QUARTERLY GROUNDWATER MONITORING REPORT
THIRD QUARTER 1994

FORMER BILL CHUN SERVICE STATION
2301 SANTA CLARA AVENUE
ALAMEDA, CALIFORNIA

Prepared for:

MR. WAYNE CHUN
265 HERON DRIVE
PITTSBURG, CALIFORNIA

JANUARY 1995

Prepared by:

FUGRO WEST, INC.
44 MONTGOMERY, SUITE 1010
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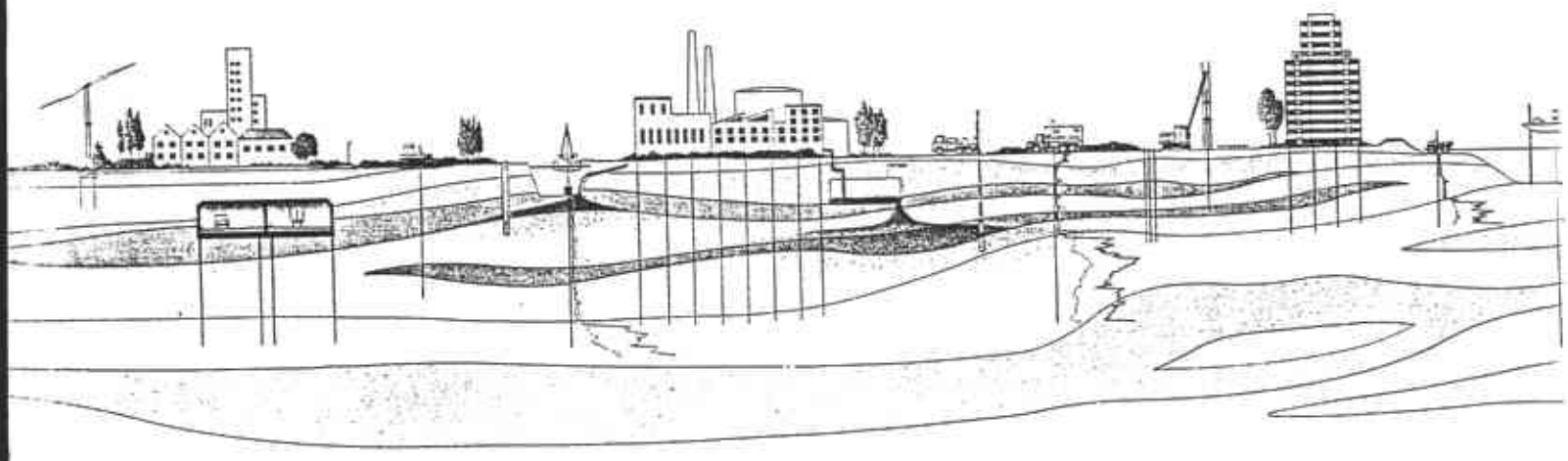
FUGRO PROJECT NO. 9437-7658



FUGRO WEST, INC.

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Tel: (415) 296-1041
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January 25, 1995
Project No. 9437-7658

Mr. Wayne Chun
265 Heron Drive
Pittsburg, California 94565

Third Quarter 1994 Groundwater Monitoring Report
Former Bill Chun Service Station
2301 Santa Clara Avenue
Alameda, California

Dear Mr. Chun,

This report documents the results of quarterly groundwater monitoring conducted on November 9, 1994 at the subject site (Figures 1 and 2). The monitoring, conducted by Fugro West, Inc. (Fugro), included measurements of depth to groundwater, depth to free product (if present), monitoring well purging, and groundwater sample collection and analysis. All field activities pertaining to events in this report were conducted according to the Fugro Standard Operating Procedures (SOP) included as Appendix A. Field data sheets for this sampling event are included as Appendix B.

All purge and rinse water generated during field activities was stored onsite in Department of Transportation (DOT)-approved drums pending transport by a licensed hazardous waste hauler to an offsite licensed recycling facility.

GROUNDWATER ELEVATIONS

Prior to purging, Fugro measured depth to groundwater and depth to free product, if present. Groundwater level data are summarized in Table 1. Groundwater elevations increased an average of 0.70 feet since the last monitoring event in June 1994. The groundwater gradient at the site is generally directed toward the northwest at a magnitude of approximately 0.007 foot per foot.

GROUNDWATER SAMPLING AND ANALYSES

Groundwater samples were collected from four monitoring wells (MW-1, MW-3, MW-4, and MW-6). No samples were collected from wells MW-5 or MW-7 due to the presence of free product in the wells. Well MW-2 could not be located at the time of the sampling event and was presumably covered during excavation activities. The well was subsequently located using a magnetic locator. Samples were collected according to standard regulatory protocol and submitted using chain-of-custody documentation to Excelchem Environmental Laboratories of Sacramento, California, a State-certified analytical laboratory. Samples were analyzed for:

- Total Petroleum Hydrocarbons as gasoline (TPH-g), using EPA Method 8015M;
- Total Petroleum Hydrocarbons as diesel (TPH-d), using EPA Method 8015M; and
- Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) using EPA Method 602.

