



Consulting • Engineering • Remediation

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Project No. 1475001

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**Quarterly 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 March 5 and March 6, 1997. 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 analyses 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

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groundwater. Concentrations of gasoline-range hydrocarbons were detected in soils at depths of 9.5 to 11 feet below ground surface (bgs).

Fugro West Geo Environmental, Inc. 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

Table 1 provides a summary of results obtained from samples collected in March, 1997, as well as maximum contaminant levels (MCLs) mandated by the state of California. Laboratory data reports and chain of custody forms are included in Appendix A. Monitoring wells MW-8, MW-9, MW-10, and MW-11 were sampled on March 5, 1997, and monitoring wells MW-1, MW-2, MW-3, MW-4, and MW-6 were sampled on March 6, 1997. Monitoring wells MW-5 and MW-7 were not sampled due to the presence of free product in 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). Groundwater is encountered at depths averaging approximately 8.75 feet below ground surface (bgs), and elevations range between 19.05 ft and 19.64 feet.

The highest concentrations of TPH-g were found in the sample collected from monitoring well MW-2 (316,000 ppb), and the lowest in the sample collected from monitoring well MW-4 and 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-4 and MW-10 (Figure 4).

Concentrations of TPH-d were detected in one of the samples collected during the March monitoring event. The sample collected from monitoring well MW-8 contained levels of TPH-d reported at 525 ppb.

Table 1. Groundwater elevations and analytical results obtained from samples collected at the Former Bill Chun Service Station on March 5-6, 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	19.48	86,900	18,900	7,730	1,470	3,320	ND (50)	ND
MW-2	19.57	316,000	36,600	55,900	4,160	16,100	ND (50)	ND
MW-3	19.69	9,060	136	244	34	126	ND (50)	ND
MW-4	19.54	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (50)	ND
MW-6	19.39	65,300	10,300	5,770	1,940	5,770	ND (50)	ND
MW-8	19.64	765	33.2	7.2	9.3	11.1	525	ND
MW-9	19.05	2,710	940	4.6	20.2	12.4	ND (50)	1,2-DCE (19.2)
MW-10	19.26	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (50)	ND
MW-11	19.63	340	4.2	0.6	3.1	5.3	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

HVOC = Halogenated Volatile Organic Carbons

NA = Not Applicable - no MCL has been established for these constituents.

ND = Not Detected

MCL = Maximum Contaminant Level. Numbers reported for California primary MCLs.

a. numbers in parenthesis represent the reported concentration

b. Sample chromatograph does not match laboratory Diesel #2 standard chromatogram. Diesel may be masked by shorter chained hydrocarbons.

Concentrations of 1,2-dichloroethane (1,2-DCE) were below the method detection limit in samples collected from monitoring wells MW-6, and MW-10 indicating a decrease since the December sampling event; however, 1,2-DCE was detected in the sample collected from monitoring wells and MW-9 at 19.2 ppb.

Following is a comparison of current data with data obtained from the December 1996 monitoring event. Historical data including those from this monitoring event are provided in Tables 2 and 3 at the end of this report.

- Groundwater elevations have increased an average of 0.20 feet since the last monitoring event in December of 1996.
- Samples collected from monitoring wells MW-3 and MW-11 indicated a decrease in concentrations of TPH-g and BTEX from the August monitoring event. The sample collected from monitoring well MW-9 also decreases in each of the constituents monitored for with the exception benzene.

- The sample collected from monitoring wells MW-1, MW-2, and MW-8 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 decrease of TPH-g and total xylenes to below the method detection limit (ND).
- The sample collected from monitoring well MW-6 indicated an increase in concentrations of TPH-g, toluene, and ethylbenzene and a decrease in concentrations of benzene and xylene.

Concentrations of TPH-g and BTEX were relatively consistent with previous sampling events. However, these constituents appear to have increased in the area of the subject property. In addition, the comparison with California MCL's indicates that concentrations of these constituents are considerably higher than levels stated by the State of California.

REMARKS

Examination of Table 2 indicates that the presence of volatile organic compounds has not occurred in monitoring wells MW-3, MW-4, MW-5, and MW-7 since the inclusion of this parameter as part of quarterly monitoring in May of 1996. Therefore, ENSR recommends that this parameter not be included in the analysis of samples collected from these wells.

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.

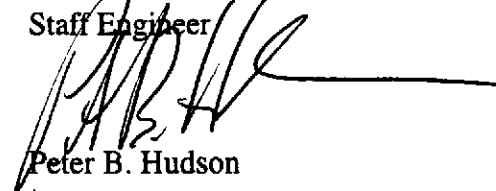
We appreciate the opportunity to provide environmental consulting services to Mr. Wayne Chun. If there are any questions or comments regarding this report, or if we can assist you in any other matter, please contact us at (510) 748-6700.

Sincerely,

ENSR



Robyn K. Simonsen, EIT
Staff Engineer



Peter B. Hudson
Project Geologist

PBH/pbh

cc: Juliet Shin, Alameda County Division of Environmental Health

**TABLE 2
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	
	12/20/94		9.00	--	0.00	19.53	
	03/29/95		8.44	--	0.00	20.09	
	05/24/95		9.01	--	0.00	19.52	
	08/30/95		9.52	--	0.00	19.01	
	11/29/95		28.49 (2)	9.96	--	0.00	18.53
	05/01/96		9.19	--	0.00	19.30	
	08/05/96	9.63	--	0.00	18.86		
12/10/96	9.31	--	0.00	19.18			
03/05/97	9.01	--	0.00	19.48			
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			



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 continued	12/20/94	28.47 (2)	NM(1)	NM	NM	NM
	03/29/95		8.26	--	0.00	20.25
	05/24/95		8.89	--	0.00	19.62
	08/30/95		9.41	--	0.00	19.10
	11/29/96		9.96	--	0.00	18.53
	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
	03/05/97		8.90		0.00	19.57
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
03/05/97		9.09		0.00	19.69	

**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			
03/05/97	8.99	--	0.00	19.54			
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	

**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 continued	11/29/95	28.33 (2)	9.84	9.60	0.24	18.68	
	05/01/96		8.87	8.86	0.01	19.47	
	08/05/96		9.37	9.36	0.01	18.97	
	12/10/96		8.15	8.14	0.01	19.39	
	03/05/97		8.75	--	0.00	19.58	
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		
03/05/97	8.97	--	0.00	19.39			
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	

**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 continued	12/20/94	28.44 (2)	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		9.86	9.84	0.02	18.60
	05/01/96		8.94	8.85	0.09	19.57
	08/05/96		9.48	9.45	0.03	19.03
	12/10/96		8.96	8.95	0.01	19.49
	03/05/97		8.77	--	0.00	19.67
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
	03/05/97		8.77	--	0.00	19.76
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
	03/05/97		8.40	--	0.00	19.05
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
	03/05/97		8.06	--	0.00	19.26
MW-11	11/29/95	28.56 (2)	10.16	--	0.00	18.40
	05/01/96		9.12	--	0.00	19.44
	08/05/96		9.62	--	0.00	18.94
	12/10/96		9.18	--	0.00	19.38
	03/05/97		8.93	--	0.00	19.63

