FUGRO WEST, INC.

THIRD QUARTER 1996
GROUND WATER MONITORING REPORT

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

Prepared for:
MR. WAYNE CHUN
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Pittsburgh, California 94565

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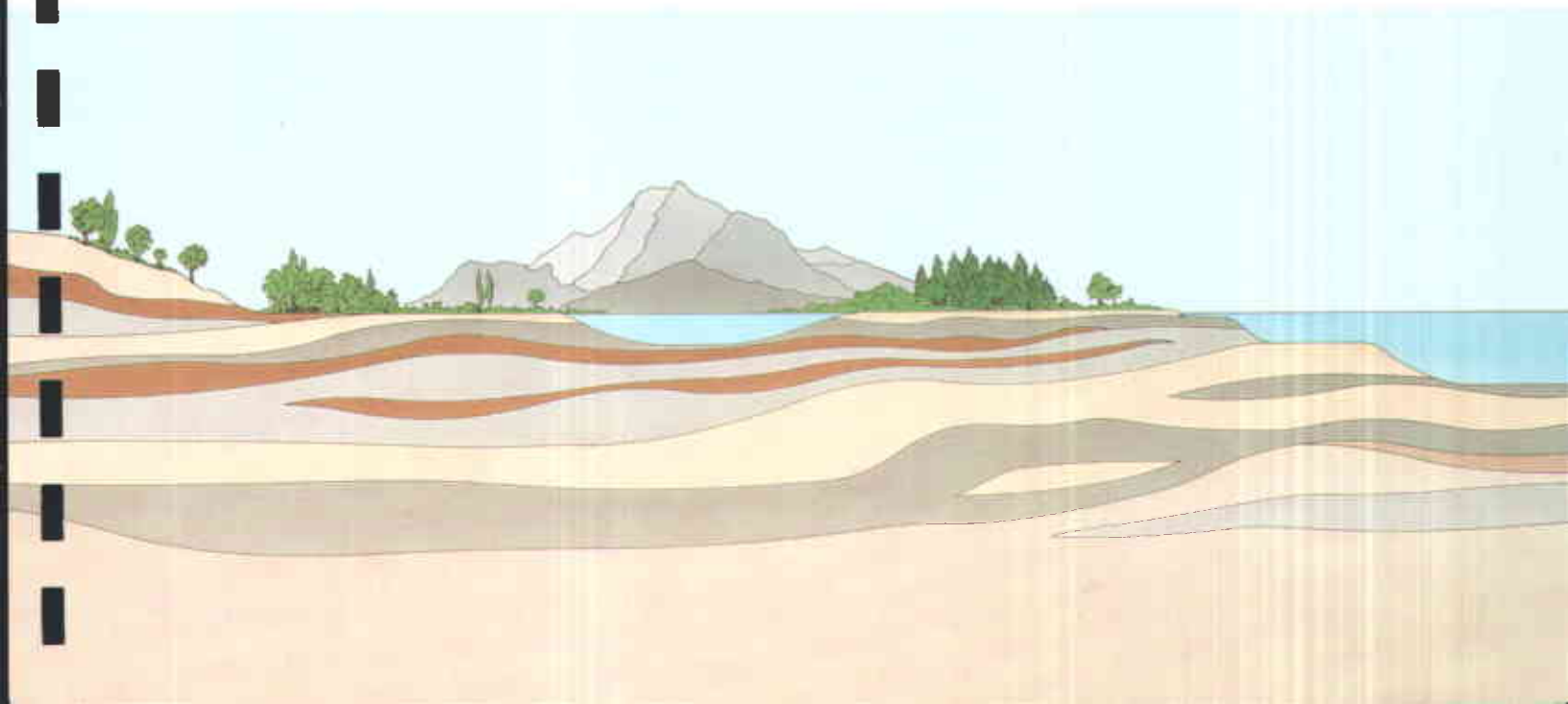
Project No. 9537-0741
January 1997



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Mr. Wayne Chun
265 Heron Drive
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Third Quarter 1996 Ground Water Monitoring Report
Former Bill Chun Service Station
2301 Santa Clara Avenue
Alameda, California

Dear Mr. Chun,

This report documents results of quarterly groundwater monitoring at the former Bill Chun Service Station located at 2301 Santa Clara Avenue, Alameda, California (subject property). Monitoring at the subject property occurred on December 10, 1996. A site location map is provided in Figure 1, and a site map is provided in Figure 2.

BACKGROUND

The following paragraphs provide background information leading up to the current condition of the subject property.

In July of 1992, three underground storage tanks (USTs) were removed from the subject property by Parker Environmental Services (Parker): two 550 gallon and one 285 gallon. During removal activities, a leak was discovered in the 285 gallon tank. The contents of the USTs were not specified in the removal report. Soil sample analysis revealed concentrations of total petroleum hydrocarbons as gasoline (TPH-g) and benzene, toluene, ethylbenzene, and total xylenes (BTEX).

Several investigative activities have been conducted at the subject property to determine the extent of the hydrocarbon impacted soil and groundwater. These activities include soil and groundwater sampling and analysis, soil vapor extraction, and free product recovery. Details of these activities are documented in *Results of Free Product Recovery; Additional Groundwater Assessment and Quarterly Groundwater Monitoring Activities* (Fugro - January, 1996).

Six monitoring wells were installed at the subject property by another consultant in 1993: MW-1, MW-2, and MW-3 in January, and MW-4, MW-5, and MW-6 in September. The purpose of these wells was to determine the lateral extent of petroleum-impacted subsurface soil and groundwater. Concentrations of gasoline-range hydrocarbons were detected in soils at depths of 9.5 to 11 feet below ground surface (bgs).

There is some concern regarding monitoring wells MW-1, MW-2, and MW-3 which may have been installed with the top of the screened casing at a depth below the surface of the groundwater. It is suspected that floating product could be present in wells MW-1 and MW-2; if this is the case, accurate assessment of it's extent and quantity may not be possible due to the positioning of the screened casings.

Fugro installed offsite monitoring wells MW-8, MW-9, MW-10, and MW-11 on November 22, 1995. These were installed to aid in the investigation of the lateral extent of contamination in groundwater adjacent to the subject property.

Quarterly groundwater monitoring and sampling has occurred at the subject property since January, 1993. Fugro has conducted quarterly monitoring activities since November, 1994. The direction of groundwater flow has typically been in the northwest and northeast directions. Free product has been detected in monitoring well MW-5 since November, 1993 and MW-7 since February, 1994.

CURRENT MONITORING ACTIVITIES

Quarterly groundwater monitoring results for the December 10, 1996 monitoring event will be presented here. Included among the results are depth to groundwater and measured concentrations of TPH-g, total petroleum hydrocarbons as diesel (TPH-d), BTEX, and halogenated volatile organic compounds (HVOCs). Laboratory data reports and chain of custody forms are included in Appendix A.

Table 1 provides a summary of results of monitoring performed on December 10, 1996, as well as maximum contaminant levels (MCLs) mandated by the state of California. Monitoring wells MW-5 and MW-7 were not sampled due to the presence of free product in the wells. Free product thickness was measured at 0.01 feet in each of these wells.

Groundwater gradient at the subject property is generally in the northerly direction at a magnitude of approximately 0.004 foot per foot (Figure 3). Elevations in monitoring wells MW-5 and MW-7 were measured at 19.39 and 19.49, respectively.

The highest concentrations of TPH-g were found in the sample collected from monitoring well MW-3 (694,000 ppb), and the lowest in the sample collected from monitoring well MW-10 (ND). The highest concentrations of BTEX were found in the sample collected from monitoring well MW-2, and the lowest in the sample collected from monitoring wells MW-10 and MW-4 (Figure 4).

Concentrations of TPH-d were not detected in the samples collected during the December monitoring event.

Table 1. Groundwater elevations and analytical results obtained from samples collected at the Former Bill Chun Service Station on May 1, 1996.