6 but samples were not collected from MW-2

Groundwater analytical results are summarized in Table 2. **Concentrations of TPH-g increased in all four wells sampled since the last sampling event.** Concentrations of benzene increased in MW-1 and MW-4 (benzene was not detected in MW-4 last quarter), and decreased in MW-3 and MW-6. Concentrations of TPH-d increased in MW-6, decreased in MW-1, and was not detected in MW-3 and MW-4. Laboratory reports and chain-of-custody records are presented in Appendix C.

This report has been prepared solely for the use of Mr. Wayne Chun. Any reliance on this report by third parties shall be at such parties' sole 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 environmental services to Mr. Wayne Chun. If you have any questions concerning this report, or if we can assist you in any other matter, please contact us at (415) 296-1041.

Sincerely,

FUGRO WEST, INC.

William E. Bassett, Jr.
Project Environmental Scientist

REGISTERED GEOLOGIST
PAUL GRAFF
No. 5600
Exp. 6/30/95
STATE OF CALIFORNIA

Paul K. Graff
Registered Geologist
CRG No. 5600

1/26/95
Date

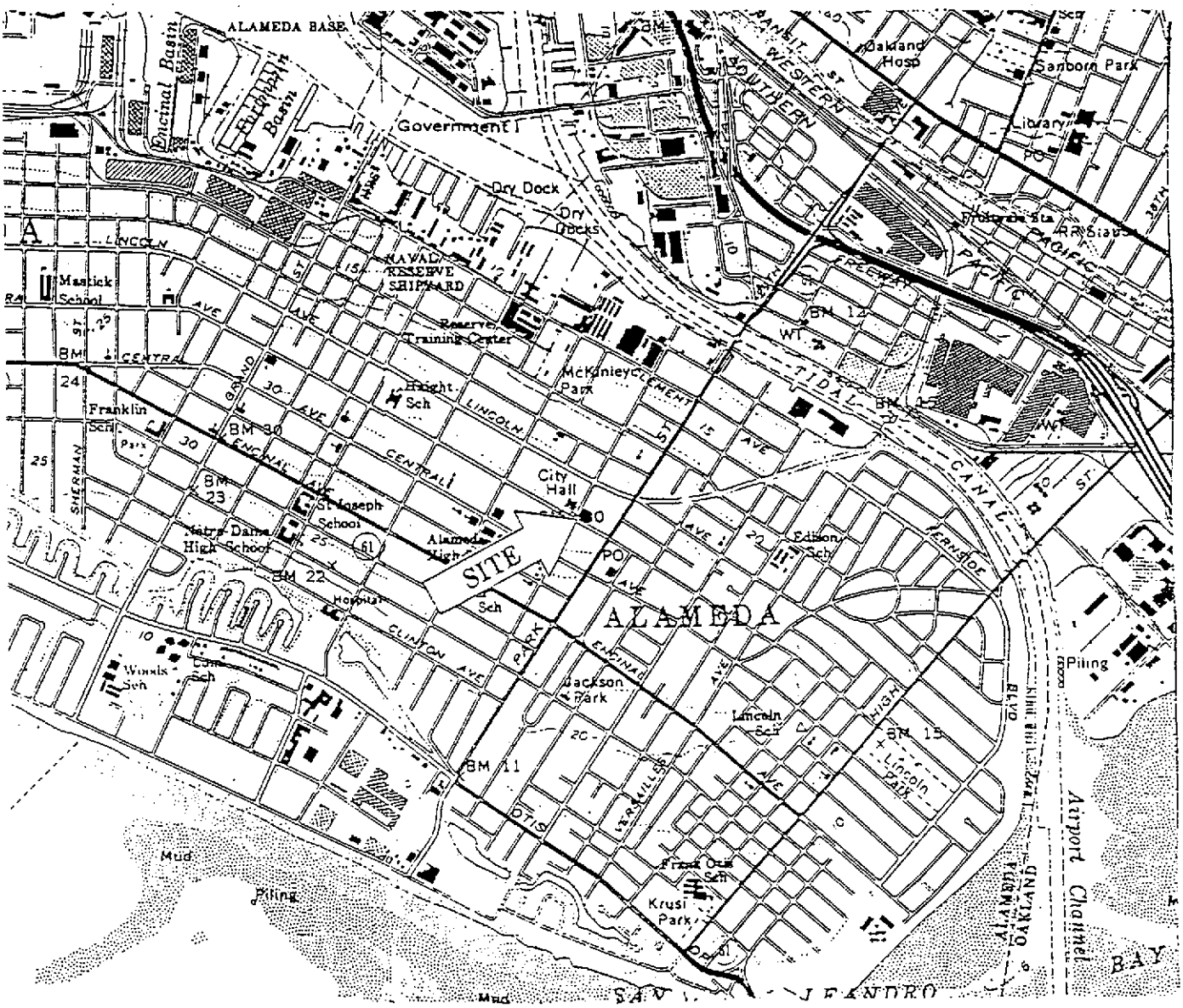
WEB:dlb

Attachments

FIGURES

TABLES

APPENDICES

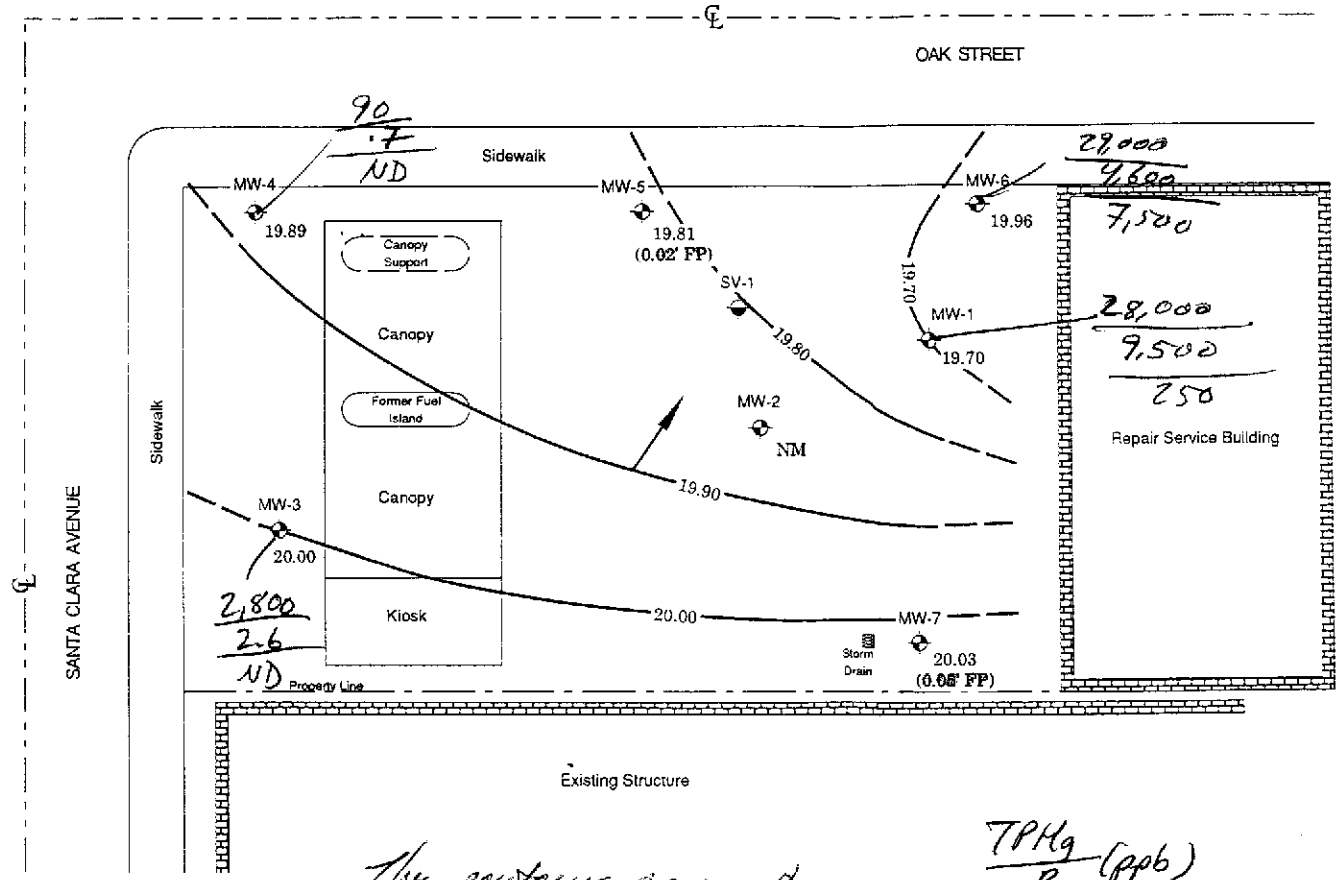


GENERAL NOTES:

BASE MAP FROM USGS
7.5 MINUTE TOPOGRAPHIC
OAKLAND EAST & WEST, CA

0 2000 4000
Approximate Scale in Feet

TUGRD	DRAWN BY: D. Hada	SITE LOCATION MAP	FIGURE 1
	DATE: January 5, 1995	Former Bill Chun's Service Station 2301 Santa Clara Avenue Alameda, CA	PROJECT NUMBER: 94-37-7622
	REVISED BY:		
	DATE:		



LEGEND

- 19.96 — Monitoring Well, Groundwater Elevation in Feet
- Vadose Zone Well
- Potentiometric Surface Contour Line (Dashed Where Inferred)
- Estimated Direction of Groundwater Flow
- NM — Not Measured
- (0.02' FP) — Free Product Thickness

NOTES

Site Sketch After Site Map
By Environmental Science & Engineering, Inc.
December 1993

All Locations Are Approximate

Groundwater elevations (GWE) are corrected for Free Product Thickness (FPT) using the following equation:
Corrected GWE = Measured GWE + (0.8 X FPT)

Approximate Hydraulic Gradient = 0.007 ft/ft
Contour Interval = 0.1 ft

The contours appear to indicate a pumping source to the south.