Table Notes on Following Page

ENSR

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
03/06/97	86,900	18,900	7,730	1,470	3,320	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	166,00	26,400	38,600	3,180	14,700	ND (50)	ND
03/06/97	316,000	36,600	55,900	4,160	16,100	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
03/06/97	9,060	136	244	34	126	ND (50)	ND	

**TABLE 3
GROUNDWATER ANALYTICAL RESULTS
Former Bill Chun Service Station
2301 Santa Clara Avenue
Alameda, California**

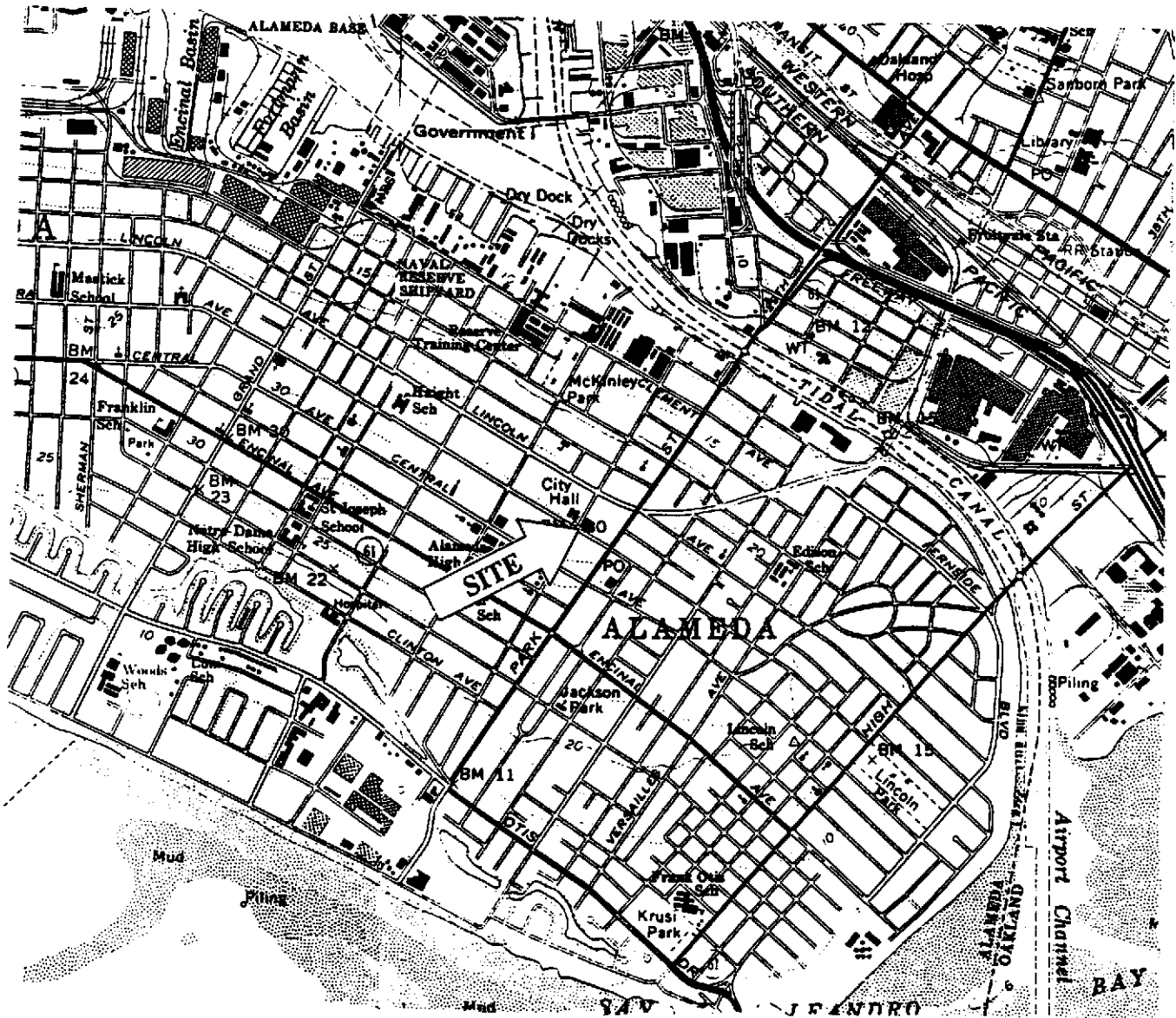
Well	Date	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TPH-d (µg/L)	HVOC's (ppb)
MW-4	09/07/93	440	2.7	1.2	1	1.9	330 (2)	NA
	12/07/93	610	6.6	0.5	0.61	2.5	460 (2)	NA
	03/04/94	110	ND (0.5)	ND (0.5)	ND (0.5)	0.63	56 (5)	NA
	06/06/94	68	ND (0.5)	ND (0.5)	ND (0.5)	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
	03/06/97	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	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
	03/06/97	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)
	03/06/97	65,300	10,300	2,500	1,940	5,770	ND (50)	ND

**TABLE 3
GROUNDWATER ANALYTICAL RESULTS
Former Bill Chun Service Station
2301 Santa Clara Avenue
Alameda, California**

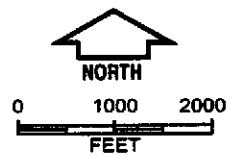
Well	Date	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TPH-d (µg/L)	HVOC's (ppb)
MW-7	09/07/93	24,000	6,000	4,800	490	2,300	1,300	NA
	12/07/93	95,000	28,000	24,000	1,600	8,700	2,200	NA
	03/04/94	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP	NSFP
	06/06/94	NSFP	NSFP	NSFP	NSFP	NSFP	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
3/05/96	NSFP	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
	03/05/97	765	33.2	7.2	9.3	11.1	525	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)
	03/05/97	2,710	940	4.6	20.2	12.4	ND (50)	1,2-DCE (19.2)
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)
	03/05/97	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (50)	ND
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
	03/05/97	340	4.2	0.6	3.1	5.3	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)



USGS 7.5 MINUTE
OAKLAND EAST & WEST,
CALIFORNIA QUADRANGLE



ENSR.