Well	GW Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH-d (µg/L)	HVOC's (ppb)[a]
MW-1	19.18	27,500	7,680	2,020	720	720	ND (50)	ND
MW-2	19.34	166,000	26,400	38,600	3,180	14,700	ND (50)	ND
MW-3	19.51	694,000	920	5,980	1,060	2,960	ND (50)	ND
MW-4	19.35	65	ND (0.5)	ND (0.5)	ND (0.5)	0.6	ND (50)	ND
MW-6	19.18	49,200	10,900	2,180	1,880	6,720	ND (50)	1,2-DCE (210)
MW-8	19.64	442	17.2	2.7	5.9	442	ND (50)	ND
MW-9	18.85	157,000	13.6	320	135	500	ND (50)	1,2-DCE (5.0)
MW-10	19.15	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (50)	1.2-DCE (10.1)
MW-11	19.38	68,000	800	260	200	1,160	ND (50)	ND
MCL	NA	NA	1.0	1,000	680	1,750	NA	1,2-DCE (0.5)

1,2-DCE = 1.2-Dichloroethane
ppb = parts per billion
NA = Not Applicable - no MCL has been established for these constituents.
ND = Not Detected
FP = Not Sampled due to the presence of free product
MCL = Maximum Contaminant Level. Numbers reported for California primary MCLs.
a. numbers in parenthesis represent the reported concentration

Concentrations of 1,2-dichloroethane (1,2-DCE) were below the method detection limit in samples collected from monitoring wells MW-1, MW-2, and MW-11 indicating a decrease since the August sampling event; however, 1,2-DCE was detected in samples collected from monitoring wells MW-6, MW-9, and MW-10. Reported concentrations of 1,2-DCE in monitoring wells MW-6, MW-9 and MW-10 were 210 parts per billion (ppb), 5.0 ppb, and 10.1 ppb, respectively. These results indicate an increase in this constituent.

Following is a comparison of current data with data obtained from the August 1996 monitoring event. Historical data including those from the December monitoring event are provided in Tables 3 and 4 at the end of this report.

- Groundwater elevations have increased an average of 0.35 feet since the last monitoring event in August of 1996.
- Samples collected from monitoring wells MW-1, MW-2, MW-6, and MW-8 indicated a decrease in concentrations of TPH-g and BTEX from the August monitoring event.

Plume could be migrating more significantly to these wells

- The sample collected from monitoring well MW-3 and MW-9 indicated an increase in concentrations of TPH-g and BTEX. The sample collected from monitoring well MW-11 also indicated an increase in these constituents with the exception of benzene.
- The sample collected from monitoring well MW-4 indicated a slight increase of TPH-g and total xylenes from below the method detection limit (ND) to 65 ppb. and 0.6 ppb., respectively.
- The concentration of 1,1,2,2-Tetrachlorobenzene, detected in monitoring well MW-8, decreased from 2.5 ppb to below the method detection limit.
- The concentration of chloroform, detected in monitoring well MW-10, decreased from 13.2 ppb to below the method detection limit.

Concentrations of TPH-g and BTEX were relatively consistent with previous sampling events. Concentrations of 1,2-DCE in monitoring wells MW-6, MW-9, and MW-10 indicate that this constituent has migrated offsite in the direction of groundwater flow.

REMARKS

This report has been prepared solely for the use of Mr. Wayne Chun. Any reliance on this report by third parties shall be at the parties sole risk. this report was prepared under the review and supervision of the professional engineer, registered with the State of California, whose signature appears below.

We appreciate the opportunity to provide environmental consulting services to Mr. Wayne Chun. If there are any questions or comments regarding this report, or if we can assist you in any other matter, please contact us at (415) 296-1041.

Sincerely,

FUGRO WEST, INC.

Robyn K. Simonsen, EIT
Staff Engineer

REGISTERED PROFESSIONAL ENGINEER
STEPHEN J. BOUDREAU
No. C 055353
Exp. 12/31/00
CIVIL
STATE OF CALIFORNIA

Peter B. Hudson
Project Geologist

Stephen J. Boudreau, PE
Regional Branch Manager
Senior Environmental Engineer

cc: Juliet Shin, Alameda County Division of Environmental Health

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TABLE 2, Continued

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-2	11/29/96	28.47 (2)	9.96	--	0.00	18.53
continued	05/01/96		9.19	--	0.00	19.30
	08/05/96		9.49	--	0.00	18.98
	12/10/96		**9.13**		**0.00**	**19.34**
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
	12/20/94		9.00	--	0.00	19.82
	03/29/95		8.45	--	0.00	20.37
	05/24/95		8.99	--	0.00	19.83
	08/30/95		9.54	--	0.00	19.28
	11/29/95	28.78 (2)	9.90	--	0.00	18.88
	05/01/96		9.25	--	0.00	19.53
	08/05/96		9.61	--	0.00	19.17
	12/10/96		**9.27**		**0.00**	**19.51**

TABLE 2, Continued

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
	12/20/94		8.97	--	0.00	19.60
	03/29/95		8.46	--	0.00	20.11
	05/24/95		8.86	--	0.00	19.71
	08/30/95		9.41	--	0.00	19.16
	11/29/95	28.53 (2)	9.72	--	0.00	18.81
	05/01/96		9.17	--	0.00	19.36
	08/05/96		9.44	--	0.00	19.09
	12/10/96		**9.18**		**0.00**	**19.35**
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
	12/20/94		8.77	8.76	0.01	19.61
	03/29/95		8.31	--	0.00	20.06
	05/24/95		8.77	8.76	0.01	19.61
	08/30/95		9.50	9.19	0.31	19.12
	11/29/95	28.33 (2)	9.84	9.60	0.24	18.68

TABLE 2, Continued
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-5	05/01/96		8.87	8.86	0.01	19.47
continued	08/05/96		9.37	9.36	0.01	18.97
	12/10/96		**8.15**	**8.14**	**0.01**	**19.39**
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
	12/20/94		9.00	--	0.00	19.41
	03/29/95		8.44	--	0.00	19.97
	05/24/95		8.94	--	0.00	19.47
	08/30/95		9.43	--	0.00	18.98
	11/29/95	28.36 (2)	9.83	--	0.00	18.53
	05/01/96		9.00	--	0.00	19.36
	08/05/96		9.55	--	0.00	18.81
	12/10/96		**9.18**		**0.00**	**19.18**
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
	12/20/94		9.08	8.67	0.41	19.81
	03/29/95		8.51	7.96	0.55	20.49
	05/24/95		8.98	8.81	0.17	19.72
	08/30/95		9.71	9.40	0.31	19.10
	11/29/95	28.44 (2)	9.86	9.84	0.02	18.60

TABLE 2, Continued

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	05/01/96		8.94	8.85	0.09	19.57
continued	08/05/96		9.48	9.45	0.03	19.03
	12/10/96		**8.96**	**8.95**	**0.01**	**19.49**
MW-8	11/29/95	28.17 (2)	8.92	--	0.00	19.25
	05/01/95		8.42	--	0.00	19.75
	08/05/96		8.75	--	0.00	19.42
	12/10/96		**8.53**		**0.00**	**19.64**
MW-9	11/29/95	27.45 (2)	9.23	--	0.00	18.22
	05/01/96		8.66	--	0.00	18.79
	08/05/96		8.94	--	0.00	18.51
	12/10/96		**8.60**		**0.00**	**18.85**
MW-10	11/29/95	27.32 (2)	8.73	--	0.00	18.59
	05/01/96		NM (3)	NM	NM	NM
	08/05/96		8.50	--	0.00	18.82
	12/10/96		**8.17**		**0.00**	**19.15**
MW-11	11/29/95	28.56 (2)	10.16	--	0.00	18.40
	05/01/96		9.12	--	0.00	1944
	08/05/96		9.62	--	0.00	18.94
	12/10/96		**9.18**		**0.00**	**19.38**

NOTES:

(1) MW-2 could not be located: well box was temporarily buried during tank excavation activities

(2) Top of casing reference elevations of all well were resurveyed on Nov. 29, 1995, following installation of MW-8, MW-9, and MW-11. Elevations relative to a found "cut-cross" in the top of the depressed curb at the mid return of the northwest corner of the intersection of Santa Clara Avenue and oak Street. Benchmark elevation taken as 28.455 feet above MSL

(3) MW-10 inaccessible due to parked car

MSL = Mean Sea Level

NM = Not Measured

Ground water elevations (GWE) are corrected for free product thickness (FPT) using the following equation: Corrected GWE = Top of Casing Elevation - (Measured Depth to Water - (0.8 x FPT))