TPHg / B (ppb) / TPHd

0 10 20
Approximate Scale In Feet

FUGRO	DRAWN BY: D. Hada	SITE PLAN AND GROUNDWATER GRADIENT MAP November 9, 1994	FIGURE 2
	DATE: January 5, 1995		
	REVISED BY: D. Hada	Former Bill Chun's Service Station 2301 Santa Clara Avenue Alameda, CA	PROJECT NUMBER: 94-37-7658
	DATE: January 28, 1995		

TABLE 1

GROUNDWATER ELEVATION DATA

Former Bill Chun Service Station
2301 Santa Clara Avenue
Alameda, California

Well	Date	Top of casing elevation (ft. above MSL)	Depth to Water (feet)	Depth to Free Product (feet)	Free Product Thickness (feet)	Corrected Groundwater Elevation (ft. above MSL)
MW-1	01/07/93	28.53	8.87	--	0.00	19.66
	09/07/93		9.63	--	0.00	18.90
	11/16/93		9.89	--	0.00	18.64
	12/07/93		9.66	--	0.00	18.87
	01/06/94		9.67	--	0.00	18.86
	02/03/94		9.50	--	0.00	19.03
	03/04/94		9.18	--	0.00	19.35
	06/06/94		9.55	--	0.00	18.98
	11/09/94		8.83	--	0.00	19.70
MW-2	01/07/93	28.51	8.78	--	0.00	19.73
	09/07/93		9.52	--	0.00	18.99
	11/16/93		9.73	--	0.00	18.78
	12/07/93		9.54	--	0.00	18.97
	01/06/94		9.54	--	0.00	18.97
	02/03/94		9.37	--	0.00	19.14
	03/04/94		9.02	--	0.00	19.49
	06/06/94		9.40	--	0.00	19.11
	11/09/94		NM(1)	NM	NM	NM
MW-3	01/07/93	28.82	8.86	--	0.00	19.96
	09/07/93		9.62	--	0.00	19.20
	11/16/93		9.82	--	0.00	19.00
	12/07/93		9.60	--	0.00	19.22
	01/06/94		9.62	--	0.00	19.20
	02/03/94		9.45	--	0.00	19.37
	03/04/94		9.11	--	0.00	19.71
	06/06/94		9.50	--	0.00	19.32
	11/09/94		8.82	--	0.00	20.00

TABLE 1 (cont...)

GROUNDWATER ELEVATION DATA

Former Bill Chun Service Station
2301 Santa Clara Avenue
Alameda, California

Well	Date	Top of casing elevation (ft. above MSL)	Depth to Water (feet)	Depth to Free Product (feet)	Free Product Thickness (feet)	Corrected Groundwater Elevation (ft. above MSL)
MW-4	09/07/93	28.57	9.39	--	0.00	19.18
	11/16/93		9.60	--	0.00	18.97
	12/07/93		9.42	--	0.00	19.15
	01/06/94		9.44	--	0.00	19.13
	02/03/94		9.31	--	0.00	19.26
	03/04/94		9.05	--	0.00	19.52
	06/06/94		9.31	--	0.00	19.26
	11/09/94		8.68	--	0.00	19.89
MW-5	09/07/93	28.37	9.31	0.00	--	19.06
	11/16/93		9.99	9.45	0.54	18.81
	12/07/93		9.88	9.27	0.61	18.98
	01/06/94		9.85	9.27	0.58	18.98
	02/03/94		9.51	9.19	0.32	19.12
	03/04/94		8.99	8.96	0.03	19.40
	06/06/94		9.72	9.14	0.58	19.11
	11/09/94		8.58	8.56	0.02	19.81
MW-6	09/07/93	28.41	9.53	--	0.00	18.88
	11/16/93		9.74	--	0.00	18.67
	12/07/93		9.58	--	0.00	18.83
	01/06/94		9.60	--	0.00	18.81
	02/03/94		9.47	--	0.00	18.94
	03/04/94		9.18	--	0.00	19.23
	06/06/94		9.46	--	0.00	18.95
	11/09/94		8.72	--	0.00	19.69

TABLE 1 (cont...)