DRAWN BY: *J. Paradis*

REVISED BY:

DATE: *April 4, 1997*

DATE:

SITE LOCATION MAP

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

FIGURE

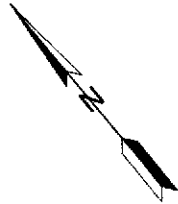
1

PROJECT NUMBER

95-37-0741

0 40 80

Approximate Scale in Feet



Tank 2

Tank 1

Tank 3

OAK STREET

Alameda Times-Star Building

Planter

Concrete Parking Area

Asphalt Driveway

Former Alameda City Hall
2263 Santa Clara Avenue

MW-9

19.05

Existing Building

Existing Building

19.2

MW-10

19.26

MW-6

19.39

MW-1

19.48

MW-7

19.67

Towata's Flowers

MW-11

19.63

19.4

MW-5

19.57

SITE

MW-4

19.54

MW-3

19.69

Existing Canopy

Building

2305 Santa Clara Avenue

Existing Greenhouse

19.6

Sewer Manhole

SANTA CLARA AVENUE

MW-8

19.76

Former Shell Gas Station
(2300 Santa Clara Avenue)

NOTES:

1. Site Vicinity Map After Plat by Ronald R. Archer, Licensed Surveyor 11/29/95
2. All Locations Are Approximate.
3. Ground Water elevations for wells MW-5 and MW-7 were not used in preparation of this map due to presence of free product in the wells.

LEGEND



Monitoring Well

19.76 Ground Water Elevation in feet

Ground Water Elevation Contour Line (Dashed Where Inferred)



Ground Water Gradient Direction



Fence

ENSR

POTENTIOMETRIC SURFACE MAP
March 5, 1997

FIGURE
2

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

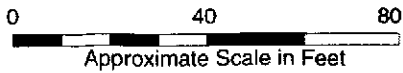
PROJECT NUMBER
95-37-0741

DRAWN BY: J. Paradis

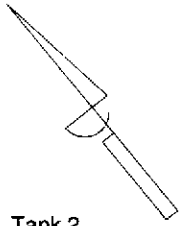
REVISED BY: J. Paradis

DATE: October 31, 1996

DATE: April 21, 1997



Approximate Scale in Feet



Tank 2

Tank 1

Tank 3

Former Alameda City Hall
2263 Santa Clara Avenue

NOTES:
Site Vicinity Map After
Plat by Ronald R. Archer
Licensed Surveyor
Date: 11/29/95
All Locations Are Approximate

LEGEND

Monitoring Well
44.2 TPH-g in parts per billion
17.2 Benzene in parts per billion

ND Not Detected

FP Free Product

Fence

OAK STREET

Alameda Times-Star Building

Planter

Concrete Parking Area

Asphalt Driveway

Existing Building

Existing Building

Towata's Flowers

Existing Greenhouse

2305 Santa Clara Avenue

MW-9
2,710
940

MW-10
ND
ND

MW-6
10,300
10,900

MW-1
86,900
18,900

MW-7
316,000
36,600

MW-5
FP
FP

MW-4
ND
ND

MW-3
9,060
136

MW-11
340
4.2

Sewer Manhole

SANTA CLARA AVENUE

MW-8
765
33.2

Former Shell Gas Station
(2300 Santa Clara Avenue)

ENSR

DISTRIBUTION MAP OF TPH-g AND BENZENE IN GROUND WATER March 5, 1997

FIGURE 3

DRAWN BY: J. Paradis

REVISED BY: J. Paradis

DATE: October 31, 1996

DATE: April 14, 1997

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

PROJECT NUMBER
95-37-0741

ENSR

APPENDIX A

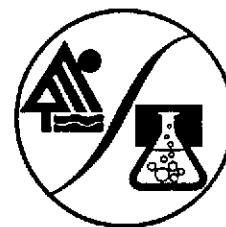
**ANALYTICAL LABORATORY RESULTS OF
GROUNDWATER SAMPLES**

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 ENSR/FUGRO 1420 Harbor Bay Parkway #160 Alameda, CA 94502	Date Sampled :	03-06-97
		Date Received:	03-07-97
		BTEX Analyzed:	03-13-97
		TPHg Analyzed:	03-13-97
		TPHd Analyzed:	03-11-97
Project :	9537-0741/Bill Chun	Matrix:	Water

	Benzene <u>PPB</u>	Toluene <u>PPB</u>	Ethyl- benzene <u>PPB</u>	Total Xylenes <u>PPB</u>	TPHg <u>PPB</u>	TPHd <u>PPB</u>
Reporting Limit:	100	100	100	100	10000	50

SAMPLE

Laboratory Identification:

MW1 W0397083	18900	7730	1470	3320	86800	ND*
MW6 W0297087	10300	2500	1940	5770	65300	ND*

PPB= Parts per billion = ug/L = micrograms per liter

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


* = Sample chromatogram does not match our Diesel #2 standard chromatogram. Diesel may be masked by shorter chained hydrocarbons.

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.

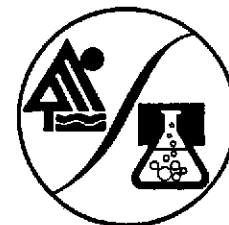
TPHd--Total petroleum hydrocarbons as diesel (high boiling points) are measured by extraction using EPA Method 3510 followed by modified EPA 8015 with direct sample injection into a GC equipped with an FID.


Laboratory Representative

03-25-97
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 :	03-06-97
	ENSR/FUGRO	Date Received:	03-07-97
	1420 Harbor Bay Parkway #160	BTEX Analyzed:	03-13-97
	Alameda, CA 94502	TPHg Analyzed:	03-13-97
		TPHd Analyzed:	03-11-97
Project :	9537-0741/Bill Chun	Matrix:	Water

	Benzene	Toluene	Ethyl- benzene	Total Xylenes	TPHg	TPHd
	<u>PPB</u>	<u>PPB</u>	<u>PPB</u>	<u>PPB</u>	<u>PPB</u>	<u>PPB</u>
Reporting Limit:	1000	1000	1000	1000	100000	50

SAMPLE

Laboratory Identification:

MW2	36600	55900	4160	16100	316000	ND*
W0397084						

PPB= Parts per billion = ug/L = micrograms per liter

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

* = Sample chromatogram does not match our Diesel #2 standard chromatogram. Diesel may be masked by shorter chained hydrocarbons.

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.

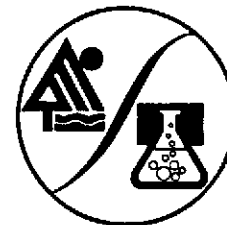
TPHd--Total petroleum hydrocarbons as diesel (high boiling points) are measured by extraction using EPA Method 3510 followed by modified EPA 8015 with direct sample injection into a GC equipped with an FID.