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

TABLE 3
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)	HVOC's (ppb)
MW-1	01/07/93	110,000	14,000	17,000	2,500	8,800	ND (3,000)	1,2-DCE (470)
	09/07/93	28,000	11,000	2,100	380	1,200	1,000 (2)	NA
	12/07/93	17,000	10,000	3,000	610	2,000	1,800 (1)	NA
	03/04/94	6,600	4,400	870	150	590	920 (4)	NA
	06/06/94	12,000	6,300	230	ND (0.5)	ND (0.5)	710 (4)	NA
	11/09/94	28,000	9,500	3,000	810	2,300	250	NA
	12/20/94	5,600	3,000	92	86	76	ND (50)	NA
	03/29/95	24,000	5,800	3,100	390	1,300	ND (50)	NA
	05/24/95	2,500	800	280	31	130	ND (50)	NA
	08/30/95	48,000	14,000	3,500	620	1,600	800	NA
	11/29/95	120,000	42,000	22,000	2,300	9,900	ND (1000)	NA
	05/01/96	49,800	11,800	5,720	121	3,160	ND (50)	1,2-DCE (5.6)
	08/05/96	54,600	17,400	7,440	1,130	3,880	ND (50)	1,2-DCE (50.7)
	12/10/96	**27,500**	**7,680**	**2,020**	**720**	**720**	**ND (50)**	**ND**
MW-2	01/07/93	85,000	20,000	8,500	1,500	4,300	ND (3,000)	1,2-DCE (550)
	09/07/93	140,000	46,000	28,000	3,300	15,000	8,200 (2)	NA
	12/07/93	86,000	28,000	17,000	35,000	16,000	8,200 (2)	NA
	03/04/94	130,000	22,000	22,000	3,500	16,000	18,000 (4)	NA
	06/06/94	100,000	27,000	22,000	2,300	10,000	9,600 (5)	NA
	11/09/94	NSL	NSL	NSL	NSL	NSL	NSL	NA
	12/20/94	NSL	NSL	NSL	NSL	NSL	NSL	NA
	03/29/95	240,000	56,000	30,000	3,100	7,000	3,800	NA
	05/24/95	330,000	54,000	51,000	4,700	22,000	28,000	NA
	08/30/95	200,000	48,000	52,000	3,900	16,000	8,000	NA
	11/29/95	170,000	42,000	40,000	3,400	17,000	ND (1000)	NA
	05/01/96	481,000	59,000	69,000	27,200	89,600	ND (50)	1,2-DCE (61.8)
	08/05/96	193,000	41,800	56,000	3,590	18,000	ND (50)	1,2-DCE (83.2)
	12/10/96	**166,000**	**26,400**	**38,600**	**3,180**	**14,700**	**ND (50)**	**ND**
MW-3	01/07/93	8,500 (3)	170	70	ND (30)	ND (30)	ND (3,000)	NA
	09/07/93	2,800	19	46	7.7	23	2,500 (1)	NA
	12/07/93	3,000	17	43	13	28	520 (2)	NA
	03/04/94	2,300	22	46	9.0	27	1,300 (5)	NA
	06/06/94	1,900	3.9	ND (0.5)	9.0	27	1,600 (5)	NA
	11/09/94	2,800	2.6	17	17	32	ND (50)	NA
	12/20/94	2,700	10	62	24	59	ND (50)	NA
	03/29/95	1,200	230	230	13	37	500	NA
	05/24/95	5,700	ND (5)	73	20	57	ND (50)	NA
	08/30/95	3,100	ND (1.0)	29	13	28	ND (50)	NA
	11/29/95	13,000	39	59	7	33	ND (80)	NA
	05/01/96	3,020	ND (1.0)	39.9	9.86	30.8	ND (50)	ND
	08/05/96	2,340	4.1	5.3	4.9	25.3	ND (50)	ND
	12/10/96	**694,000**	**920**	**5,980**	**1,060**	**2,960**	**ND (50)**	**ND**

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TABLE 3
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)	HVOC's (ppb)
MW-4	09/07/93	440	2.7	1.2	1	1.9	330 (2)	NA
	12/07/93	610	6.6	0.5	0.61	2.5	460 (2)	NA
	03/04/94	110	ND (0.5)	ND (0.5)	ND (0.5)	0.63	56 (5)	NA
	06/06/94	68	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	68 (4)	NA
	11/09/94	90	0.7	1.1	0.5	2.1	ND(50)	NA
	12/20/94	130	2.2	33	4.8	27	ND (50)	NA
	03/29/95	ND (50)	ND (0.5)	0.5	ND (0.5)	ND (0.5)	ND (50)	NA
	05/24/95	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (50)	NA
	08/30/95	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (50)	NA
	11/29/95	100	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (50)	NA
	05/01/96	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (50)	ND
	08/05/96	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (50)	ND
	12/10/96	**65**	**ND (0.5)**	**ND (0.5)**	**ND (0.5)**	**0.6**	**ND (50)**	**ND**
MW-5	09/07/93	37,000	2,700	1,700	870	4,600	1,700 (2)	NA
	12/07/93	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	03/04/94	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	06/06/94	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	11/09/94	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	12/20/94	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	03/29/95	54,000	6,800	3,600	1,500	7,600	7,500	NA
	05/24/95	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	08/30/95	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	11/29/95	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	05/01/96	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	08/05/96	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	12/10/96	**NSFP**	**NSFP**	**NSFP**	**NSFP**	**NSFP**	**NSFP**	**NSFP**
MW-6	09/07/93	10,000	1,300	540	370	1,600	1,400 (2)	NA
	12/07/93	17,000	4,300	1,200	600	2,700	2,400 (2)	NA
	03/04/94	21,000	4,600	1,000	460	1,800	1,800 (4)	NA
	06/06/94	12,000	5,400	350	ND (0.5)	1,200	1,600 (4)	NA
	11/09/94	29,000	4,600	1,600	820	3,600	7,500	NA
	12/20/94	66,000	5,800	2,200	1,100	4,600	1,100	NA
	03/29/95	25,000	8,000	780	450	1,300	1,300	NA
	05/24/95	56,000	1,600	1,300	1,200	7,200	40,000	NA
	08/30/95	68,000	16,000	3,400	1,900	6,800	4,900	NA
	11/29/95	57,000	15,000	2,900	2,500	10,000	ND (900)	NA
	05/01/96	39,500	7,400	2,540	1,270	4,470	ND (50)	1,2-DCE (73.0)
	08/05/96	71,200	22,600	4,000	2,100	7,030	ND (50)	1,2-DCE (157)
	12/10/96	**49,200**	**10,900**	**2,180**	**1,880**	**6,720**	**ND (50)**	1,2-DCE (210)

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TABLE 3
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)	HVOC's (ppb)
MW-7	09/07/93	24,000	6,000	4,800	490	2,300	1,300	NA
	12/07/93	95,000	28,000	24,000	1,600	8,700	2,200	NA
	03/04/94	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	06/06/94	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	11/09/94	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	12/20/94	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	03/29/95	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	05/24/95	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	08/30/95	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	11/29/95	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	05/01/96	**NSFP**	**NSFP**	**NSFP**	**NSFP**	**NSFP**	**NSFP**	**NSFP**
	08/05/96	**NSFP**	**NSFP**	**NSFP**	**NSFP**	**NSFP**	**NSFP**	**NSFP**
	12/10/96	**NSFP**	**NSFP**	**NSFP**	**NSFP**	**NSFP**	**NSFP**	**NSFP**
MW-8	11/29/95	7,400	260	40	140	190	ND (80)	NA
	05/01/96	270	1.02	ND	1.10	1.87	ND (50)	ND
	08/05/96	1,100	22.6	3.4	11.2	12.7	ND (50)	1,1,2,2-TCB (2.5)
	12/10/96	**442**	**17.2**	**2.7**	**5.9**	**5.6**	**ND (50)**	**ND**
MW-9	11/29/95	1,500	590	2	3	20	ND (50)	1,2-DCE (46)
	05/01/96	230	142	0.78	ND	1.17	ND (50)	ND
	08/05/96	180	3.1	0.5	0.5	2.3	ND (50)	ND
	12/10/96	**157,000**	**13.6**	**320**	**135**	**500**	**ND (50)**	**1,2-DCE (5.0)**
MW-10	11/29/95	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	ND (2)	ND (950)	NA
	05/01/96	NSR	NSR	NSR	NSR	NSR	NSR	NSR
	08/05/96	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (50)	Chloroform (13.2)
	12/10/96	**ND (0.5)**	**ND (0.5)**	**ND (0.5)**	**ND (0.5)**	**ND (0.5)**	**ND (50)**	**1,2-DCE (10.1)**
MW-11	11/29/95	3,200	14	31	15	570	ND (50)	NA
	05/01/96	79	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	107	ND
	08/05/96	6,660	5,040	ND (0.5)	51.6	ND (0.5)	ND (50)	1,2-DCE (16.0)
	12/10/96	**68,000**	**800**	**260**	**200**	**1,160**	**ND (50)**	**ND**