GROUNDWATER ELEVATION DATA

Former Bill Chun Service Station
2301 Santa Clara Avenue
Alameda, California

Well	Date	Top of casing elevation (ft. above MSL)	Depth to Water (feet)	Depth to Free Product (feet)	Free Product Thickness (feet)	Corrected Groundwater Elevation (ft. above MSL)
MW-7	09/07/93	28.56	9.61	--	0.00	18.95
	11/16/93		9.86	--	0.00	18.70
	12/07/93		9.58	--	0.00	18.98
	01/06/94		9.59	--	0.00	18.97
	02/03/94		9.56	9.39	0.17	19.14
	03/04/94		9.04	9.01	0.03	19.54
	06/06/94		9.67	9.37	0.30	19.13
	11/09/94		8.57	8.52	0.05	20.03

NOTES:

(1) MW-2 could not be located; well box may have been damaged during tank excavation.
MSL = mean seal level
NM = Not measured
Groundwater elevations (GWE) are corrected for free product thickness (FPT) using the following equation:

Corrected GWE = Measured GWE + (0.8 x FPT)

Data prior to 11/09/94 from Environmental Science and Engineering, Inc.

TABLE 2

GROUNDWATER ANALYTICAL RESULTS

Former Bill Chun Service Station
2301 Santa Clara Avenue
Alameda, California

Well	Date	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TPH-d (µg/L)
MW-1	01/07/93	110,000	14,000	17,000	2,500	8,800	ND (3,000)
	09/07/93	28,000	11,000	2,100	380	1,200	1,000 (2)
	12/07/93	17,000	10,000	3,000	610	2,000	1,800 (1)
	03/04/94	6,600	4,400	870	150	590	920 (4)
	06/06/94	12,000	6,300	230	ND (0.5)	ND (0.5)	710 (4)
	11/09/94	28,000	9,500	3,000	810	2,300	250
MW-2	01/07/93	85,000	20,000	8,500	1,500	4,300	ND (3,000)
	09/07/93	140,000	46,000	28,000	3,300	15,000	8,200 (2)
	12/07/93	86,000	28,000	17,000	35,000	16,000	8,200 (2)
	03/04/94	130,000	22,000	22,000	3,500	16,000	18,000 (4)
	06/06/94	100,000	27,000	22,000	2,300	10,000	9,600 (5)
	11/09/94	NSL	NSL	NSL	NSL	NSL	NSL
MW-3	01/07/93	8,500 (3)	170	70	ND (30)	ND (30)	ND (3,000)
	09/07/93	2,800	19	46	7.7	23	2,500 (1)
	12/07/93	3,000	17	43	13	28	520 (2)
	03/04/94	2,300	22	46	9.0	27	1,300 (5)
	06/06/94	1,900	3.9	ND (0.5)	9.0	27	1,600 (5)
	11/09/94	2,800	2.6	17	17	32	ND (50)
MW-4	09/07/93	440	2.7	1.2	1	1.9	330 (2)
	12/07/93	610	6.6	ND (0.5)	0.61	2.5	460 (2)
	03/04/94	110	ND (0.5)	ND (0.5)	ND (0.5)	0.63	56 (5)
	06/06/94	68	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	68 (4)
	11/09/94	90	0.7	1.1	0.5	2.1	ND(50)
MW-5	09/07/93	37,000	2,700	1,700	870	4,600	1,700 (2)
	12/07/93	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	03/04/94	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	06/06/94	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	11/09/94	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
MW-6	09/07/93	10,000	1,300	540	370	1,600	1,400 (2)
	12/07/93	17,000	4,300	1,200	600	2,700	2,400 (2)
	03/04/94	21,000	4,600	1,000	460	1,800	1,800 (4)
	06/06/94	12,000	5,400	350	ND (0.5)	1,200	1,600 (4)
	11/09/94	29,000	4,600	1,600	820	3,600	7,500
MW-7	09/07/93	24,000	6,000	4,800	490	2,300	1,300
	12/07/93	95,000	28,000	24,000	1,600	8,700	2,200
	03/04/94	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	06/06/94	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	11/09/94	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP

NOTES:

TPH-g = Total Petroleum Hydrocarbons as gasoline
TPH-d = Total Petroleum Hydrocarbons as diesel
µg/L = micrograms per liter or parts per billion (ppb)
NSFP = Not Sampled - Free Product present
NSL = Not Sampled - well could not be located
ND = Not Detected (detection limit in parentheses)
(1) = Results typical of a non-diesel mixture (<C16)
(2) = Results typical of a diesel and non-diesel mixture (<C16)
(3) = Results typical of weathered gasoline
(4) = Results typical of diesel and unidentified hydrocarbons (<C14)
(5) = Results typical of unidentified hydrocarbons (<C14)

APPENDIX A

FUGRO STANDARD OPERATING PROCEDURES

FUGRO WEST, INC.
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.

FUGRO WEST, INC.
STANDARD OPERATING PROCEDURES
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.

FUGRO WEST, INC.
STANDARD OPERATING PROCEDURES
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.

FUGRO WEST, INC.
STANDARD OPERATING PROCEDURES
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.