Laboratory Representative

03-25-97
Date Reported

EXCELICHEM ENVIRONMENTAL LABS

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



ANALYSIS REPORT

Attention:	Mr. Peter Hudson ENSR/FUGRO 1420 Harbor Bay Parkway #160 Alameda, CA 94502	Date Sampled :	03-06-97
		Date Received:	03-07-97
		BTEX Analyzed:	03-12-97
		TPHg Analyzed:	03-12-97
		TPHd Analyzed:	03-11-97
Project :	9537-0741/Bill Chun	Matrix:	Water

	Benzene <u>PPB</u>	Toluene <u>PPB</u>	Ethyl- benzene <u>PPB</u>	Total Xylenes <u>PPB</u>	TPHg <u>PPB</u>	TPHd <u>PPB</u>
Reporting Limit:	10	10	10	10	1000	50

SAMPLE

Laboratory Identification:

MW3 W0397085	136	244	34	126	9060	ND*
-----------------	-----	-----	----	-----	------	-----

PPB= Parts per billion = ug/L = micrograms per liter

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

* = Sample chromatogram does not match our Diesel #2 standard chromatogram. Diesel may be masked by shorter chained hydrocarbons.

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).

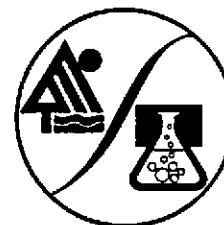
TPHg--Total petroleum hydrocarbons as gasoline (low-to-medium boiling points) are analyzed by using modified EPA Method 8015, which utilizes a GC equipped with an FID.

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

03-25-97
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 ENSR/FUGRO 1420 Harbor Bay Parkway #160 Alameda, CA 94502	Date Sampled :	03-05,06-97
		Date Received:	03-07-97
		BTEX Analyzed:	03-12,13-97
		TPHg Analyzed:	03-12,13-97
		TPHd Analyzed:	03-11-97
Project :	9537-0741/Bill Chun	Matrix:	Water

	Benzene <u>PPB</u>	Toluene <u>PPB</u>	Ethyl- benzene <u>PPB</u>	Total Xylenes <u>PPB</u>	TPHg <u>PPB</u>	TPHd <u>PPB</u>
Reporting Limit:	0.5	0.5	0.5	0.5	50	50

SAMPLE

Laboratory Identification:

MW4 W0397086	ND	ND	ND	ND	ND	ND
MW8 W0397088	33.2	7.2	9.3	11.1	765	525
MW10 W0397090	ND	ND	ND	ND	ND	ND
MW11 W0397091	4.2	0.6	3.1	5.3	340	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.

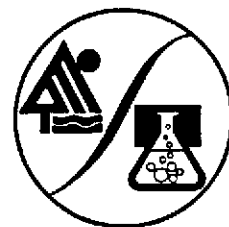
TPHd--Total petroleum hydrocarbons as diesel (high boiling points) are measured by extraction using EPA Method 3510 followed by modified EPA 8015 with direct sample injection into a GC equipped with an FID.


Laboratory Representative

03-25-97
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 : 03-05-97
ENSR/FUGRO Date Received: 03-07-97
1420 Harbor Bay Parkway #160 BTEX Analyzed: 03-13-97
Alameda, CA 94502 TPHg Analyzed: 03-13-97
TPHd Analyzed: 03-11-97
Project : 9537-0741/Bill Chun Matrix: Water

	Benzene	Toluene	Ethyl- benzene	Total Xylenes	TPHg	TPHd
	<u>PPB</u>	<u>PPB</u>	<u>PPB</u>	<u>PPB</u>	<u>PPB</u>	<u>PPB</u>
Reporting Limit:	5.0	5.0	5.0	5.0	500	50

SAMPLE

Laboratory Identification:

MW9	940	4.6	20.2	12.4	2710	ND
W0397089						

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).

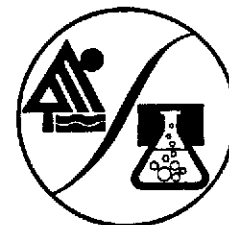
TPHg--Total petroleum hydrocarbons as gasoline (low-to-medium boiling points) are analyzed by using modified EPA Method 8015, which utilizes a GC equipped with an FID.

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

03-25-97
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 : 03-06-97
ENSR/FUGRO Date Received: 03-07-97
1420 Harbor Bay Parkway #160 Date Analyzed: 03-23-97
Alameda, CA 94502

Project : 9537-0741/Bill Chun Matrix: Water
Sample ID: MW1
Lab ID: W0397083

COMPOUND	Reporting Measured		COMPOUND	Reporting Measured	
	Limit PPB	Value PPB		Limit PPB	Value PPB
Dichlorodifluoromethane	100	ND	2-Butanone	100	ND
Chloromethane	100	ND	Bromodichloromethane	100	ND
Vinyl Chloride	100	ND	Cis-1,3-Dichloropropene	100	ND
Bromomethane	100	ND	Trans-1,3-Dichloropropene	100	ND
Chloroethane	100	ND	1,1,2-Trichloroethane	100	ND
Trichlorofluoromethane	100	ND	Trans-1,4-dichloro-2-butene	100	ND
Acetone	100	ND	Toluene	100	7540
1,1-Dichloroethene	100	ND	Tetrachloroethene	100	ND
Methylene Chloride	1000	ND	2-Hexanone	100	ND
Carbon disulfide	100	ND	4-Methyl-2-pentanone	100	ND
Trans-1,2-Dichloroethene	100	ND	Chlorobenzene	100	ND
1,1-Dichloroethane	100	ND	Ethylbenzene	100	1500
Chloroform	100	ND	M+P-Xylene	100	2760
1,2-Dichloroethane	100	ND	O-Xylene	100	1250
Iodomethane	100	ND	Styrene	100	ND
Dibromochloromethane	100	ND	Bromoform	100	ND
1,1,1-Trichloroethane	100	ND	1,1,2,2-Tetrachloroethane	100	ND
Carbon Tetrachloride	100	ND	1,3-Dichlorobenzene	100	ND
Benzene	100	18300	1,4-Dichlorobenzene	100	ND
Trichloroethene	100	ND	1,2-Dichlorobenzene	100	ND
1,2-Dichloropropane	100	ND			

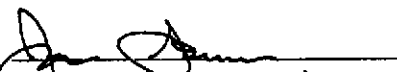
ppb = parts per billion = ug/L = micrograms per liter

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

Surrogate Recoveries -
1,2-Dichloroethane-d4 87%
Toluene-d8 95%
4-Bromofluorobenzene 100%

ANALYTICAL PROCEDURES

Organic 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

03-25-97
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 : 03-06-97
ENSR/FUGRO	Date Received: 03-07-97
1420 Harbor Bay Parkway #160	Date Analyzed: 03-23-97
Alameda, CA 94502	