NOTES:

1,2-DCE	=	1,2-Dichloroethane
1,1,2,2-TCB		1,1,2,2-Tetrachlorobenzene
TPH-g	=	Total Petroleum Hydrocarbons as gasoline
TPH-d	=	Total Petroleum Hydrocarbons as diesel
µg/L	=	micrograms per liter or parts per billion (ppb)
ND	=	Not Detected (detection limit in parentheses)
NSFP	=	Not Sampled - Free Product present
NSL	=	Not Samples - well could not be located
NSR	=	Not Sampled - well could not be reached
(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)

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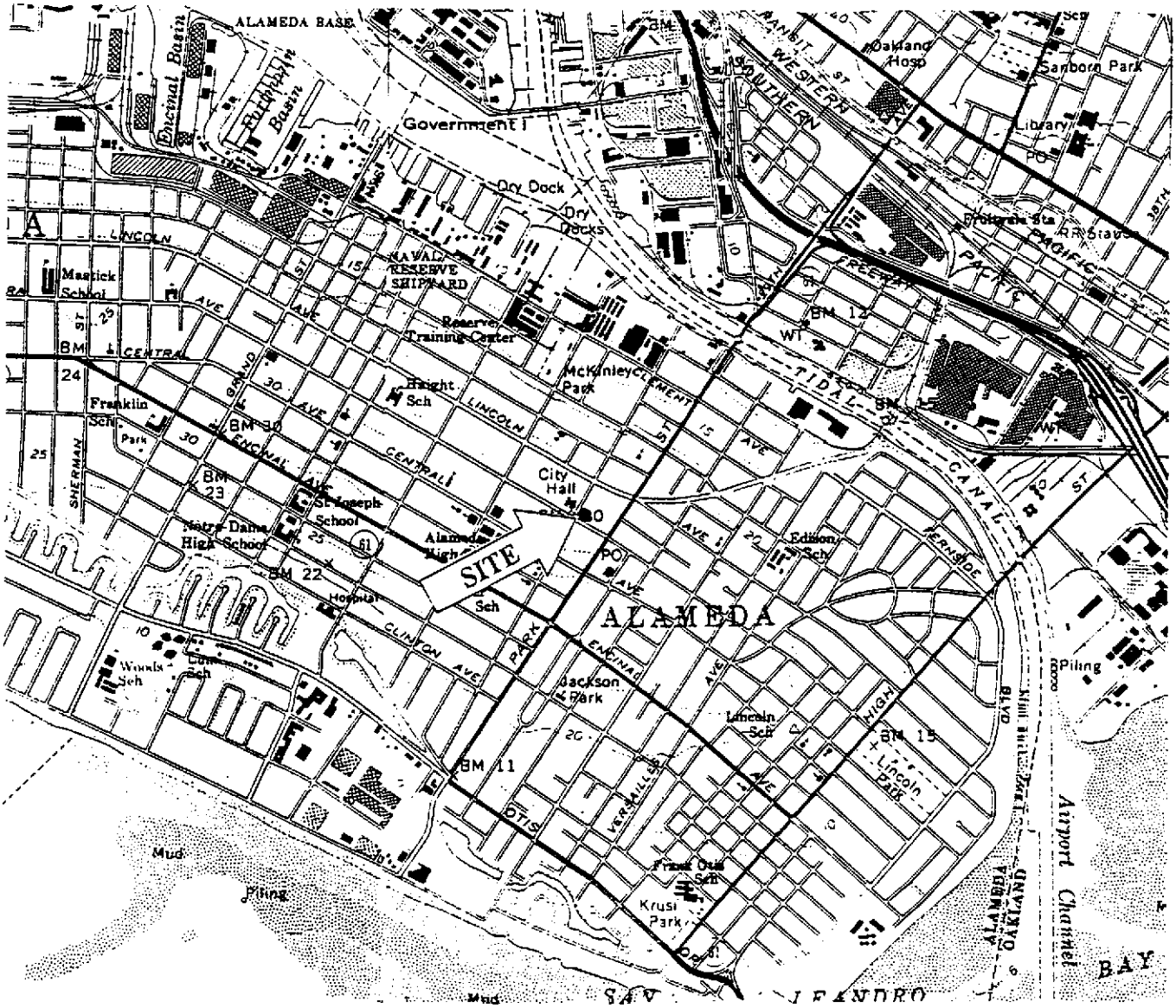
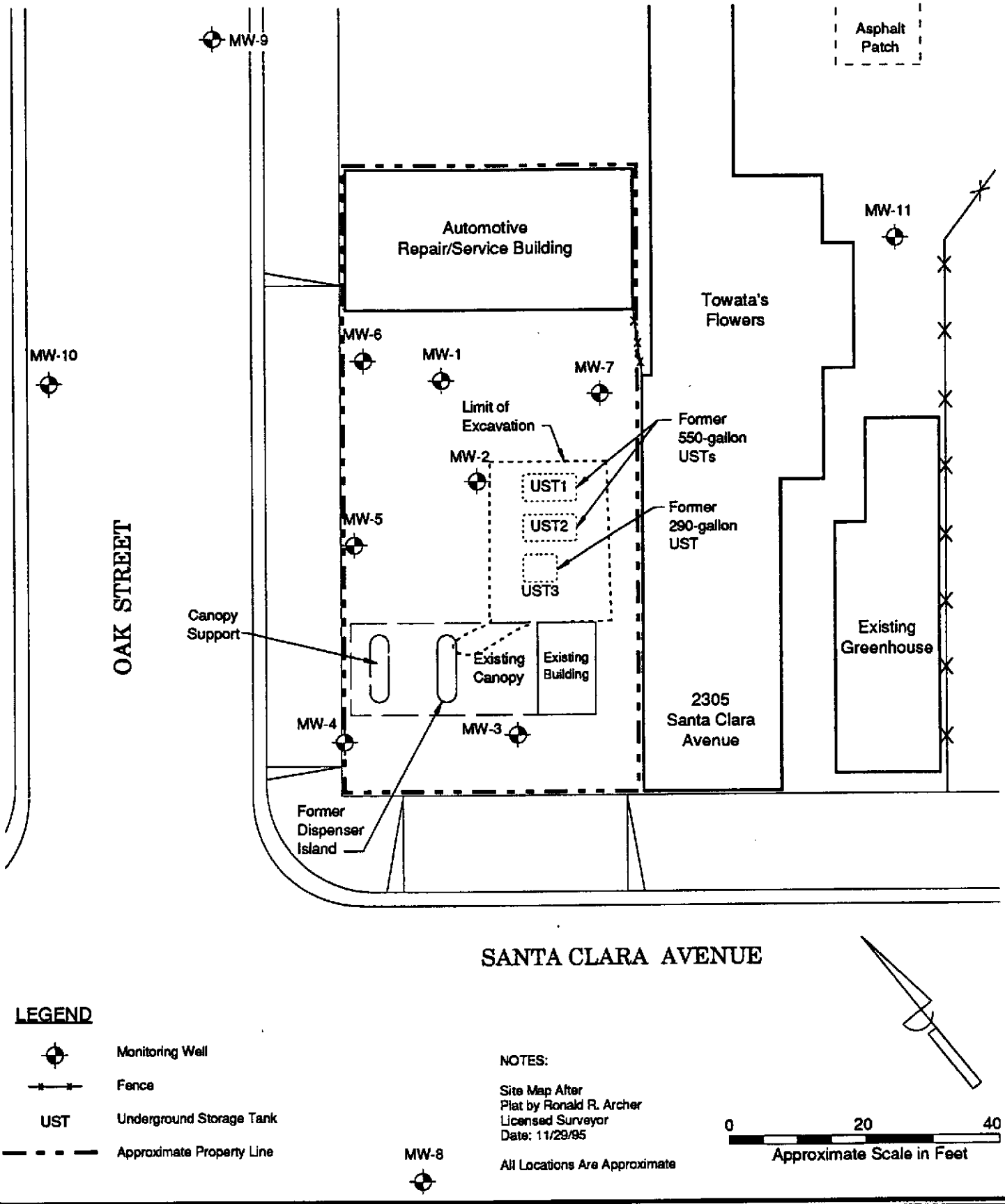