APPENDIX B

FIELD DATA SHEETS

FUGRO WEST, INC.
GROUNDWATER/LIQUID LEVEL DATA
(measurements in feet)

Project Address: 2301 Saint Clara Ave
Recorded by: DJ

Date: 11-9-94
Project No.: 94-37-7622

Well No.	Time	Measured Total Depth	Depth to Gr. Water	Depth to Product	Product Thickness	Comments (TOC/TOB) (product skimmer in well)
MW4	1520	21.83	8.68			
MW 3	1525	21.10	8.82			
MW 6	1529	22.20	8.72			
MW-1	1535	24.25	8 83			
MW-2	—				→	MW-2 covered with dirt/mud from excavation being refilled too high.
MW-5			8.58	8.56	0.02	
MW-7	1840		8.57	8.52	0.05	

Notes:

MONITORING WELL SAMPLING INFORMATION SHEET

TUGRO

Client: Bill Chuns
Site: 2301 SANTA CLARA AV. ALAMEDA, CA.

Project No: 9437-7622
Well Designation: MW-1

Is setup of traffic control devices required?	:	(NO)	YES	Setup & Takedown time: _____ hours
Is there standing water in well box?	:	NO	(YES)	(Above TOC Below TOC)
Is Top of Casing cut level?	:	NO	(YES)	(If NO please explain in remarks)
Is well cap sealed and locked?	:	NO	(YES)	(If NO please explain in remarks)
Height of Well Casing Riser (in inches)	:	_____		
General condition of Wellhead assembly	:	Excellent	(Good)	Fair Poor (Explain in remarks)

Purging Equipment:
_____ 2" Disposable bailer
_____ 2" PVC bailer
_____ 4" PVC bailer
X Submersible pump
_____ Dedicated bailer

Sampled with: Disposal bailer: [X] Teflon Bailer: [ ]

Well Diameter:	2" X	3" ___	4" ___	6" ___	8" ___	
Purge Vol. Multiplier:	0.163	0.367	0.653	1.47	2.61	gal/ft.

Initial Measurment
Time: 1535
Depth of well: 24.25
Depth to water: 8.83

Recharge Measurement
Time: 1724
Depth to water: 8.96

Calculated purge: 7
Actual purge: 7

Start purge: 1655 Sampling time: 1755 Sampling Date: _____

Time	Temp (F)	E.C.	pH	Turbidity	O_2 (ppm)	Volume (Gal.)
1700	60.0	122	6.33			3
1705	60.5	1.18	6.27			2
1709	61.2	1.15	6.22			2

Sample appearance: Cloudy

QC samples collected at this well: _____ Lock: none

Equipment replaced: (Check all that apply) Note condition of replaced item.

2" Locking Cap:	[ ]	Lock #2357:	[ ]	Lock #0909:	[ ]
3" Locking Cap:	[ ]	Lock #3753:	[ ]	Lock-Dolphin:	[ ]
4" Locking Cap:	[ ]	Chevron Lock:	[ ]		

Remarks: good recharge

Signature _____ Review _____

MONITORING WELL SAMPLING INFORMATION SHEET

TUGRO

Client: Bill Cruns
Project No: 9437-7622
Site: 2301 SANTA CLARA AV. ALAMEDA, CA.
Well Designation: MW-3

Is setup of traffic control devices required?	:	(NO)	YES	Setup & Takedown time: _____ hours
Is there standing water in well box?	:	(NO)	YES	(Above TOC Below TOC)
Is Top of Casing cut level?	:	NO	(YES)	(If NO please explain in remarks)
Is well cap sealed and locked?	:	NO	(YES)	(If NO please explain in remarks)
Height of Well Casing Riser (in inches)	:	_____		
General condition of Wellhead assembly	:	Excellent	(Good)	Fair Poor (Explain in remarks)

Purging Equipment:
_____ 2" Disposable bailer
X Submersible pump
_____ 2" PVC bailer
_____ Dedicated bailer
_____ 4" PVC bailer

Sampled with: Disposal bailer: [X] Teflon Bailer: [ ]

Well Diameter:	2" X	3" ___	4" ___	6" ___	8" ___
Purge Vol. Multiplier:	0.163	0.367	0.653	1.47	2.61 gal/ft.

Initial Measurment
Time: 1525
Depth of well: 21.10
Depth to water: 8.82

Recharge Measurement
Time: 1718
Depth to water: 8.91

Calculated purge: 6
Actual purge: 6

Start purge: 1616 Sampling time: 1806 Sampling Date: 11-9-94

Time	Temp (F)	E.C.	pH	Turbidity	O_2 (ppm)	Volume (Gal.)
1620	56.0	1.25	6.20			2
1624	57.2	1.18	6.23			2
1628	56.5	1.10	6.28			2

Sample appearance: cloudy
QC samples collected at this well: _____ Lock: none

Equipment replaced: (Check all that apply) Note condition of replaced item.