Project : 9537-0741/Bill Chun	Matrix: Water
Sample ID: MW2	
Lab ID: W0397084	

COMPOUND	Reporting Measured		COMPOUND	Reporting Measured	
	Limit PPB	Value PPB		Limit PPB	Value PPB
Dichlorodifluoromethane	500	ND	2-Butanone	500	ND
Chloromethane	500	ND	Bromodichloromethane	500	ND
Vinyl Chloride	500	ND	Cis-1,3-Dichloropropene	500	ND
Bromomethane	500	ND	Trans-1,3-Dichloropropene	500	ND
Chloroethane	500	ND	1,1,2-Trichloroethane	500	ND
Trichlorofluoromethane	500	ND	Trans-1,4-dichloro-2-butene	500	ND
Acetone	500	ND	Toluene	500	50700
1,1-Dichloroethene	500	ND	Tetrachloroethene	500	ND
Methylene Chloride	5000	ND	2-Hexanone	500	ND
Carbon disulfide	500	ND	4-Methyl-2-pentanone	500	ND
Trans-1,2-Dichloroethene	500	ND	Chlorobenzene	500	ND
1,1-Dichloroethane	500	ND	Ethylbenzene	500	4000
Chloroform	500	ND	M+P-Xylene	500	14100
1,2-Dichloroethane	500	ND	O-Xylene	500	6570
Iodomethane	500	ND	Styrene	500	ND
Dibromochloromethane	500	ND	Bromoform	500	ND
1,1,1-Trichloroethane	500	ND	1,1,2,2-Tetrachloroethane	500	ND
Carbon Tetrachloride	500	ND	1,3-Dichlorobenzene	500	ND
Benzene	500	35400	1,4-Dichlorobenzene	500	ND
Trichloroethene	500	ND	1,2-Dichlorobenzene	500	ND
1,2-Dichloropropane	500	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-d4	89%
	Toluene-d8	95%
	4-Bromofluorobenzene	99%

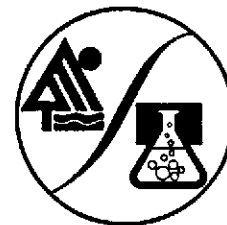
ANALYTICAL PROCEDURES

Organic 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

03-25-97
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 :	03-06-97
	ENSR/FUGRO	Date Received:	03-07-97
	1420 Harbor Bay Parkway #160	Date Analyzed:	03-23-97
	Alameda, CA 94502		

Project :	9537-0741/Bill Chun	Matrix:	Water
Sample ID:	MW3		
Lab ID:	W0397085		

COMPOUND	Reporting Measured		COMPOUND	Reporting Measured	
	Limit PPB	Value PPB		Limit PPB	Value PPB
Dichlorodifluoromethane	0.5	ND	2-Butanone	0.5	ND
Chloromethane	0.5	ND	Bromodichloromethane	0.5	ND
Vinyl Chloride	0.5	ND	Cis-1,3-Dichloropropene	0.5	ND
Bromomethane	0.5	ND	Trans-1,3-Dichloropropene	0.5	ND
Chloroethane	0.5	ND	1,1,2-Trichloroethane	0.5	ND
Trichlorofluoromethane	0.5	ND	Trans-1,4-dichloro-2-butene	0.5	ND
Acetone	0.5	ND	Toluene	0.5	1.5
1,1-Dichloroethene	0.5	ND	Tetrachloroethene	0.5	ND
Methylene Chloride	5.0	ND	2-Hexanone	0.5	ND
Carbon disulfide	0.5	ND	4-Methyl-2-pentanone	0.5	ND
Trans-1,2-Dichloroethene	0.5	ND	Chlorobenzene	0.5	ND
1,1-Dichloroethane	0.5	ND	Ethylbenzene	0.5	2.1
Chloroform	0.5	ND	M+P-Xylene	0.5	1.7
1,2-Dichloroethane	0.5	ND	O-Xylene	0.5	1.0
Iodomethane	0.5	ND	Styrene	0.5	ND
Dibromochloromethane	0.5	ND	Bromoform	0.5	ND
1,1,1-Trichloroethane	0.5	ND	1,1,1,2-Tetrachloroethane	0.5	ND
Carbon Tetrachloride	0.5	ND	1,3-Dichlorobenzene	0.5	ND
Benzene	0.5	0.8	1,4-Dichlorobenzene	0.5	ND
Trichloroethene	0.5	ND	1,2-Dichlorobenzene	0.5	ND
1,2-Dichloropropane	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-d4	89%
	Toluene-d8	96%
	4-Bromofluorobenzene	98%

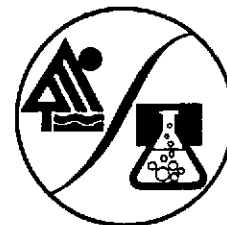
ANALYTICAL PROCEDURES

Organic 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

03-25-97
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 : 03-06-97
ENSR/FUGRO	Date Received: 03-07-97
1420 Harbor Bay Parkway #160	Date Analyzed: 03-20-97
Alameda, CA 94502	

Project : 9537-0741/Bill Chun	Matrix: Water
Sample ID: MW4	
Lab ID: W0397086	

COMPOUND	Reporting Limit PPB	Measured Value PPB	COMPOUND	Reporting Limit PPB	Measured Value PPB
Dichlorodifluoromethane	0.5	ND	2-Butanone	0.5	ND
Chloromethane	0.5	ND	Bromodichloromethane	0.5	ND
Vinyl Chloride	0.5	ND	Cis-1,3-Dichloropropene	0.5	ND
Bromomethane	0.5	ND	Trans-1,3-Dichloropropene	0.5	ND
Chloroethane	0.5	ND	1,1,2-Trichloroethane	0.5	ND
Trichlorofluoromethane	0.5	ND	Trans-1,4-dichloro-2-butene	0.5	ND
Acetone	0.5	ND	Toluene	0.5	ND
1,1-Dichloroethene	0.5	ND	Tetrachloroethene	0.5	ND
Methylene Chloride	5.0	ND	2-Hexanone	0.5	ND
Carbon disulfide	0.5	ND	4-Methyl-2-pentanone	0.5	ND
Trans-1,2-Dichloroethene	0.5	ND	Chlorobenzene	0.5	ND
1,1-Dichloroethane	0.5	ND	Ethylbenzene	0.5	ND
Chloroform	0.5	ND	M+P-Xylene	0.5	ND
1,2-Dichloroethane	0.5	ND	O-Xylene	0.5	ND
Iodomethane	0.5	ND	Styrene	0.5	ND
Dibromochloromethane	0.5	ND	Bromoform	0.5	ND
1,1,1-Trichloroethane	0.5	ND	1,1,2,2-Tetrachloroethane	0.5	ND
Carbon Tetrachloride	0.5	ND	1,3-Dichlorobenzene	0.5	ND
Benzene	0.5	ND	1,4-Dichlorobenzene	0.5	ND
Trichloroethene	0.5	ND	1,2-Dichlorobenzene	0.5	ND
1,2-Dichloropropane	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-d4	88%
	Toluene-d8	96%
	4-Bromofluorobenzene	98%