GENERAL NOTES:

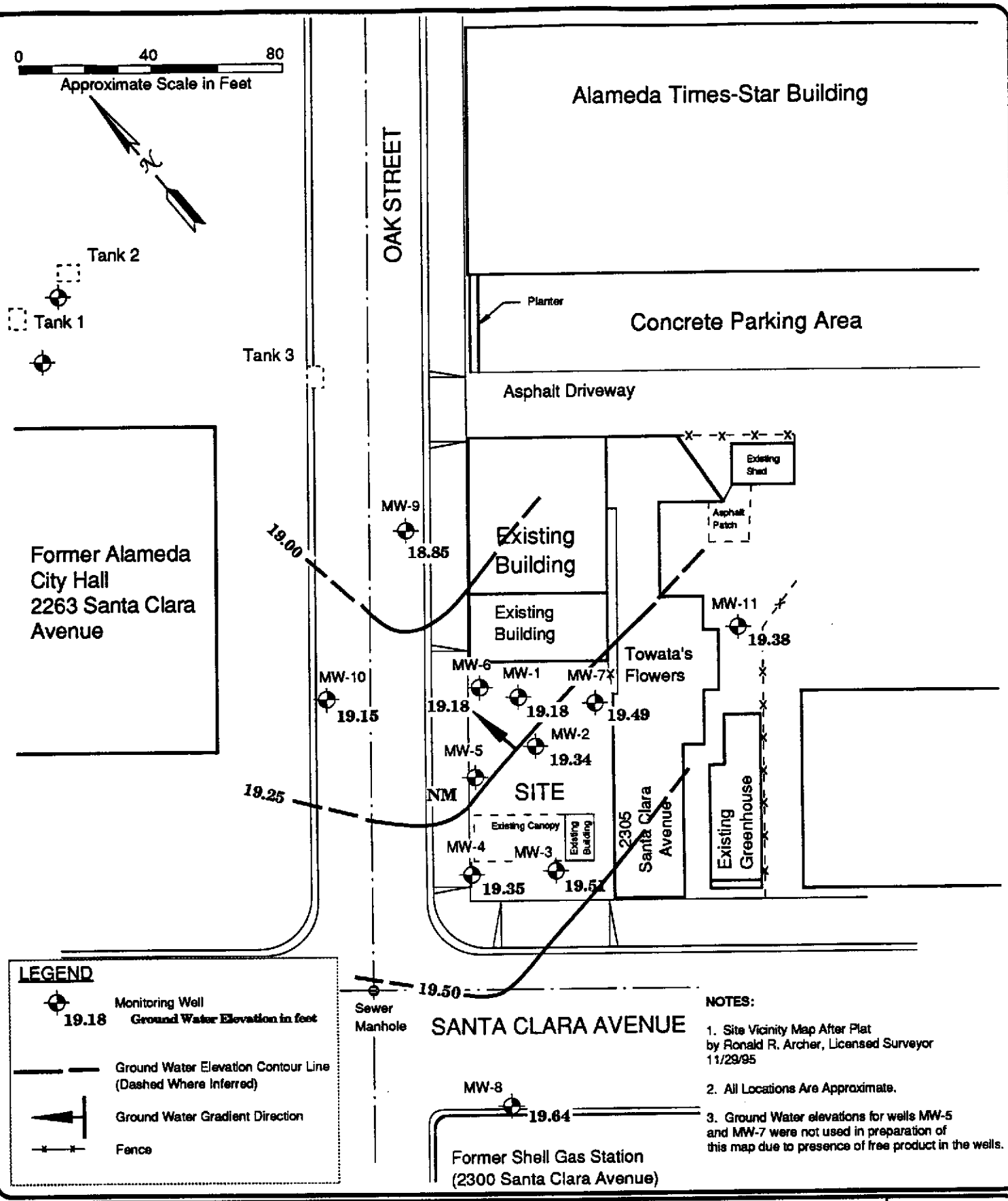
BASE MAP FROM USGS
7.5 MINUTE TOPOGRAPHIC
OAKLAND EAST & WEST, CA

0 2000 4000
Approximate Scale in Feet

FUGRO	DRAWN BY: D. Hada DATE: January 5, 1995 REVISED BY: DATE:	SITE LOCATION MAP Former Bill Chun's Service Station 2301 Santa Clara Avenue Alameda, CA	FIGURE 1 PROJECT NUMBER: 95-37-0431



FUGRO	DRAWN BY: J. Scruggs DATE: December 28, 1995 REVISED BY: J. Paradis DATE: October 31, 1996	SITE MAP Former Bill Chun Service Station 2301 Santa Clara Avenue Alameda, CA	FIGURE 2 PROJECT NUMBER: 95-37-0431



FUGRO

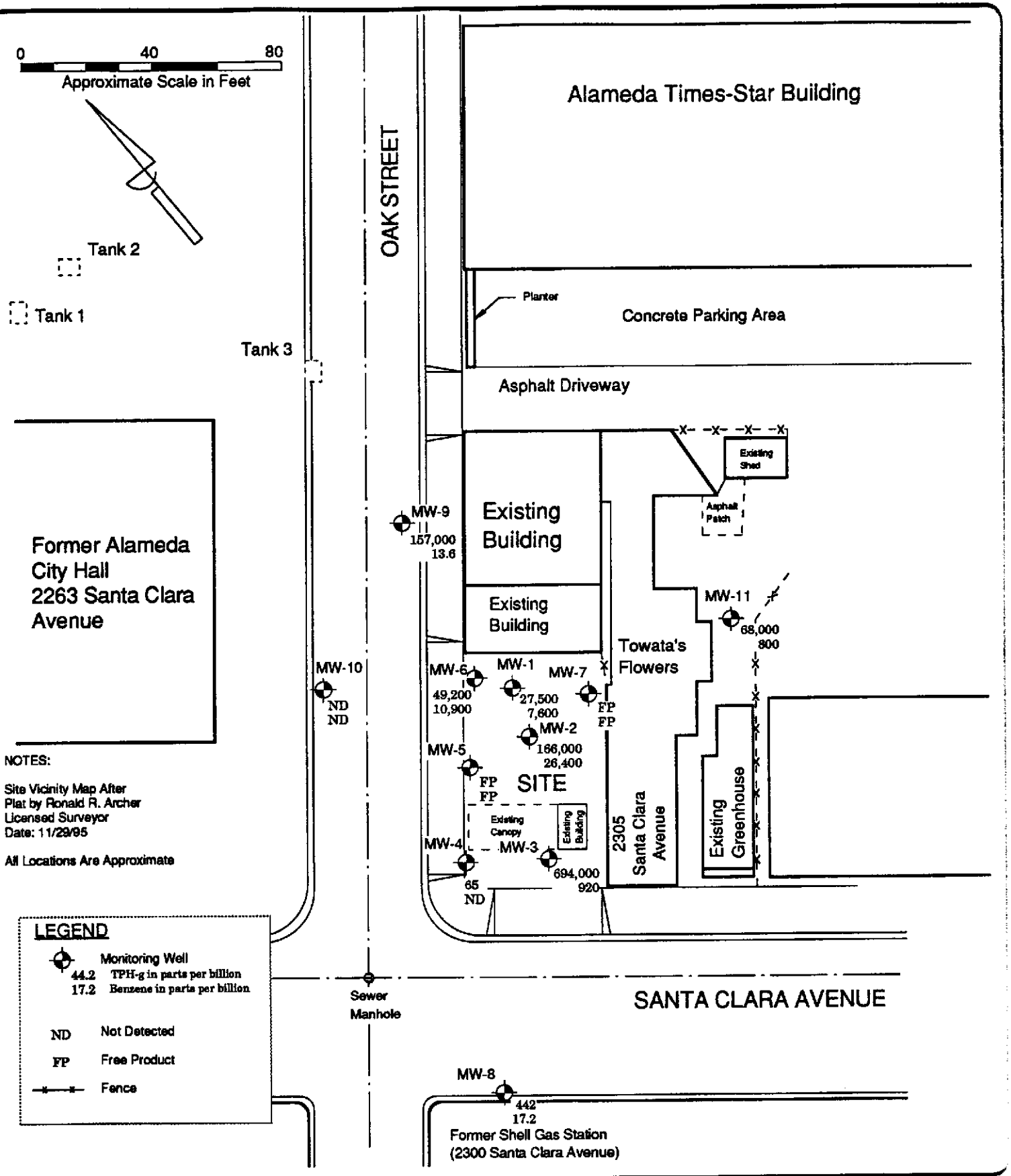
DRAWN BY:	J. Paradis
DATE:	October 31, 1996
REVISED BY:	J. Paradis
DATE:	January 14, 1997