2" Locking Cap: [ ]	Lock #2357: [ ]	Lock #0909: [ ]
3" Locking Cap: [ ]	Lock #3753: [ ]	Lock-Dolphin: [ ]
4" Locking Cap: [ ]	Chevron Lock: [ ]	

Remarks: _____

Signature _____ Review _____

MONITORING WELL SAMPLING INFORMATION SHEET

TUGRO

Client: Bell chons — Project No: 9437-7622

Site: 2301 SANTA CLARA AV. ALAMEDA, CA. — Well Designation: MW-4

Is setup of traffic control devices required?	:	(NO)	YES	Setup & Takedown time: _____ hours
Is there standing water in well box?	:	(NO)	YES	(Above TOC Below TOC)
Is Top of Casing cut level?	:	NO	(YES)	(If NO please explain in remarks)
Is well cap sealed and locked?	:	NO	(YES)	(If NO please explain in remarks)
Height of Well Casing Riser (in inches)	:	_____		
General condition of Wellhead assembly	:	Excellent	Good	Fair Poor (Explain in remarks)

Purging Equipment:

_____	2" Disposable bailer	X	Submersible pump
_____	2" PVC bailer	_____	Dedicated bailer
_____	4" PVC bailer		

Sampled with: Disposal bailer: [X] Teflon Bailer: [ ]

Well Diameter:	2" X	3" __	4" __	6" __	8" __	
Purge Vol. Multiplier:	0.163	0.367	0.653	1.47	2.61	gal/ft.

Initial Measurment
Time: 1520
Depth of well: 21.83
Depth to water: 8.68

Recharge Measurement
Time: 1721
Depth to water: 8.74

Calculated purge: 6
Actual purge: 6

Start purge: 1555 Sampling time: 1750 Sampling Date: 11-9-94

Time	Temp (F)	E.C.	pH	Turbidity	O_2 (ppm)	Volume (Gal.)
1600	48.5	1.79	6.24			2
1604	52.0	1.73	6.18			2
1610	52.0	1.64	6.22			2

Sample appearance: Clear

QC samples collected at this well: _____ Lock: none

Equipment replaced: (Check all that apply) Note condition of replaced item.

2" Locking Cap: [ ]	Lock #2357: [ ]	Lock #0909: [ ]
3" Locking Cap: [ ]	Lock #3753: [ ]	Lock-Dolphin: [ ]
4" Locking Cap: [ ]	Chevron Lock: [ ]	

Remarks: Good recharge -

Signature _____ Review _____

MONITORING WELL SAMPLING INFORMATION SHEET

TUGRO

Client: Bill Chuns
Site: 2301 SANTA CLARA AV. ALAMEDA, CA.

Project No: 9437-7622
Well Designation: MW-6

Is setup of traffic control devices required? :	(NO)	YES	Setup & Takedown time: _____ hours
Is there standing water in well box? :	(NO)	YES	(Above TOC Below TOC)
Is Top of Casing cut level? :	NO	(YES)	(If NO please explain in remarks)
Is well cap sealed and locked? :	NO	(YES)	(If NO please explain in remarks)
Height of Well Casing Riser (in inches) :	_____		
General condition of Wellhead assembly :	Excellent	(Good)	Fair Poor (Explain in remarks)

Purging Equipment:
_____ 2" Disposable bailer
_____ 2" PVC bailer
_____ 4" PVC bailer
X Submersible pump
_____ Dedicated bailer

Sampled with: Disposal bailer: [X] Teflon Bailer: [ ]

Well Diameter:	2" X	3" ___	4" ___	6" ___	8" ___	
Purge Vol. Multiplier:	0.163	0.367	0.653	1.47	2.61	gal/ft.

Initial Measurment
Time: 1529
Depth of well: 22.20
Depth to water: 8.72

Recharge Measurement
Time: 1715
Depth to water: 8.69

Calculated purge: 6
Actual purge: 6

Start purge: 1635 Sampling time: 1800 Sampling Date: 11-9-94

Time	Temp (F)	E.C.	pH	Turbidity	O_2 (ppm)	Volume (Gal.)
1640	55.0	1.98	6.53			2
1644	56.5	1.70	6.47			2
1649	57.2	1.62	6.40			2

Sample appearance: cloudy
QC samples collected at this well: _____
Lock: none

Equipment replaced: (Check all that apply) Note condition of replaced item.

2" Locking Cap: [ ]	Lock #2357: [ ]	Lock #0909: [ ]
3" Locking Cap: [ ]	Lock #3753: [ ]	Lock-Dolphin: [ ]
4" Locking Cap: [ ]	Chevron Lock: [ ]	

Remarks: _____

Signature _____ Review _____

APPENDIX C

LABORATORY REPORTS AND CHAIN-OF-CUSTODY RECORDS

Environmental Labs

4946 Watt Avenue, #38
North Highlands, CA 95660
(916)334-8661

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: STEVE FRIEDMAN
Phone #: 415/296-1041
Company/Address: FLUOR
FAX #: 296-0944
44 MONTGOMERY ST. #1000 SAN FRANCISCO 94104
Project Number: 94 37 7622
P.O.#:
Project Name: BIG CHAIN'S
Project Location: ALAMEDA
Sampler Signature:

Sample ID	Sampling DATE	Sampling TIME	Container VOA	Container SLEEVE	Container 1L GLASS	Container 1L PLASTIC	Method Preserved HCl	Method Preserved HNO_3	Method Preserved ICE	Method Preserved NONE	Matrix WATER	Matrix SOIL	BTEX (602/8020)	BTEX/TPH as Gasoline (602/8020/8015)	TPH as Diesel (8015)	TPH as Oil (8015)	Total Oil & Grease (5520 B/E,F)	Total Oil & Grease IR (5520 B/E,F,C)	96 - Hour Fish Bioassay	EPA 601/8010	EPA 602/8020	EPA 615/8150	EPA 608/8080 - Pesticides	EPA 608/8080-PCBs	EPA 624/8240	EPA 625/8270	ORGANIC LEAD	Reactivity, Corrosivity, Ignitibility	CAM - 17 Metals	EPA - Priority Pollutant Metals	LEAD(7420/7421/239.2)	Cd, Cr, Pb, Zn, Ni	W.E.T. (✓)	TOTAL (✓)					RUSH SERVICE (12 hr) or (24 hr)	EXPEDITED SERVICE (48 hr) or (1 wk)	STANDARD SERVICE (2wk)
	11-9-94	1755	3		2						X			X	X																		W	11	94	21	8			X
	11-9-94	1806	3		2						X			X	X																		W	11	94	21	9			↓
	11-9-94	1750	3		2						X			X	X																		W	11	94	22	0			
	11-9-94	1800	3		2						X			X	X																		W	11	94	22	1			

Relinquished by:	Date 11/10/94 Time 15:10	Received by:	Remarks:
Relinquished by	Date Time	Received by:	
Relinquished by	Date 10/10/94 Time 15:10	Received by Laboratory: Mindy Somers	Bill To:

Excelchem
Environmental Labs
4946 Watt Avenue, #38
North Highlands, CA 95660
(916)334-8661

ANALYSIS REPORT

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

Project: 94-37-7622

Date Sampled : 11-09-94
Date Received: 11-10-94
BTEX Analyzed: 11-18-94
TPHg Analyzed: 11-18-94
TPHd Analyzed: 11-16-94
Matrix: Water

	Benzene PPB	Toluene PPB	Ethyl-benzene PPB	Total Xylenes PPB	TPHg PPB	TPHd PPB
Reporting Limit:	100	100	100	100	5000	50
SAMPLE Laboratory Identification:						
MW-1 W1194218	9500	3000	810	2300	28000	250*

ppb= Parts per billion = ug/L = micrograms per liter
* = Peaks in the diesel range.
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.

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

Laboratory Representative

10-11-94
Date Reported

Excelchem
Environmental Labs
4946 Watt Avenue, #38
North Highlands, CA 95660
(916)334-8661

ANALYSIS REPORT

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

Project: 94-37-7622

Date Sampled : 11-09-94
Date Received: 11-10-94
BTEX Analyzed: 11-21-94
TPHg Analyzed: 11-21-94
TPHd Analyzed: 11-16-94
Matrix: Water

	Benzene PPB	Toluene PPB	Ethyl-benzene PPB	Total Xylenes PPB	TPHg PPB	TPHd PPB
Reporting Limit:	1.0	1.0	1.0	1.0	100	50
SAMPLE Laboratory Identification:						
MW-3 W1194219	2.6	17	17	32	2800	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.

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

Laboratory Representative

10-11-94
Date Reported

Excelchem
Environmental Labs
4946 Watt Avenue, #38
North Highlands, CA 95660
(916)334-8661

ANALYSIS REPORT

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

Project: 94-37-7622

Date Sampled : 11-09-94
Date Received: 11-10-94
BTEX Analyzed: 11-19-94
TPHg Analyzed: 11-19-94
TPHd Analyzed: 11-17-94
Matrix: Water

	Benzene PPB	Toluene PPB	Ethyl-benzene PPB	Total Xylenes PPB	TPHg PPB	TPHd PPB
Reporting Limit:	0.5	0.5	0.5	0.5	50	50
SAMPLE Laboratory Identification:						
MW-4 W1194220	0.7	1.1	0.5	2.1	90	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.

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

Laboratory Representative

10-11-94
Date Reported

Excelchem
Environmental Labs
4946 Watt Avenue, #38
North Highlands, CA 95660
(916)334-8661

ANALYSIS REPORT

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

Project: 94-37-7622

Date Sampled : 11-09-94
Date Received: 11-10-94
BTEX Analyzed: 11-20-94
TPHg Analyzed: 11-20-94
TPHd Analyzed: 11-17-94
Matrix: Water

	Benzene PPB	Toluene PPB	Ethyl-benzene PPB	Total Xylenes PPB	TPHg PPB	TPHd PPB
Reporting Limit:	1000	1000	1000	1000	5000	50
SAMPLE Laboratory Identification:						
MW-6 W1194221	4600	1600	820	3600	29000	7500

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.

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

Laboratory Representative

10-11-94
Date Reported