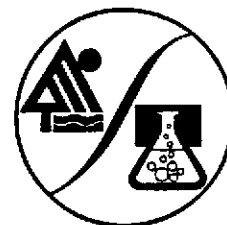
ANALYTICAL PROCEDURES

Organic 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

03-25-97
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 : 03-06-97
ENSR/FUGRO	Date Received: 03-07-97
1420 Harbor Bay Parkway #160	Date Analyzed: 03-23-97
Alameda, CA 94502	

Project : 9537-0741/Bill Chun	Matrix: Water
Sample ID: MW6	
Lab ID: W0397087	

COMPOUND	Reporting Limit PPB	Measured Value PPB	COMPOUND	Reporting Limit PPB	Measured Value PPB
Dichlorodifluoromethane	50	ND	2-Butanone	50	ND
Chloromethane	50	ND	Bromodichloromethane	50	ND
Vinyl Chloride	50	ND	Cis-1,3-Dichloropropene	50	ND
Bromomethane	50	ND	Trans-1,3-Dichloropropene	50	ND
Chloroethane	50	ND	1,1,2-Trichloroethane	50	ND
Trichlorofluoromethane	50	ND	Trans-1,4-dichloro-2-butene	50	ND
Acetone	50	ND	Toluene	50	2180
1,1-Dichloroethene	50	ND	Tetrachloroethene	50	ND
Methylene Chloride	500	ND	2-Hexanone	50	ND
Carbon disulfide	50	ND	4-Methyl-2-pentanone	50	ND
Trans-1,2-Dichloroethene	50	ND	Chlorobenzene	50	ND
1,1-Dichloroethane	50	ND	Ethylbenzene	50	1770
Chloroform	50	ND	M+P-Xylene	50	3700
1,2-Dichloroethane	50	73	O-Xylene	50	1910
Iodomethane	50	ND	Styrene	50	ND
Dibromochloromethane	50	ND	Bromoform	50	ND
1,1,1-Trichloroethane	50	ND	1,1,2,2-Tetrachloroethane	50	ND
Carbon Tetrachloride	50	ND	1,3-Dichlorobenzene	50	ND
Benzene	50	9050	1,4-Dichlorobenzene	50	ND
Trichloroethene	50	ND	1,2-Dichlorobenzene	50	ND
1,2-Dichloropropane	50	ND			

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

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Surrogate Recoveries -	1,2-Dichloroethane-d4	89%
	Toluene-d8	94%
	4-Bromofluorobenzene	102%

ANALYTICAL PROCEDURES

Organic 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

03-25-97
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 : 03-05-97
ENSR/FUGRO Date Received: 03-07-97
1420 Harbor Bay Parkway #160 Date Analyzed: 03-20-97
Alameda, CA 94502

Project : 9537-0741/Bill Chun Matrix: Water
Sample ID: MW8
Lab ID: W0397088

COMPOUND	Reporting Measured		COMPOUND	Reporting Measured	
	Limit PPB	Value PPB		Limit PPB	Value PPB
Dichlorodifluoromethane	0.5	ND	2-Butanone	0.5	ND
Chloromethane	0.5	ND	Bromodichloromethane	0.5	ND
Vinyl Chloride	0.5	ND	Cis-1,3-Dichloropropene	0.5	ND
Bromomethane	0.5	ND	Trans-1,3-Dichloropropene	0.5	ND
Chloroethane	0.5	ND	1,1,2-Trichloroethane	0.5	ND
Trichlorofluoromethane	0.5	ND	Trans-1,4-dichloro-2-butene	0.5	ND
Acetone	0.5	ND	Toluene	0.5	5.6
1,1-Dichloroethene	0.5	ND	Tetrachloroethene	0.5	ND
Methylene Chloride	5.0	ND	2-Hexanone	0.5	ND
Carbon disulfide	0.5	ND	4-Methyl-2-pentanone	0.5	ND
Trans-1,2-Dichloroethene	0.5	ND	Chlorobenzene	0.5	ND
1,1-Dichloroethane	0.5	ND	Ethylbenzene	0.5	6.9
Chloroform	0.5	ND	M+P-Xylene	0.5	8.5
1,2-Dichloroethane	0.5	ND	O-Xylene	0.5	0.6
Iodomethane	0.5	ND	Styrene	0.5	ND
Dibromochloromethane	0.5	ND	Bromoform	0.5	ND
1,1,1-Trichloroethane	0.5	ND	1,1,2,2-Tetrachloroethane	0.5	ND
Carbon Tetrachloride	0.5	ND	1,3-Dichlorobenzene	0.5	ND
Benzene	0.5	24.3	1,4-Dichlorobenzene	0.5	ND
Trichloroethene	0.5	ND	1,2-Dichlorobenzene	0.5	ND
1,2-Dichloropropane	0.5	ND			

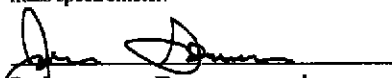
ppb = parts per billion = ug/L = micrograms per liter

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

Surrogate Recoveries -
1,2-Dichloroethane-d4 88%
Toluene-d8 95%
4-Bromofluorobenzene 102%

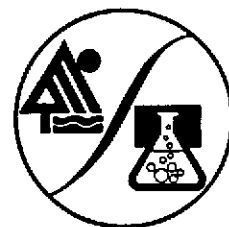
ANALYTICAL PROCEDURES

Organic 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

03-25-97
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 : 03-05-97
ENSR/FUGRO Date Received: 03-07-97
1420 Harbor Bay Parkway #160 Date Analyzed: 03-19,20-97
Alameda, CA 94502

Project : 9537-0741/Bill Chun Matrix: Water
Sample ID: MW9
Lab ID: W0397089

COMPOUND	Reporting Measured		COMPOUND	Reporting Measured	
	Limit PPB	Value PPB		Limit PPB	Value PPB
Dichlorodifluoromethane	5.0	ND	2-Butanone	5.0	ND
Chloromethane	5.0	ND	Bromodichloromethane	5.0	ND
Vinyl Chloride	5.0	ND	Cis-1,3-Dichloropropene	5.0	ND
Bromomethane	5.0	ND	Trans-1,3-Dichloropropene	5.0	ND
Chloroethane	5.0	ND	1,1,2-Trichloroethane	5.0	ND
Trichlorofluoromethane	5.0	ND	Trans-1,4-dichloro-2-butene	5.0	ND
Acetone	5.0	ND	Toluene	5.0	11.6
1,1-Dichloroethene	5.0	ND	Tetrachloroethene	5.0	ND
Methylene Chloride	50	ND	2-Hexanone	5.0	ND
Carbon disulfide	5.0	ND	4-Methyl-2-pentanone	5.0	ND
Trans-1,2-Dichloroethene	5.0	ND	Chlorobenzene	5.0	ND
1,1-Dichloroethane	5.0	ND	Ethylbenzene	5.0	75.4
Chloroform	5.0	ND	M+P-Xylene	5.0	62.2
1,2-Dichloroethane	5.0	19.2	O-Xylene	5.0	ND
Iodomethane	5.0	ND	Styrene	5.0	ND
Dibromochloromethane	5.0	ND	Bromoform	5.0	ND
1,1,1-Trichloroethane	5.0	ND	1,1,2,2-Tetrachloroethane	5.0	ND
Carbon Tetrachloride	5.0	ND	1,3-Dichlorobenzene	5.0	ND
Benzene	5.0	3490	1,4-Dichlorobenzene	5.0	ND
Trichloroethene	5.0	ND	1,2-Dichlorobenzene	5.0	ND
1,2-Dichloropropane	5.0	ND			