POTENTIOMETRIC SURFACE MAP
December 10, 1996

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

FIGURE
3

PROJECT NUMBER:
95-37-0741



FUGRO

DRAWN BY:	J. Paradis
DATE:	October 31, 1996
REVISED BY:	J. Paradis
DATE:	January 14, 1997

DISTRIBUTION MAP OF TPH-g AND BENZENE IN GROUND WATER December 10, 1996

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

FIGURE
4

PROJECT NUMBER:
95-37-0431

APPENDIX A

ANALYTICAL LABORATORY RESULTS OF GROUNDWATER SAMPLES

EXELCHEM ENVIRONMENTAL LABORATORIES

EXCELCHEM
ENVIRONMENTAL LABS

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

ANALYSIS REPORT

Attention: Mr. Peter Hudson
Fugro West
44 Montgomery Street
San Francisco, CA 94104

Date Sampled: 12-10-96
Date Received: 12-10-96
BTEX Analyzed: 12-16,17-96
TPHg Analyzed: 12-16,17-96

Project : 9537-0741/Former Bill Chun

Matrix: Water

	Benzene PPB	Toluene PPB	Ethyl-benzene PPB	Total Xylenes PPB	TPHg PPB
Reporting Limit:	200	200	200	200	20000
SAMPLE Laboratory Identification:					
MW-1 W1296141	7680	2020	720	720	27500
MW-3 W1296143	920	5980	1060	2960	694000
MW-6 W1296145	10900	2180	1880	6720	49200
MW-11 W1296149	800	260	200	1160	68000

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

12-31-96
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. Peter Hudson
Fugro West
44 Montgomery Street
San Francisco, CA 94104

Date Sampled: 12-10-96
Date Received: 12-10-96
BTEX Analyzed: 12-17-96
TPHg Analyzed: 12-17-96

Project : 9537-0741/Former Bill Chun

Matrix: Water

	Benzene PPB	Toluene PPB	Ethyl-benzene PPB	Total Xylenes PPB	TPHg PPB
Reporting Limit:	2000	2000	200	200	20000
SAMPLE Laboratory Identification:					
MW-2 W1296142	26400	38600	3180	14700	166000

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

12-31-96
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. Peter Hudson
Fugro West
44 Montgomery Street
San Francisco, CA 94104

Date Sampled: 12-10-96
Date Received: 12-10-96
BTEX Analyzed: 12-16-96
TPHg Analyzed: 12-16-96

Project : 9537-0741/Former Bill Chun

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-4 W1296144	ND	ND	ND	[illegible]	65
MW-8 W1296146	17.2	2.7	5.9	[illegible]	442
MW-10 W1296148	ND	ND	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

12-31-96
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. Peter Hudson	Date Sampled:	12-10-96
	Fugro West	Date Received:	12-10-96
	44 Montgomery Street	BTEX Analyzed:	12-16,17-96
	San Francisco, CA 94104	TPHg Analyzed:	12-16-96
Project :	9537-0741/Former Bill Chun	Matrix:	Water

	Benzene PPB	Toluene PPB	Ethyl-benzene PPB	Total Xylenes PPB	TPHg PPB
Reporting Limit:	0.5	200	200	200	20000
SAMPLE Laboratory Identification:					
MW-9 W1296147	13.6	320	135	500	157000

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

12-31-96
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. Peter Hudson
Fugro West
44 Montgomery Street
San Francisco, CA 94104

Date Sampled: 12-10-96
Date Received: 12-10-96
TPHd Analyzed: 12-18,19-96

Project : 9537-0741/Former Bill Chun

Matrix: Water

	Reporting Limit PPB	TPHd Result PPB
SAMPLE Laboratory Identification		
MW-1 W1296141	50	ND*
MW-2 W1296142	50	ND*
MW-3 W1296143	50	ND*
MW-4 W1296144	50	ND
MW-6 W1296145	50	ND*

PPB = Parts per billion = ug/L = micrograms per Liter
ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
* = Diesel may be masked by shorter chained hydrocarbons.

ANALYTICAL PROCEDURES

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

Laboratory Representative

12-31-96
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. Peter Hudson
Fugro West
44 Montgomery Street
San Francisco, CA 94104

Date Sampled: 12-10-96
Date Received: 12-10-96
TPHd Analyzed: 12-18-96

Project : 9537-0741/Former Bill Chun

Matrix: Water

	Reporting Limit PPB	TPHd Result PPB
SAMPLE Laboratory Identification		
MW-8 W1296146	50	ND
MW-9 W1296147	50	ND
MW-10 W1296148	50	ND
MW-11 W1296149	50	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

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

Laboratory Representative

12-3[illegible]
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. Peter Hudson
Fugro West
44 Montgomery Street
San Francisco, CA 94104

Date Sampled: 12-10-96
Date Received: 12-10-96
Date Analyzed: 12-22-96

Project : 9537-0741/Former Bill Chun
Sample ID: MW-1
Lab ID: W1296141

Matrix: Water

Compound	Reporting Limit(ppb)	Measured Value(ppb)
Dichlorodifluoromethane	25	ND
Chloromethane	25	ND
Vinyl Chloride	25	ND
Bromomethane	25	ND
Chloroethane	25	ND
Trichlorofluoromethane	25	ND
1,1-Dichloroethene	25	ND
Methylene Chloride	100	ND
Trans-1,2-Dichloroethene	25	ND
1,1-Dichloroethane	25	ND
Chloroform	25	ND
1,2-Dichloroethane	25	ND
Dibromochloromethane	25	ND
1,1,1-Trichloroethane	25	ND
Carbon Tetrachloride	25	ND
Trichloroethene	25	ND
1,2-Dichloropropane	25	ND
Bromodichloromethane	25	ND
Cis-1,3 Dichloropropene	25	ND
Trans-1,3 Dichloropropene	25	ND
1,1,2-Trichloroethane	25	ND
Tetrachloroethene	25	ND
Chlorobenzene	25	ND
Bromoform	25	ND
1,1,2,2-Tetrachlorobenzene	25	ND
1,3-Dichlorobenzene	25	ND
1,4-Dichlorobenzene	25	ND
1,2-Dichlorobenzene	25	ND

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

Surrogate Recoveries -		
	1,2-Dichloroethane d-4	= 97%
	Toluene d-8	= 99%
	4-Bromofluorobenzene	= 102%

ANALYTICAL PROCEDURES

HV--Halogenated Volatiles are measured using EPA Method 624 which utilizes a purge and trap interfaced to a gas chromatograph (GC) equipped with a mass spectrometer.

Laboratory Representative

12-31-96
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. Peter Hudson
Fugro West
44 Montgomery Street
San Francisco, CA 94104

Date Sampled: 12-10-96
Date Received: 12-10-96
Date Analyzed: 12-22-96

Project : 9537-0741/Former Bill Chun
Sample ID: MW-2
Lab ID: W1296142

Matrix: Water

Compound	Reporting Limit(ppb)	Measured Value(ppb)
Dichlorodifluoromethane	100	ND
Chloromethane	100	ND
Vinyl Chloride	100	ND
Bromomethane	100	ND
Chloroethane	100	ND
Trichlorofluoromethane	100	ND
1,1-Dichloroethene	100	ND
Methylene Chloride	200	ND
Trans-1,2-Dichloroethene	100	ND
1,1-Dichloroethane	100	ND
Chloroform	100	ND
1,2-Dichloroethane	100	ND
Dibromochloromethane	100	ND
1,1,1-Trichloroethane	100	ND
Carbon Tetrachloride	100	ND
Trichloroethene	100	ND
1,2-Dichloropropane	100	ND
Bromodichloromethane	100	ND
Cis-1,3 Dichloropropene	100	ND
Trans-1,3 Dichloropropene	100	ND
1,1,2-Trichloroethane	100	ND
Tetrachloroethene	100	ND
Chlorobenzene	100	ND
Bromoform	100	ND
1,1,2,2-Tetrachlorobenzene	100	ND
1,3-Dichlorobenzene	100	ND
1,4-Dichlorobenzene	100	ND
1,2-Dichlorobenzene	100	ND

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

Surrogate Recoveries -

1,2-Dichloroethane d-4	= 96%
Toluene d-8	= 104%
4-Bromofluorobenzene	= 100%

ANALYTICAL PROCEDURES

HV–Halogenated Volatiles are measured using EPA Method 624 which utilizes a purge and trap interfaced to a gas chromatograph (GC) equipped with a mass spectrometer.

Laboratory Representative

12-31-96
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. Peter Hudson
Fugro West
44 Montgomery Street
San Francisco, CA 94104

Date Sampled: 12-10-96
Date Received: 12-10-96
Date Analyzed: 12-22-96

Project : 9537-0741/Former Bill Chun
Sample ID: MW-3
Lab ID: W1296143

Matrix: Water

Compound	Reporting Limit(ppb)	Measured Value(ppb)
Dichlorodifluoromethane	0.5	ND
Chloromethane	0.5	ND
Vinyl Chloride	0.5	ND
Bromomethane	0.5	ND
Chloroethane	0.5	ND
Trichlorofluoromethane	0.5	ND
1,1-Dichloroethene	0.5	ND
Methylene Chloride	5.0	ND
Trans-1,2-Dichloroethene	0.5	ND
1,1-Dichloroethane	0.5	ND
Chloroform	0.5	ND
1,2-Dichloroethane	0.5	ND
Dibromochloromethane	0.5	ND
1,1,1-Trichloroethane	0.5	ND
Carbon Tetrachloride	0.5	ND
Trichloroethene	0.5	ND
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3 Dichloropropene	0.5	ND
Trans-1,3 Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachlorobenzene	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND

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

Surrogate Recoveries - 1,2-Dichloroethane d-4 = 100%
Toluene d-8 = 101%
4-Bromofluorobenzene = 97%

ANALYTICAL PROCEDURES

HV–Halogenated Volatiles are measured using EPA Method 624 which utilizes a purge and trap interfaced to a gas chromatograph (GC) equipped with a mass spectrometer.

Laboratory Representative

12-31-96
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. Peter Hudson
Fugro West
44 Montgomery Street
San Francisco, CA 94104

Date Sampled: 12-10-96
Date Received: 12-10-96
Date Analyzed: 12-20-96

Project : 9537-0741/Former Bill Chun
Sample ID: MW-4
Lab ID: W1296144

Matrix: Water

Compound	Reporting Limit(ppb)	Measured Value(ppb)
Dichlorodifluoromethane	0.5	ND
Chloromethane	0.5	ND
Vinyl Chloride	0.5	ND
Bromomethane	0.5	ND
Chloroethane	0.5	ND
Trichlorofluoromethane	0.5	ND
1,1-Dichloroethene	0.5	ND
Methylene Chloride	5.0	ND
Trans-1,2-Dichloroethene	0.5	ND
1,1-Dichloroethane	0.5	ND
Chloroform	0.5	ND
1,2-Dichloroethane	0.5	ND
Dibromochloromethane	0.5	ND
1,1,1-Trichloroethane	0.5	ND
Carbon Tetrachloride	0.5	ND
Trichloroethene	0.5	ND
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3 Dichloropropene	0.5	ND
Trans-1,3 Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachlorobenzene	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND

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

Surrogate Recoveries - 1,2-Dichloroethane d-4 = 98%
Toluene d-8 = 101%
4-Bromofluorobenzene = 67%

ANALYTICAL PROCEDURES

HV--Halogenated Volatiles are measured using EPA Method 624 which utilizes a purge and trap interfaced to a gas chromatograph (GC) equipped with a mass spectrometer.

Laboratory Representative

12-31-96
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. Peter Hudson
Fugro West
44 Montgomery Street
San Francisco, CA 94104

Date Sampled: 12-10-96
Date Received: 12-10-96
Date Analyzed: 12-22-96

Project : 9537-0741/Former Bill Chun
Sample ID: MW-6
Lab ID: W1296145

Matrix: Water

Compound	Reporting Limit(ppb)	Measured Value(ppb)
Dichlorodifluoromethane	20	ND
Chloromethane	20	ND
Vinyl Chloride	20	ND
Bromomethane	20	ND
Chloroethane	20	ND
Trichlorofluoromethane	20	ND
1,1-Dichloroethene	20	ND
Methylene Chloride	100	ND
Trans-1,2-Dichloroethene	20	ND
1,1-Dichloroethane	20	ND
Chloroform	20	ND
1,2-Dichloroethane	20	210
Dibromochloromethane	20	ND
1,1,1-Trichloroethane	20	ND
Carbon Tetrachloride	20	ND
Trichloroethene	20	ND
1,2-Dichloropropane	20	ND
Bromodichloromethane	20	ND
Cis-1,3 Dichloropropene	20	ND
Trans-1,3 Dichloropropene	20	ND
1,1,2-Trichloroethane	20	ND
Tetrachloroethene	20	ND
Chlorobenzene	20	ND
Bromoform	20	ND
1,1,2,2-Tetrachlorobenzene	20	ND
1,3-Dichlorobenzene	20	ND
1,4-Dichlorobenzene	20	ND
1,2-Dichlorobenzene	20	ND

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

Surrogate Recoveries -		
	1,2-Dichloroethane d-4	= 98%
	Toluene d-8	= 103%
	4-Bromofluorobenzene	= 101%

ANALYTICAL PROCEDURES

HV--Halogenated Volatiles are measured using EPA Method 624 which utilizes a purge and trap interfaced to a gas chromatograph (GC) equipped with a mass spectrometer.

Laboratory Representative

12-31-96
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. Peter Hudson
Fugro West
44 Montgomery Street
San Francisco, CA 94104

Date Sampled: 12-10-96
Date Received: 12-10-96
Date Analyzed: 12-20-96

Project : 9537-0741/Former Bill Chun
Sample ID: MW-8
Lab ID: W1296146

Matrix: Water

Compound	Reporting Limit(ppb)	Measured Value(ppb)
Dichlorodifluoromethane	0.5	ND
Chloromethane	0.5	ND
Vinyl Chloride	0.5	ND
Bromomethane	0.5	ND
Chloroethane	0.5	ND
Trichlorofluoromethane	0.5	ND
1,1-Dichloroethene	0.5	ND
Methylene Chloride	5.0	ND
Trans-1,2-Dichloroethene	0.5	ND
1,1-Dichloroethane	0.5	ND
Chloroform	0.5	ND
1,2-Dichloroethane	0.5	ND
Dibromochloromethane	0.5	ND
1,1,1-Trichloroethane	0.5	ND
Carbon Tetrachloride	0.5	ND
Trichloroethene	0.5	ND
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3 Dichloropropene	0.5	ND
Trans-1,3 Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachlorobenzene	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND

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

Surrogate Recoveries -

1,2-Dichloroethane d-4	= 101%
Toluene d-8	= 98%
4-Bromofluorobenzene	= 95%

ANALYTICAL PROCEDURES

HV—Halogenated Volatiles are measured using EPA Method 624 which utilizes a purge and trap interfaced to a gas chromatograph (GC) equipped with a mass spectrometer.

Laboratory Representative

12-31-96
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. Peter Hudson
Fugro West
44 Montgomery Street
San Francisco, CA 94104

Date Sampled: 12-10-96
Date Received: 12-10-96
Date Analyzed: 12-22-96

Project : 9537-0741/Former Bill Chun
Sample ID: MW-9
Lab ID: W1296147

Matrix: Water

Compound	Reporting Limit(ppb)	Measured Value(ppb)
Dichlorodifluoromethane	0.5	ND
Chloromethane	0.5	ND
Vinyl Chloride	0.5	ND
Bromomethane	0.5	ND
Chloroethane	0.5	ND
Trichlorofluoromethane	0.5	ND
1,1-Dichloroethene	0.5	ND
Methylene Chloride	5.0	ND
Trans-1,2-Dichloroethene	0.5	ND
1,1-Dichloroethane	0.5	ND
Chloroform	0.5	ND
1,2-Dichloroethane	0.5	5.0
Dibromochloromethane	0.5	ND
1,1,1-Trichloroethane	0.5	ND
Carbon Tetrachloride	0.5	ND
Trichloroethene	0.5	ND
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3 Dichloropropene	0.5	ND
Trans-1,3 Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachlorobenzene	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND

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

Surrogate Recoveries - 1,2-Dichloroethane d-4 = 103%
Toluene d-8 = 102%
4-Bromofluorobenzene = 105%

ANALYTICAL PROCEDURES

HV--Halogenated Volatiles are measured using EPA Method 624 which utilizes a purge and trap interfaced to a gas chromatograph (GC) equipped with a mass spectrometer.

Laboratory Representative

12-31-96
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. Peter Hudson
Fugro West
44 Montgomery Street
San Francisco, CA 94104

Date Sampled: 12-10-96
Date Received: 12-10-96
Date Analyzed: 12-20-96

Project : 9537-0741/Former Bill Chun
Sample ID: MW-10
Lab ID: W1296148

Matrix: Water

Compound	Reporting Limit(ppb)	Measured Value(ppb)
Dichlorodifluoromethane	0.5	ND
Chloromethane	0.5	ND
Vinyl Chloride	0.5	ND
Bromomethane	0.5	ND
Chloroethane	0.5	ND
Trichlorofluoromethane	0.5	ND
1,1-Dichloroethene	0.5	ND
Methylene Chloride	5.0	ND
Trans-1,2-Dichloroethene	0.5	ND
1,1-Dichloroethane	0.5	ND
Chloroform	0.5	10.1
1,2-Dichloroethane	0.5	ND
Dibromochloromethane	0.5	ND
1,1,1-Trichloroethane	0.5	ND
Carbon Tetrachloride	0.5	ND
Trichloroethene	0.5	ND
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3 Dichloropropene	0.5	ND
Trans-1,3 Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachlorobenzene	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND

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

Surrogate Recoveries -

1,2-Dichloroethane d-4	= 93%
Toluene d-8	= 101%
4-Bromofluorobenzene	= 96%

ANALYTICAL PROCEDURES

HV–Halogenated Volatiles are measured using EPA Method 624 which utilizes a purge and trap interfaced to a gas chromatograph (GC) equipped with a mass spectrometer.

Laboratory Representative

12-31-96
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. Peter Hudson
Fugro West
44 Montgomery Street
San Francisco, CA 94104

Date Sampled: 12-10-96
Date Received: 12-10-96
Date Analyzed: 12-20-96

Project : 9537-0741/Former Bill Chun
Sample ID: MW-11
Lab ID: W1296149

Matrix: Water

Compound	Reporting Limit(ppb)	Measured Value(ppb)
Dichlorodifluoromethane	0.5	ND
Chloromethane	0.5	ND
Vinyl Chloride	0.5	ND
Bromomethane	0.5	ND
Chloroethane	0.5	ND
Trichlorofluoromethane	0.5	ND
1,1-Dichloroethene	0.5	ND
Methylene Chloride	5.0	ND
Trans-1,2-Dichloroethene	0.5	ND
1,1-Dichloroethane	0.5	ND
Chloroform	0.5	ND
1,2-Dichloroethane	0.5	ND
Dibromochloromethane	0.5	ND
1,1,1-Trichloroethane	0.5	ND
Carbon Tetrachloride	0.5	ND
Trichloroethene	0.5	ND
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3 Dichloropropene	0.5	ND
Trans-1,3 Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachlorobenzene	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND

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

Surrogate Recoveries -		
	1,2-Dichloroethane d-4	= 100%
	Toluene d-8	= 98%
	4-Bromofluorobenzene	= 99%

ANALYTICAL PROCEDURES

HV--Halogenated Volatiles are measured using EPA Method 624 which utilizes a purge and trap interfaced to a gas chromatograph (GC) equipped with a mass spectrometer.

Laboratory Representative

12-31-96
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

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

QA/QC REPORT

Attention: Mr. Peter Hudson
Fugro West
44 Montgomery Street
San Francisco, CA 94104

Date Analyzed: 12-17-96
Matrix: Water

Project : 9537-0741/Former Bill Chun

	Benzene PPB	Toluene PPB	Ethyl-benzene PPB	Total Xylenes PPB
Reporting Limit:	0.5	0.5	0.5	0.5
QA/QC PARAMETER				
Matrix Blank	ND	ND	ND	ND
PERCENT RECOVERIES				
Matrix Spike	111%	111%	143%	151%
Matrix Spike Duplicate	120%	121%	152%	160%

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

All surrogate recoveries were within 30% of target values.
Spikes & Spike Duplicates were each spiked with 250 ng BTEX standard.

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 602 which utilizes a gas chromatograph (GC) equipped with a photoionization detector (PID).

Laboratory Representative

12-31-96
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

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

QA/QC REPORT

Attention: Mr. Peter Hudson
Fugro West
44 Montgomery Street
San Francisco, CA 94104

Date Analyzed: 12-19-96
Matrix: Water

Project : 9537-0741/Former Bill Chun

	TPHd PPB
Reporting Limit:	50
QA/QC PARAMETER	
Matrix Blank	ND
PERCENT RECOVERIES	
Laboratory Control Spike	103%
Laboratory Control Spike Duplicate	95%

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

Spikes & Spike Duplicates were each spiked with 5000 ug of diesel standard.

ANALYTICAL PROCEDURES

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

Laboratory Representative

12-31-96
Date Reported

ENVIRONMENTAL LABS

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

QA/QC REPORT

Attention: Mr. Peter Hudson
Fugro West
44 Montgomery Street
San Francisco, CA 94104

Date Analyzed: 12-20-96
Matrix: Water

Project : 9537-0741/Former Bill Chun

Compound	Matrix Spike % Recovery	Matrix Spike Duplicate % Recovery
1,1-Dichloroethene	102%	97%
Benzene	98%	103%
Trichloroethene	98%	103%
Toluene	96%	103%
Chlorobenzene	48%	52%

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

ANALYTICAL PROCEDURES

Volatile Organic Compounds are measured using EPA Method 624 which utilizes a purge and trap interfaced to a gas chromatograph (GC) equipped with a mass selective detector.

Laboratory Representative

12-31-96
Date Reported

Excelchem
Environmental Labs

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

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Peter Hudson
Phone #: (415) 296-1044
Company/Address: Fugro West, 44 Montgomery St. San Francisco 94104
FAX #: 296-0544
Project Number: 9537-0741
P.O.#:
Project Name: Former Bill Chan
Project Location: 2301 Santa Clara Ave Alameda CA
Sampler Signature:

ANALYSIS REQUEST 1296051

TAT

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
MW-1	12-10-96	12:40	X		X		X		X		X	
MW-2		11:50										
MW-3		11:15										
MW-4		11:35										
MW-6		12:15										
MW-8		10:20										
MW-9		9:50										
MW-10		9:25										
MW-11		10:15										

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. (Y)	TOTAL (Y)	RUSH SERVICE (12 hr) or (24 hr)	EXPEDITED SERVICE (48 hr) or (1 wk)	STANDARD SERVICE (2wk)
	X	X					X						W	1	2	9	6	1	4	1				X
													W	1	2	9	6	1	4	2				
													W	1	2	9	6	1	4	3				
													W	1	2	9	6	1	4	4				
													W	1	2	9	6	1	4	5				
													W	1	2	9	6	1	4	6				
													W	1	2	9	6	1	4	7				
													W	1	2	9	6	1	4	8				
													W	1	2	9	6	1	4	9				

Relinquished by:	Date	Time	Received by:
	12-10-96	3:46	
Relinquished by	Date	Time	Received by:
Relinquished by	Date	Time	Received by Laboratory:
	12/10/96	1550	

Remarks:

Bill To: Fugro