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Surrogate Recoveries -
1,2-Dichloroethane-d4 89%
Toluene-d8 95%
4-Bromofluorobenzene 103%

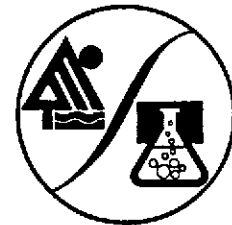
ANALYTICAL PROCEDURES

Organic 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

03-25-97
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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 : 03-05-97
ENSR/FUGRO Date Received: 03-07-97
1420 Harbor Bay Parkway #160 Date Analyzed: 03-20-97
Alameda, CA 94502

Project : 9537-0741/Bill Chun Matrix: Water
Sample ID: MW10
Lab ID: W0397090

COMPOUND	Reporting Measured		COMPOUND	Reporting Measured	
	Limit PPB	Value PPB		Limit PPB	Value PPB
Dichlorodifluoromethane	0.5	ND	2-Butanone	0.5	ND
Chloromethane	0.5	ND	Bromodichloromethane	0.5	ND
Vinyl Chloride	0.5	ND	Cis-1,3-Dichloropropene	0.5	ND
Bromomethane	0.5	ND	Trans-1,3-Dichloropropene	0.5	ND
Chloroethane	0.5	ND	1,1,2-Trichloroethane	0.5	ND
Trichlorofluoromethane	0.5	ND	Trans-1,4-dichloro-2-butene	0.5	ND
Acetone	0.5	ND	Toluene	0.5	ND
1,1-Dichloroethene	0.5	ND	Tetrachloroethene	0.5	ND
Methylene Chloride	5.0	ND	2-Hexanone	0.5	ND
Carbon disulfide	0.5	ND	4-Methyl-2-pentanone	0.5	ND
Trans-1,2-Dichloroethene	0.5	ND	Chlorobenzene	0.5	ND
1,1-Dichloroethane	0.5	ND	Ethylbenzene	0.5	ND
Chloroform	0.5	ND	M+P-Xylene	0.5	ND
1,2-Dichloroethane	0.5	ND	O-Xylene	0.5	ND
Iodomethane	0.5	ND	Styrene	0.5	ND
Dibromochloromethane	0.5	ND	Bromoform	0.5	ND
1,1,1-Trichloroethane	0.5	ND	1,1,2,2-Tetrachloroethane	0.5	ND
Carbon Tetrachloride	0.5	ND	1,3-Dichlorobenzene	0.5	ND
Benzene	0.5	ND	1,4-Dichlorobenzene	0.5	ND
Trichloroethene	0.5	ND	1,2-Dichlorobenzene	0.5	ND
1,2-Dichloropropane	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-d4 86%
Toluene-d8 93%
4-Bromofluorobenzene 102%

ANALYTICAL PROCEDURES

Organic 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

03-25-97
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 : 03-05-97
ENSR/FUGRO Date Received: 03-07-97
1420 Harbor Bay Parkway #160 Date Analyzed: 03-20-97
Alameda, CA 94502

Project : 9537-0741/Bill Chun Matrix: Water
Sample ID: MW11
Lab ID: W0397091

COMPOUND	Reporting Measured		COMPOUND	Reporting Measured	
	Limit PPB	Value PPB		Limit PPB	Value PPB
Dichlorodifluoromethane	0.5	ND	2-Butanone	0.5	ND
Chloromethane	0.5	ND	Bromodichloromethane	0.5	ND
Vinyl Chloride	0.5	ND	Cis-1,3-Dichloropropene	0.5	ND
Bromomethane	0.5	ND	Trans-1,3-Dichloropropene	0.5	ND
Chloroethane	0.5	ND	1,1,2-Trichloroethane	0.5	ND
Trichlorofluoromethane	0.5	ND	Trans-1,4-dichloro-2-butene	0.5	ND
Acetone	0.5	ND	Toluene	0.5	ND
1,1-Dichloroethene	0.5	ND	Tetrachloroethene	0.5	ND
Methylene Chloride	5.0	ND	2-Hexanone	0.5	ND
Carbon disulfide	0.5	ND	4-Methyl-2-pentanone	0.5	ND
Trans-1,2-Dichloroethene	0.5	ND	Chlorobenzene	0.5	ND
1,1-Dichloroethane	0.5	ND	Ethylbenzene	0.5	2.8
Chloroform	0.5	ND	M+P-Xylene	0.5	5.3
1,2-Dichloroethane	0.5	ND	O-Xylene	0.5	1.1
Iodomethane	0.5	ND	Styrene	0.5	ND
Dibromochloromethane	0.5	ND	Bromoform	0.5	ND
1,1,1-Trichloroethane	0.5	ND	1,1,2,2-Tetrachloroethane	0.5	ND
Carbon Tetrachloride	0.5	ND	1,3-Dichlorobenzene	0.5	ND
Benzene	0.5	2.5	1,4-Dichlorobenzene	0.5	ND
Trichloroethene	0.5	ND	1,2-Dichlorobenzene	0.5	ND
1,2-Dichloropropane	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-d4 88%
Toluene-d8 94%
4-Bromofluorobenzene 102%

ANALYTICAL PROCEDURES

Organic 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

03-25-97
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
ENSR/FUGRO
1420 Harbor Bay Parkway #160
Alameda, CA 94502

Date Analyzed: 03-13-97
Matrix: Water

Project : 9537-0741/Bill Chun

	Benzene <u>PPB</u>	Toluene <u>PPB</u>	Ethyl- benzene <u>PPB</u>	Total Xylenes <u>PPB</u>
Reporting Limit:	0.5	0.5	0.5	0.5

QA/QC PARAMETER

Matrix Blank	ND	ND	ND	ND
--------------	----	----	----	----

PERCENT RECOVERIES

Matrix Spike	103%	104%	103%	104%
Matrix Spike Duplicate	102%	103%	103%	103%

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

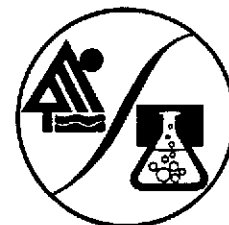
BTEX-- Benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are measured by extraction using EPA Method 5030 followed by analysis using EPA Method 602 which utilizes a gas chromatograph (GC) equipped with a photoionization detector (PID).


Laboratory Representative

03-25-97
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 Date Analyzed: 03-11-97
ENSR/FUGRO Matrix: Water
1420 Harbor Bay Parkway #160
Alameda, CA 94502

Project : 9537-0741/Bill Chun

Reporting Limit: TPHd
PPB
50

QA/QC PARAMETER

Matrix Blank ND

PERCENT RECOVERIES

Laboratory Control Spike 78%

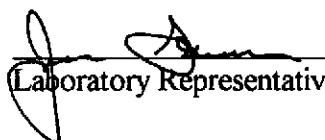
Laboratory Control Spike Duplicate 67%

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

03-25-97
Date Reported

**EXCELCHEM
ENVIRONMENTAL LABS**

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



QA/OC REPORT

Attention: Mr. Peter Hudson
ENSR/FUGRO
1420 Harbor Bay Parkway #160
Alameda, CA 94502

Date Analyzed:
Matrix:

03-19-97
Water

Project : 9537-0741/Bill Chun

<u>Compound</u>	<u>Laboratory Control Spike % Recovery</u>	<u>Laboratory Control Spike Duplicate % Recovery</u>
1,1-Dichloroethene	84%	85%
Benzene	102%	101%
Trichloroethene	107%	105%
Toluene	95%	94%
Chlorobenzene	100%	99%

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

Organic Volatiles 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

03-25-97
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 # **(510)748-6700**

ANALYSIS REQUEST 397037

TAT

Company/Address: **ENSA (EPA) 1420 HARBOR BAY PARKWAY STE 160 ALAMEDA, CA 94502** FAX # **(510)748-6199**

Project Number: **9537-0741** P.O.#: Project Name: **BILL CHUN**

Project Location: **2301 SANTA CLARA AVE ALAMEDA, CA.** Sampler Signature: *Jace Kelly*

Sample ID	Sampling		Container				Method Preserved				Matrix		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 601/6010	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	W.E.T. (✓)		RUSH SERVICE (12 hr) or (24 hr)	EXPEDITED SERVICE (48 hr) or (1 wk)	STANDARD SERVICE (2wk)		
	DATE	TIME	VOA	SLEEVE	1L GLASS	1L PLASTIC	HCl	HNO ₃	ICE	NONE	WATER	SOIL																	TOTAL (✓)						
mw1	3/16/97	0940	4	1			X		X	X			X	X																					X
mw2		0950																																	
mw3		1005																																	
mw4		0915																																	
mw6		0925																																	
mw8	3/5/97	1350																																	
mw9		1405																																	
mw10		1335																																	
mw11		1440																																	

Relinquished by: *Jace Kelly* Date Time: **3/17/97 1100**
 Received by: _____
 Relinquished by: _____ Date Time: _____
 Received by: _____
 Relinquished by: _____ Date Time: **3/7/97 1000**
 Received by Laboratory: *Nandy Reese*

Remarks:
 Bill To:



Sequoia
Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834

(650) 364-9600
(510) 988-9600
(916) 921-9600

FAX (650) 364-9233
FAX (510) 988-9673
FAX (916) 921-0600

Cambria
1144 65th St. Suite C
Oakland, CA 94608
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara

Received: 01/28/98

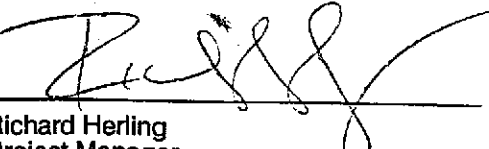
Lab Proj. ID: 9801F35

Reported: 02/12/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 7 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL



Richard Herling
Project Manager





SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 9801F35

Date: 1-26-98

Page 3 of 3

Site Address: 2300 Santa Clara, Alameda

WIC#: 204-0072-0908

Shell Engineer:

Alex Perez

Phone No.:

510 335 5027

Fax #: 510 335 5029

Consultant Name & Address: CAMBRIA ENVIRONMENTAL

1144 65th St. Suite C, Oakland, CA 94608

Consultant Contact:

Aubrey Cool

Phone No.:

510 420-0700

Fax #: 420-9170

Comments:

Sampled by: Aubrey K Cool

Printed Name: Aubrey K. Cool

Analysis Required

TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal She 11 4B-28	Combination TPH 8015 & BTEX 8020 & MTD6	Pb	Asbestos	Container Size	Preparation Used	Composite Y/N
	✓		✓		✓	✓				
		✓	✓		✓	✓				
					✓	✓				
					✓	✓				
					✓	✓				
					✓	✓				
					✓	✓				Y

LAB: Sequoia

CHECK ONE (1) BOX ONLY	C1/D1	DURR AROUND TIME
G.W. Monitoring <input type="checkbox"/>	4441	24 hours <input type="checkbox"/>
Site Investigation <input checked="" type="checkbox"/>	4441	48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	4442	16 Days <input type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	4443	Other <u>15 DAY</u>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	4452	
Water Rem. or Sys. O & M <input type="checkbox"/>	4453	NOTE: Notify lab as soon as possible at 24/48 hrs. TAT.
Other <input type="checkbox"/>		

UST AGENCY: Alameda County

Sample ID	Date	TIME (Judge)	Soil	Water	Air	No. of confs.
GP-F-5.0'	1-26-98	14:20	X			1
GP-F-10.0'	1-26-98	14:30	X			1
GP-F	1-26-98	14:35		X		6 VOA's 2 Liters 1 plastic
GP-G	1-26-98	16:35		X		6 VOA's 1 Liter 1 plastic
GP-G-7.0'	1-26-98	1600	X			1
GP-G-9.5'	1-26-98	1605	X			1
GP-H-6.0'	1-26-98	1630	X			1
GP-H-9.5'	1-26-98	1640	X			1

MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
	HOLD
	HOLD
	See attached Shell Protocol

Relinquished By (signature): <u>Aubrey K Cool</u>	Printed Name: <u>Aubrey Cool</u>
Relinquished By (signature):	Printed Name:
Relinquished By (signature):	Printed Name:

Date: 1-28-98	Received (signature): <u>[Signature]</u>
Time: 10:10	Received (signature):
Date:	Received (signature):
Time:	Received (signature): <u>[Signature]</u>

Printed Name: <u>MIKE BROMON</u>	Date: 1-28-98
Printed Name:	Time: 10:10
Printed Name:	Date:
Printed Name: <u>ABAD</u>	Date: 1/28/98
	Time: 10:10

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS