

March 8, 1999

4008

SECOR
International Incorporated

Mr. Barney M. Chan
Hazardous Materials Specialist
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

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INCORPORATED
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5 09 PM

QUARTERLY GROUNDWATER MONITORING REPORT FOR FOURTH QUARTER 1998, 580 JULIE ANN WAY, OAKLAND, CALIFORNIA, ST ID #4008, FOR METZ BAKING COMPANY

Dear Mr. Chan:

SECOR International Incorporated (SECOR) is pleased to submit this Quarterly Groundwater Monitoring Report presenting the results of groundwater monitoring conducted at 580 Julie Ann Way in Oakland, California (the Site, see Figure 1, Site Location Map). We are submitting this document on behalf of the Metz Baking Company (Metz) which formerly operated the Site as a San Francisco French Bread Company (SFFBC) baking and distribution facility. The scope of work performed was in accordance with the additional requirement by the Alameda County Environmental Health Services (ACEHS) in a November 7, 1997 letter. This report presents monitoring well sounding, groundwater elevation, and groundwater quality data collected from seven Site wells on December 3, 1998.

BACKGROUND

The Site formerly operated one 8,000-gallon capacity gasoline underground storage tank (UST) and one 10,000-gallon capacity diesel UST for fueling delivery trucks (Figure 2). Previous subsurface investigations conducted by Groundwater Technology, Inc. (GTI) in June 1991 and SECOR in November 1993 indicated the presence of total petroleum hydrocarbons as gasoline (TPHg) and TPH as diesel (TPHd) in soil samples collected in the immediate vicinity of the USTs. At soil boring locations further away from the USTs, low to non-detectable concentrations of TPHg and TPHd were reported; however, elevated concentrations of high-boiling point hydrocarbons (total oil and grease/total recoverable petroleum hydrocarbons) were reported at all boring locations where analyzed.

SECOR supervised the excavation and removal of the two USTs in September 1995. Petroleum hydrocarbon-impacted soil and groundwater were observed during UST removal activities, laboratory analysis of collected soil and groundwater samples revealed the presence of TPHg, TPHd, and high-boiling hydrocarbons. Based on the apparent composition of these high-boiling point hydrocarbons and their pervasive presence in fill soil underlying the Site, it was determined that the source of these hydrocarbons is not related to the USTs. SECOR supervised the installation of seven groundwater monitoring wells (MW-1 through MW-7) adjacent to the former USTs in February and August 1996 and May 1998. Soil and groundwater samples collected and analyzed during these activities revealed the presence of TPHg; TPHd; TPH as motor oil (TPHmo); benzene, toluene, ethylbenzene, and xylenes (BTEX); and methyl tertiary butyl ether (MTBE).

GROUNDWATER MONITORING PROCEDURES

On December 3, 1998, SECOR sounded seven groundwater monitoring wells (MW-1 through MW-7) using an electronic water-level indicator. The depth-to-groundwater and total depth were measured for each well and recorded on the Hydrologic and Water Sample Field Data Sheets included in Appendix B. The water-level indicator was rinsed with deionized water between the sounding of each well to prevent cross contamination.

Prior to sampling, wells were purged of approximately three wellbore volumes of water using a disposable bailer. During purging, the evacuated groundwater was measured for pH, electrical conductivity, and temperature, and was visually inspected for color and turbidity. Parameter results were recorded on Water Sample Field Data Sheets included in Appendix B. Upon removal of the appropriate purge volume and stabilization of the measured parameters, samples were collected from each well using a disposable PVC bailer. Groundwater samples were decanted into pre-labeled laboratory-supplied glassware, placed in an ice-filled cooler, and transported to Chromalab, Inc. (Chromalab) of Pleasanton, California, a state-certified laboratory under chain-of-custody documentation.

Seven samples were submitted for chemical analysis of TPHg, TPHd, and TPHmo by EPA Method 8015, modified, and BTEX and MTBE by EPA Method 8020. Laboratory analytical reports and chain-of-custody records are included in Appendix C.

SUMMARY OF RESULTS

Groundwater elevations along with historic data are included in Table 1. Groundwater chemical results along with historic data are included in Table 2.

Monitoring Well Sounding

A groundwater elevation contour map based on the December 3, 1998 groundwater elevation data is presented as Figure 3. During this monitoring event, groundwater was measured at depths between 3.89 feet and 7.32 feet below the top of the PVC casing. These depths translate to groundwater elevations ranging from 2.56 to 6.23 feet above mean sea level (msl). During this monitoring event groundwater elevations have decreased ranging from 0.08 feet to 1.15 feet in wells MW-2, MW-5, and MW-6, increased ranging from 0.06 to 4.13 feet in wells MW-1, MW-3, and MW-4, and remained the same in well MW-7 when compared with the September 1998 data. Interpretation of the groundwater elevation contour map indicates a general flow direction to the north under an average hydraulic gradient of 0.043 feet per foot (ft/ft).

Groundwater Chemical Results

Groundwater samples exhibited pH values ranging from 6.01 to 6.32 pH units; temperatures ranging from 64.3 to 69.9 degrees Fahrenheit; specific conductivities ranging from 1,090 micromhos per centimeter ($\mu\text{mhos/cm}$) to a number exceeding the range of the equipment (more than 20,000 $\mu\text{mhos/cm}$); appearance ranging from cloudy to dark gray; and turbidity ranging from low to high. Groundwater chemical results for

Mr. Barney Chan
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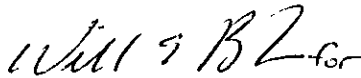
December 1998 are shown on Table 2 and displayed graphically on Figure 4. Laboratory analytical reports and chain-of-custody records are included in Appendix C.

During this monitoring event, groundwater samples collected from wells MW-1 through MW-7 were reported to contain TPHd at concentrations ranging from 350 micrograms per liter ($\mu\text{g}/\ell$) to 3,800 $\mu\text{g}/\ell$. The sample collected from well MW-4 was also reported to contain TPHmo at a concentration of 980 $\mu\text{g}/\ell$. The maximum BTEX concentrations were reported in the samples collected from wells MW-1 and MW-2 at 140 $\mu\text{g}/\ell$, 5.7 $\mu\text{g}/\ell$, 170 $\mu\text{g}/\ell$, and 5.3 $\mu\text{g}/\ell$, respectively. No TPHg and MTBE were detected above the specified laboratory reporting limit in any of seven groundwater samples analyzed. Also, no BTEX concentrations were reported above the specified laboratory reporting limit in the groundwater samples collected from well MW-7. In general, the reported chemical concentrations have decreased when compared with the historic data.

SECOR plans to conduct the next quarterly groundwater monitoring event for the Site in March 1999. SECOR will also collect information for analysis of dissolved oxygen and oxidation-reduction potential in all Site wells during next monitoring event, as required by the ACEHS in a December 11, 1998 letter. Please do not hesitate to contact us at (510) 285-2556 with any questions or comments regarding this document.

Sincerely,

SECOR International Incorporated



Liping Zhang
Project Manager



Bruce E. Scarbrough, R.G.
Principal Geologist

cc: Mr. Christopher Rants, Metz Baking Company

Attachments:

Table 1 - Well Construction Details and Groundwater Elevations

Table 2 - Groundwater Chemical Results

Figure 1 - Site Location Map

Figure 2 - Site Plan

Figure 3 - Groundwater Elevation Contour Map

Figure 4 - Groundwater Chemical Results

Appendix A - Hydrologic and Water Sample Field Data Sheets

Appendix B - Laboratory Analytical Reports and Chain-of-Custody Records

TABLE 1
WELL CONSTRUCTION DETAILS AND GROUNDWATER ELEVATIONS
 580 Julie Ann Way
 Oakland, California

WELL NUMBER	TOTAL DEPTH ^(a)	SCREENED INTERVAL ^(a)	CASING DIAMETER ^(b)	TOP OF CASING ELEVATION ^(c)	DATE	DEPTH TO GROUNDWATER ^(d)	GROUNDWATER ELEVATION ^(e)
MW-1	14.5	4.5-14.5	2	10.06	08/16/96	4.41	5.65
					08/22/96	4.45	5.61
					07/31/97	4.70	5.36
					06/04/98	3.66	6.40
					09/11/98	4.50	5.56
					12/03/98	4.44	5.62
MW-2	15	5-15	2	10.17	08/16/96	4.52	5.65
					08/22/96	4.54	5.63
					07/31/97	4.86	5.31
					06/04/98	3.83	6.34
					09/11/98	4.63	5.54
					12/03/98	4.71	5.46
MW-3	15	5-15	2	10.12	08/16/96	12.66	-2.54
					08/22/96	7.99	2.13
					07/31/97	5.11	5.01
					06/04/98	2.72	7.40
					09/11/98	8.02	2.10
					12/03/98	3.89	6.23
MW-4	15	5-15	2	9.70	08/16/96	5.72	3.98
					08/22/96	5.72	3.98
					07/31/97	6.02	3.68
					06/04/98	5.60	4.10
					09/11/98	5.96	3.74
					12/03/98	5.69	4.01

TABLE 1 (Continued)
WELL CONSTRUCTION AND GROUNDWATER ELEVATIONS
 580 Julie Ann Way
 Oakland, California

WELL NUMBER	TOTAL DEPTH ^(a)	SCREENED INTERVAL ^(a)	CASING DIAMETER ^(b)	TOP OF CASING ELEVATION ^(c)	DATE	DEPTH TO GROUNDWATER ^(d)	GROUNDWATER ELEVATION ^(c)
MW-5	15	4-15	2	9.42	06/04/98	5.44	3.98
					09/11/98	5.71	3.71
					12/03/98	6.09	3.33
MW-6	15	4-15	2	9.88	06/04/98	7.92	1.96
					09/11/98	6.17	3.71
					12/03/98	7.32	2.56
MW-7	15	4-15	2	9.91	06/04/98	3.58	6.33
					09/11/98	4.43	5.48
					12/03/98	4.43	5.48

NOTES:

- (a) Measured in feet below ground surface.
- (b) Measured in inches.
- (c) Measured in feet above mean sea level.
- (d) Measured in feet below top of PVC casing.

**TABLE 2
GROUNDWATER CHEMICAL RESULTS**

580 Julie Ann Way
Oakland, California

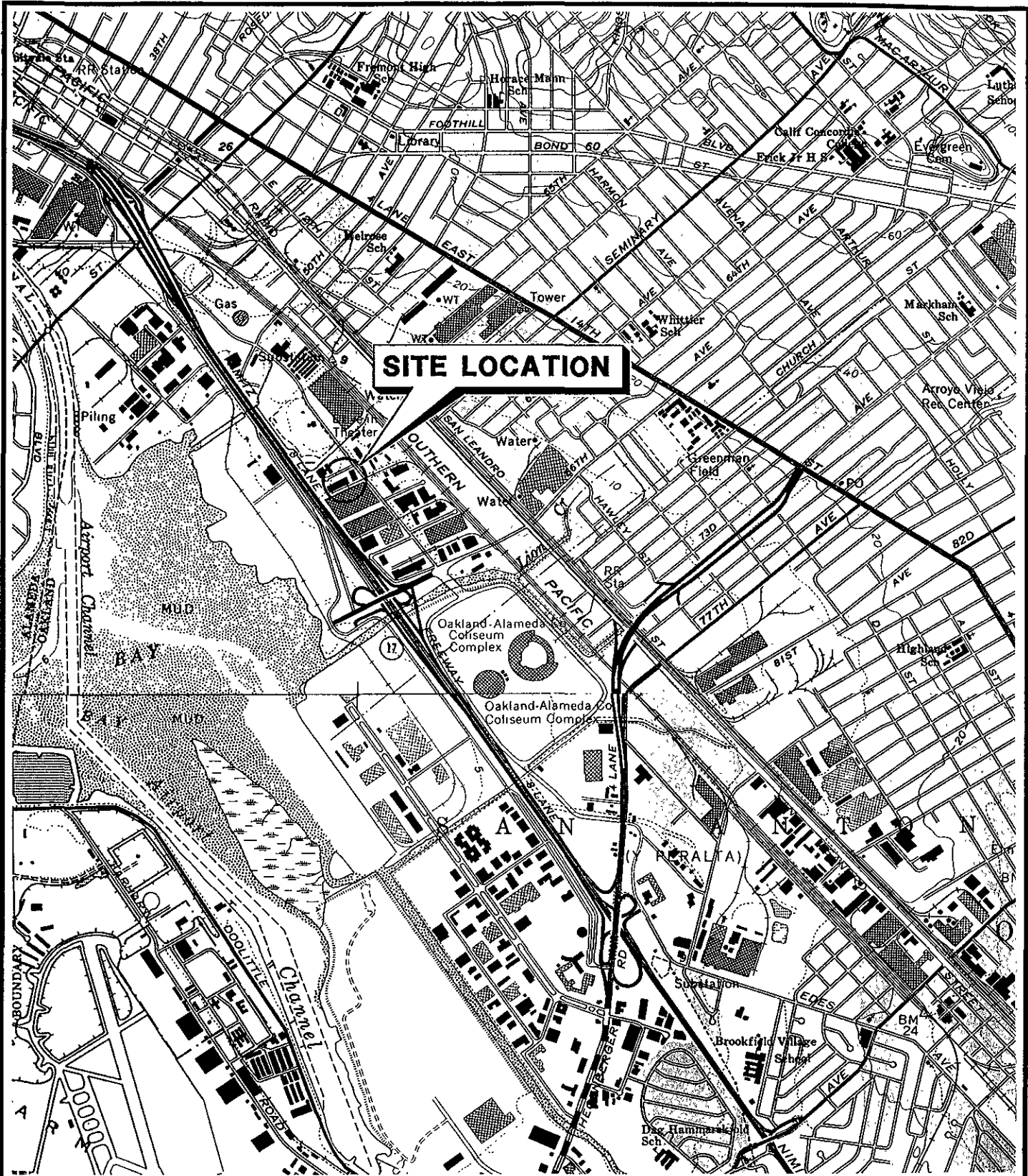
SAMPLE NUMBER	DATE	TPHg ^(a) (µg/ℓ) ^(b)	TPHd ^(c) (µg/ℓ)	TPHmo ^(d) (µg/ℓ)	Benzene (µg/ℓ)	Toluene (µg/ℓ)	Ethylbenzene (µg/ℓ)	Xylenes (µg/ℓ)	MTBE ^(e) (µg/ℓ)	Lead (mg/ℓ) ^(f)	TDS ^(g) (mg/ℓ)
MW-1	02/28/96	5,900	ND ^(h) < 10	1,700	540	9.0	950	110	NA ⁽ⁱ⁾	NA	NA
	08/16/96	5,600	5,400 ^(j)	4,000	540	7.3	950	110	NA	ND < 0.05	NA
	07/31/97	5,900	3,200	1,600	630	8.0	900	34	ND < 10	NA	NA
	06/04/98	1,800	1,600 ^(k)	640 ^(l)	160	2.6	300	1.6	ND < 5.0	NA	580
	09/11/98	4,800	3,300 ^(m)	900	270	15	510	41	ND < 50	NA	NA
	12/03/98	ND < 100	1,500 ^(k)	ND < 500	140	5.7	170	1.4	ND < 10	NA	NA
MW-2	08/16/96	2,700	3,000 ^(j)	1,800	63	36	65	100	NA	ND < 0.05	NA
	07/31/97	1,800	3,300	1,800	20	1.8	22	4.6	7.0	NA	NA
	06/04/98	ND < 50	4,100 ^(k)	ND < 500	10	0.72	2.3	3.5	ND < 5.0	NA	2,900
	09/11/98	ND < 500	3,700 ^(m)	750	65	15	39	5.7	ND < 50	NA	NA
	12/03/98	ND < 100	3,800 ^(k)	ND < 500	15	4.3	3.5	5.3	ND < 10	NA	NA
MW-3	08/16/96	ND < 50	730 ^(j)	640	3.1	ND < 0.5	ND < 0.5	ND < 0.5	NA	ND < 0.05	NA
	07/31/97	ND < 50	1,600	1,500	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	NA	NA
	06/04/98	ND < 50	860 ^(k)	ND < 500	3.9	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	NA	5,100
	09/11/98	ND < 50	570 ^(k)	ND < 500	4.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	NA	NA
	12/03/98	ND < 50	1,200 ^(k)	ND < 500	3.3	2.1	ND < 0.5	ND < 0.5	ND < 5.0	NA	NA
MW-4	08/16/96	460	2,800 ^(j)	3,000	17	1.0	9.1	1.4	NA	ND < 0.05	NA
	07/31/97	360	2,000	1,800	1.8	0.6	7.6	0.8	ND < 5.0	NA	NA
	06/04/98	ND < 50	1,400 ^(k)	710 ^(l)	18	1.6	2.5	1.9	ND < 5.0	NA	2,000
	09/11/98	ND < 50	1,200 ^(k)	ND < 500	0.93	ND < 0.5	1.0	ND < 0.5	ND < 5.0	NA	NA
	12/03/98	ND < 50	1,700 ^(k)	980	23	2.1	2.3	2.4	ND < 5.0	NA	NA
MW-5	06/04/98	ND < 50	970 ^(k)	ND < 500	7.2	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	NA	9,900
	09/11/98	ND < 50	810 ^(k)	ND < 500	5.7	ND < 0.5	ND < 0.5	ND < 0.5	10	NA	NA
	12/03/98	ND < 50	840 ^(k)	ND < 500	8.4	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	NA	NA
MW-6	06/04/98	ND < 50	120 ^(k)	ND < 500	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	NA	43,000
	09/11/98	ND < 50	410 ^(m)	ND < 500	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	NA	NA
	12/03/98	ND < 50	350 ^(k)	ND < 500	ND < 0.5	2.6	ND < 0.5	ND < 0.5	ND < 5.0	NA	NA

TABLE 2 (Continued)
GROUNDWATER CHEMICAL RESULTS
 580 Julie Ann Way
 Oakland, California

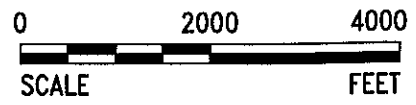
SAMPLE NUMBER	DATE	TPHg ^(a) (µg/l) ^(b)	TPHd ^(c) (µg/l)	TPHmo ^(d) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE ^(e) (µg/l)	Lead (mg/l) ^(f)	TDS ^(g) (mg/l)
MW-7	06/04/98	ND < 50	900 ^(k)	540 ^(l)	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	NA	6,100
	09/11/98	ND < 50	3,700 ^(m)	ND < 500	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	NA	NA
	12/03/98	ND < 50	780 ^(k)	ND < 500	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	NA	NA

NOTES:

- (a) Total petroleum hydrocarbons as gasoline.
- (b) Micrograms per liter.
- (c) Total petroleum hydrocarbons as diesel.
- (d) Total petroleum hydrocarbons as motor oil.
- (e) Methyl tertiary butyl ether.
- (f) Milligrams per liter.
- (g) Total dissolved solids.
- (h) ND: Not detected at specified laboratory reporting limit.
- (i) NA: Not Analyzed.
- (j) Lighter and heavier hydrocarbons were found in the range of diesel, but do not resemble a diesel fingerprint. Possible gasoline and motor oil, see attached certified laboratory analytical report.
- (k) Hydrocarbon reported does not match the pattern of the laboratory diesel standard, see attached certified laboratory analytical report.
- (l) Hydrocarbon reported does not match the pattern of the laboratory motor oil standard, see attached certified laboratory analytical report.
- (m) Hydrocarbon reported is in the early diesel range and does not match the pattern of the laboratory diesel standard, see attached certified laboratory analytical report.



SOURCE: BASE MAP FROM U.S.G.S. OAKLAND EAST AND SAN LEANDRO CA QUADRANGLES. 7.5 MINUTE SERIES TOPOGRAPHIC MAP, PHOTOREVISED 1980.



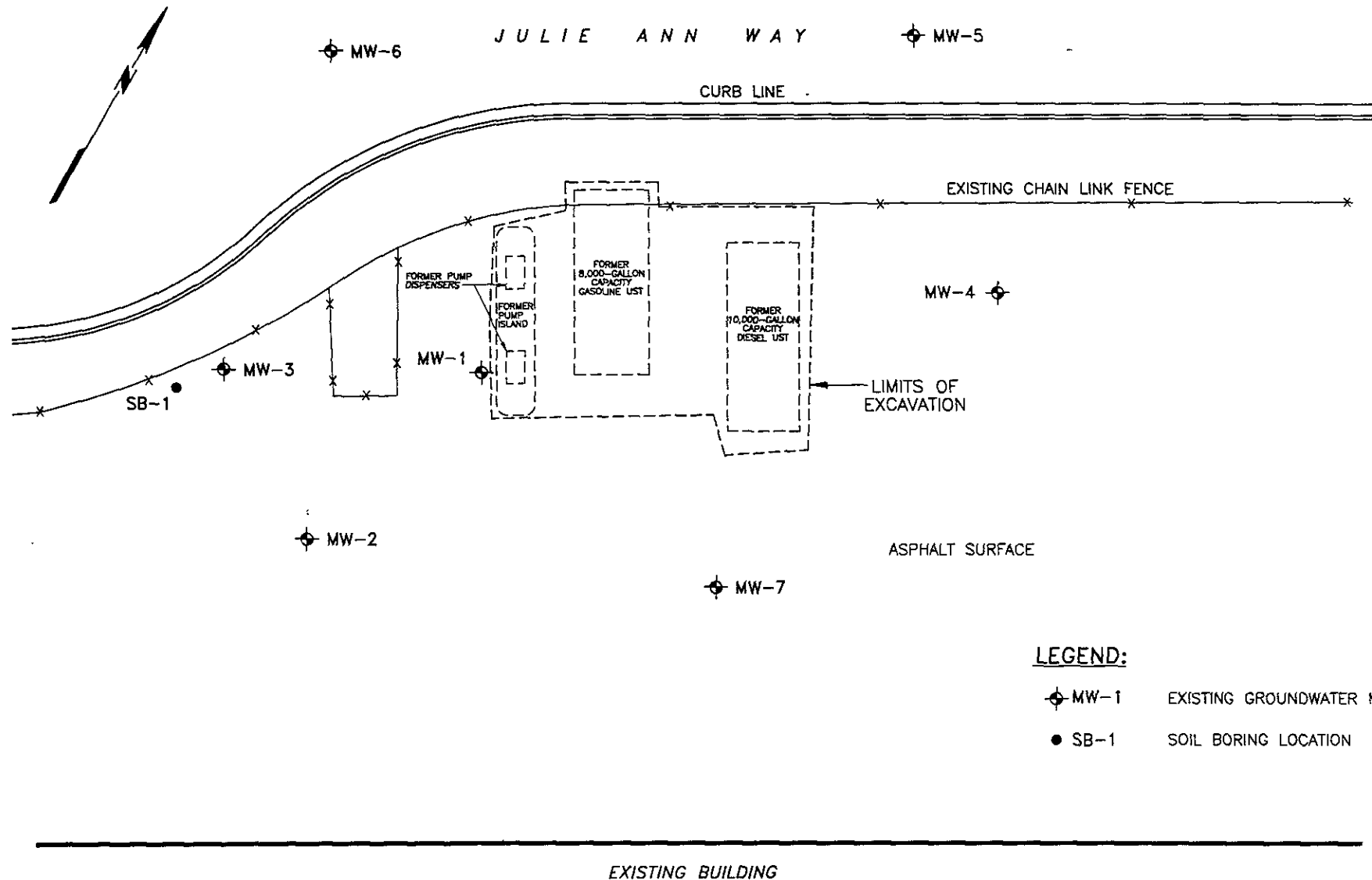
199510.171511 X:1SF-BREAD\JUL1E18\ITEPLAN

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JOB NO.	70007-001-01

FIGURE 1
SAN FRANCISCO FRENCH BREAD
580 JULIE ANN WAY
OAKLAND, CALIFORNIA

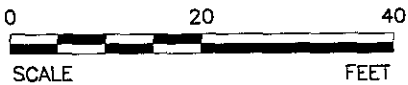
SITE LOCATION MAP



LEGEND:

- ⊕ MW-1 EXISTING GROUNDWATER MONITORING WELL
- SB-1 SOIL BORING LOCATION

REFERENCE: RON ARCHER CIVIL ENGINEER INC., DATED AUGUST 15, 1996.

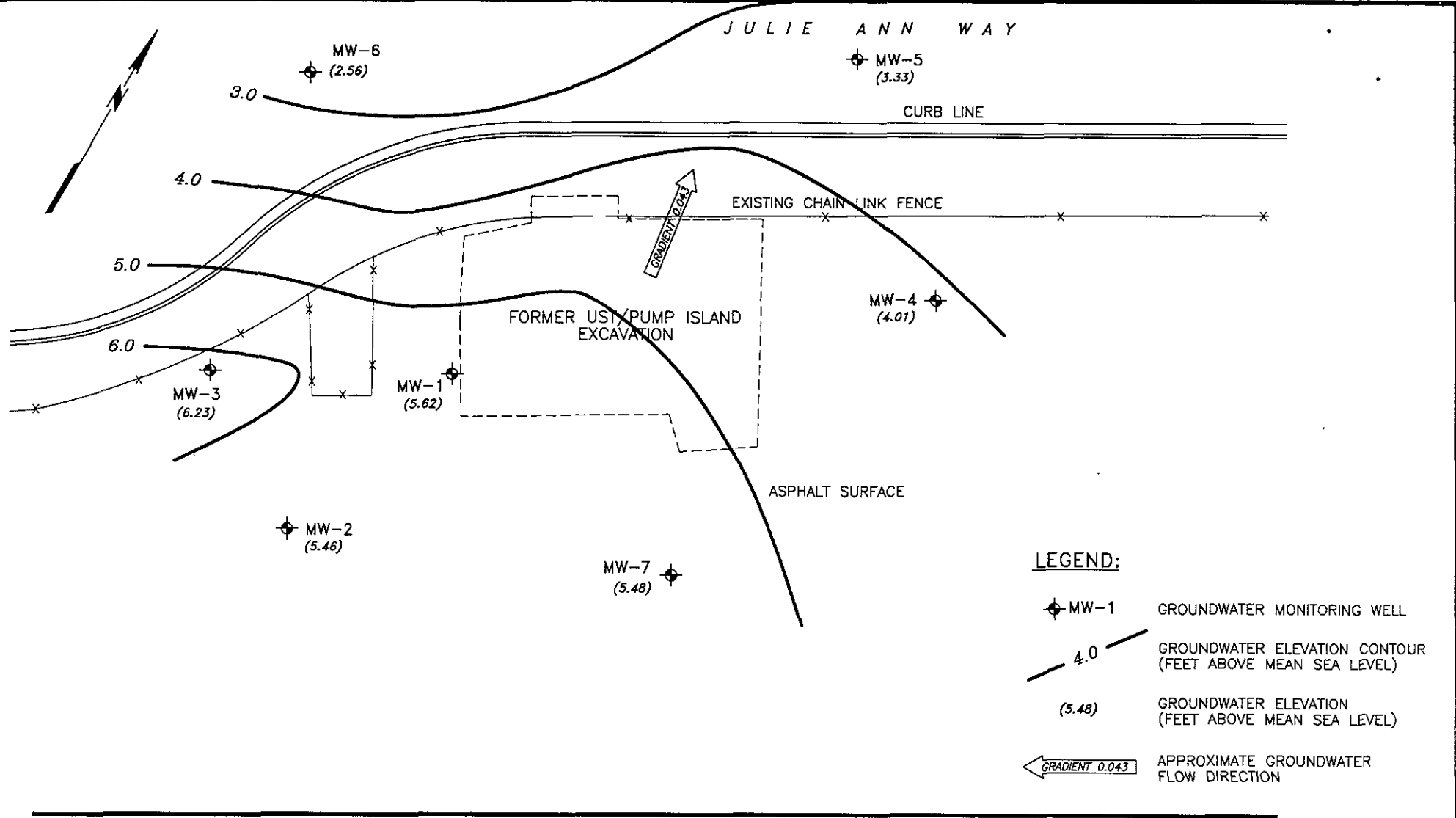


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DATE	02FEB99
JOB NO.	50090-009-04

FIGURE 2
SAN FRANCISCO FRENCH BREAD
580 JULIE ANN WAY
OAKLAND, CALIFORNIA

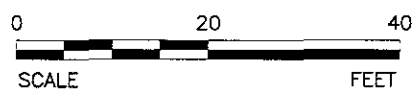
SITE PLAN



- LEGEND:**
- MW-1 GROUNDWATER MONITORING WELL
 - 4.0 GROUNDWATER ELEVATION CONTOUR (FEET ABOVE MEAN SEA LEVEL)
 - (5.48) GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
 - GRADIENT 0.043 APPROXIMATE GROUNDWATER FLOW DIRECTION

EXISTING BUILDING

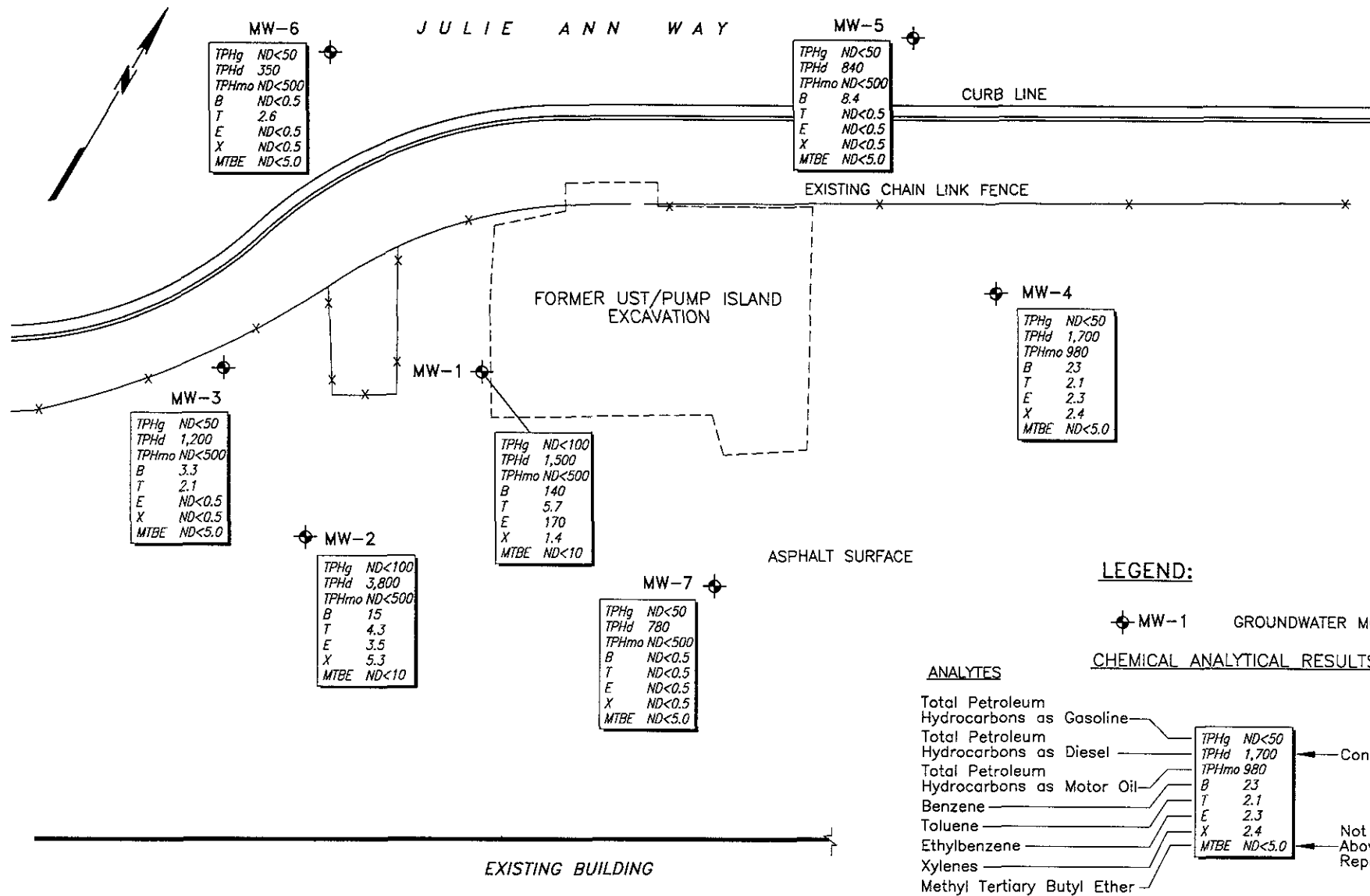
REFERENCE: RON ARCHER CIVIL ENGINEER INC., DATED AUGUST 15, 1996.



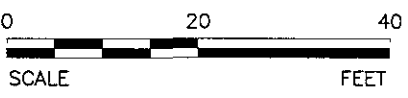
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DATE	28DEC98
JOB NO.	50090-009-04

FIGURE 3
SAN FRANCISCO FRENCH BREAD
580 JULIE ANN WAY
OAKLAND, CALIFORNIA
**GROUNDWATER ELEVATION
CONTOUR MAP-DECEMBER 3, 1998**



REFERENCE: RON ARCHER CIVIL ENGINEER INC., DATED AUGUST 15, 1996.



SECOR INTERNATIONAL INCORPORATED	DRAWN	CCR
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	DATE	29DEC98
	JOB NO	50090-009-04

FIGURE 4
 SAN FRANCISCO FRENCH BREAD
 580 JULIE ANN WAY
 OAKLAND, CALIFORNIA
GROUNDWATER CHEMICAL RESULTS - DECEMBER 3, 1998

APPENDIX A

**HYDROLOGIC AND WATER SAMPLE
FIELD DATA SHEETS**

DATE: 12-3-98 PROJECT: 50090-009-04 PROJECT # SFFB

EVENT: _____

SAMPLER: C. Melancon

WELL OR LOCATION	TIME	MEASUREMENT					COMMENTS
		TOC	DTW	DTP	PT	ELEV	
MW-6	8:20		7.32				
MW-3	8:30		3.89				
MW-5	8:25		6.09				
MW-4	8:35		5.69				
MW-7	8:40		4.43				
MW-2	8:45		4.71				
MW-1	8:50		4.44				
1.5 Drums	H ₂ O on site						

CODES:

- TOC - TOP OF CASING (FEET, RELATIVE TO MEAN SEA LEVEL)
- DTW - DEPTH TO WATER (FEET)
- DTP - DEPTH TO PRODUCT (FEET)
- PT - PRODUCT THICKNESS (FEET)
- ELEV - GROUNDWATER ELEVATION (FEET, RELATIVE TO MEAN SEA LEVEL)

SECOR International Incorporated
WATER SAMPLE FIELD DATA SHEET

Project #: 50090-009-04 (003) Purged By: CM Well I.D.: MW-1
 Client Name: SFFB Sampled By: CM Sample I.D.: MW-1
 Location: 580 Julie Ann Way, Oakland QA Samples: -

Date Purged 12-3-98 Start (2400hr) 11:10 End (2400hr) 11:25
 Date Sampled 12-3-98 Sample Time (2400hr) 12:50
 Sample Type: Groundwater Other

Casing Diameter 2" 3" _____ 4" _____ 5" _____ 6" _____ 8" _____ Other _____

Depth to Bottom (feet) = 14.5 Purge (gal) = 5.13
 Depth to Water (feet) = 4.44 Purge Rate (gal or liter/min) _____

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (μ mhos/cm)	pH (units)	Color (visual)	Turbidity (NTU)	D.O. (mg/l)	Depth (ft)
<u>12-3</u>	<u>11:15</u>	<u>2.0</u>	<u>67.1</u>	<u>1206</u>	<u>6.21</u>	<u>Lt. Grey</u>	<u>mod.</u>	_____	_____
<u>"</u>	<u>11:20</u>	<u>3.5</u>	<u>68.3</u>	<u>2640</u>	<u>6.18</u>	<u>"</u>	<u>"</u>	_____	_____
<u>"</u>	<u>11:25</u>	<u>5.5</u>	<u>69.3</u>	<u>2420</u>	<u>6.20</u>	<u>"</u>	<u>"</u>	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

SAMPLE INFORMATION

Sample Depth to Water: _____ Sample Turbidity: _____
 Analyses: TPH_g / BTEX / MTBE, TPH_d, TPH_{mo}
 Odor: _____ Sample Vessel/Preservative: 3 Vials, 2 L

PURGING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated _____
 Other: Disposable Bailer
 Pump Depth: _____

SAMPLING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC or disposable)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated _____
 Other: _____

Well Integrity: good Lock #: _____

Remarks: _____

NOTE: Sample after three consecutive readings are within:
 pH - ± 0.1 , turbidity and DO = $\pm 10\%$, conductivity = $\pm 3\%$.

Signature: [Handwritten Signature] Page _____ of _____

SECOR International Incorporated
WATER SAMPLE FIELD DATA SHEET

Project #: 50090-009-04 (003) Purged By: CM Well I.D.: MW-2
 Client Name: SFFB Sampled By: CM Sample I.D.: MW-2
 Location: 580 Julie Ann Way, Oakland QA Samples: —

Date Purged 12-3-98 Start (2400hr) 10:40 End (2400hr) 10:55
 Date Sampled 12-3-98 Sample Time (2400hr) 12:20
 Sample Type: Groundwater Other

Casing Diameter 2" 3" _____ 4" _____ 5" _____ 6" _____ 8" _____ Other _____

Depth to Bottom (feet) = 15.0 Purge (gal) = 5.25
 Depth to Water (feet) = 4.71 Purge Rate (gal or liter/min) _____

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (μ mhos/cm)	pH (units)	Color (visual)	Turbidity (NTU)	D.O. (mg/l)	Depth (ft)
<u>12-3</u>	<u>10:45</u>	<u>2.0</u>	<u>67.4</u>	<u>6640</u>	<u>6.21</u>	<u>cloudy</u>	<u>mod.</u>	_____	_____
<u>"</u>	<u>10:50</u>	<u>4.0</u>	<u>68.8</u>	<u>7340</u>	<u>6.15</u>	<u>grey</u>	<u>mod.</u>	_____	_____
<u>"</u>	<u>10:55</u>	<u>5.5</u>	<u>68.6</u>	<u>6970</u>	<u>6.17</u>	<u>4.6 grey</u>	<u>"</u>	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

SAMPLE INFORMATION

Sample Depth to Water: _____ Sample Turbidity: _____
 Analyses: TPH_g / BTEX / MTBE, TPH_d, TPH_{mo}
 Odor: _____ Sample Vessel/Preservative: 3 Vials, 2 L

PURGING EQUIPMENT

____ Bladder Pump ____ Bailer (Teflon)
 ____ Centrifugal Pump ____ Bailer (PVC)
 ____ Submersible Pump ____ Bailer (Stainless Steel)
 ____ Peristaltic Pump ____ Dedicated _____
 Other: Disposable Bailer
 Pump Depth: _____

SAMPLING EQUIPMENT

____ Bladder Pump ____ Bailer (Teflon)
 ____ Centrifugal Pump Bailer (PVC or disposable)
 ____ Submersible Pump ____ Bailer (Stainless Steel)
 ____ Peristaltic Pump ____ Dedicated _____
 Other: _____

Well Integrity: good Lock #: _____

Remarks: _____
 NOTE: Sample after three consecutive readings are within:
 pH - ± 0.1 , turbidity and DO = $\pm 10\%$, conductivity = $\pm 3\%$.

Signature: [Handwritten Signature] Page _____ of _____

SECOR International Incorporated
WATER SAMPLE FIELD DATA SHEET

Project #: 50090-009-04 (003) Purged By: CM Well I.D.: MW-3
 Client Name: SFFB Sampled By: CM Sample I.D.: MW-3
 Location: 580 Julie Ann Way, Oakland QA Samples: —

Date Purged 12-3-98 Start (2400hr) 8:55 End (2400hr) 9:10
 Date Sampled 12-3-98 Sample Time (2400hr) 13:00
 Sample Type: Groundwater Other

Casing Diameter 2" 3" _____ 4" _____ 5" _____ 6" _____ 8" _____ Other _____

Depth to Bottom (feet) = 15.0 Purge (gal) = 5.67
 Depth to Water (feet) = 3.89 Purge Rate (gal or liter/min) _____

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (µmhos/cm)	pH (units)	Color (visual)	Turbidity (NTU)	D.O. (mg/l)	Depth (ft)
12-3	9:00	2.0	64.3	3950	6.27	yel.	Low		
"	9:05	4.0	68.6	6720	6.24	"	"		
"	9:10	5.0*	69.1	6810	6.21	cloudy	mod		

SAMPLE INFORMATION

Sample Depth to Water: 8.36 Sample Turbidity: Low
 Analyses: TPH_g / BTEX / MTBE, TPH_d, TPH_{mo}
 Odor: _____ Sample Vessel/Preservative: 3 Vials, 2 L

PURGING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated _____
 Other: Disposable Bailer
 Pump Depth: _____

SAMPLING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC or disposable)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated _____
 Other: _____

Well Integrity: good Lock #: _____

Remarks: * gone Dry

NOTE: Sample after three consecutive readings are within:
 pH - ± 0.1, turbidity and DO = ± 10%, conductivity = ± 3%.

Signature: [Handwritten Signature] Page ___ of ___

SECOR International Incorporated
WATER SAMPLE FIELD DATA SHEET

Project #: 50090-009-04 (003) Purged By: CM Well I.D.: MW-4
 Client Name: SFFB Sampled By: CM Sample I.D.: MW-4
 Location: 580 Julie Ann Way, Oakland QA Samples: —

Date Purged 12-3-98 Start (2400hr) 9:25 End (2400hr) 9:40
 Date Sampled 12-3-98 Sample Time (2400hr) 9:50
 Sample Type: Groundwater Other

Casing Diameter 2" 3" 4" 5" 6" 8" Other

Depth to Bottom (feet) = 15.0 Purge (gal) = 4.75
 Depth to Water (feet) = 5.67 Purge Rate (gal or liter/min) _____

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (μ mhos/cm)	pH (units)	Color (visual)	Turbidity (NTU)	D.O. (mg/l)	Depth (ft)
12-3	9:30	1.5	67.0	3790	6.32	cloudy	mod		
"	9:35	3.5	67.5	3760	6.27	"	"		
"	9:40	5.0	68.3	3930	6.26	"	"		

SAMPLE INFORMATION

Sample Depth to Water: _____ Sample Turbidity: _____
 Analyses: TPH_g / BTEX / MTBE, TPH_d, TPH_{mo}
 Odor: _____ Sample Vessel/Preservative: 3 Vials, 2 L

PURGING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated _____
 Other: Disposable Bailer
 Pump Depth: _____

SAMPLING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC or disposable)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated _____
 Other: _____

Well Integrity: good Lock #: _____

Remarks: _____

NOTE: Sample after three consecutive readings are within:
 pH - \pm 0.1, turbidity and DO = \pm 10%, conductivity = \pm 3%.

Signature: [Handwritten Signature] Page _____ of _____

SECOR International Incorporated
WATER SAMPLE FIELD DATA SHEET

Project #: 50090-009-04 (003) Purged By: CM Well I.D.: MW-5
 Client Name: SFFB Sampled By: CM Sample I.D.: MW-5
 Location: 580 Julie Ann Way, Oakland QA Samples: —

Date Purged 12-3-98 Start (2400hr) 10:20 End (2400hr) 10:35
 Date Sampled 12-3-98 Sample Time (2400hr) 13:20
 Sample Type: Groundwater Other

Casing Diameter 2" 3" 4" 5" 6" 8" Other

Depth to Bottom (feet) = 15.0 Purge (gal) = 4.54
 Depth to Water (feet) = 6.09 Purge Rate (gal or liter/min) _____

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (μ mhos/cm)	pH (units)	Color (visual)	Turbidity (NTU)	D.O. (mg/l)	Depth (ft)
12-3	10:25	1.5	65.5	8020	6.30	yel	low		
"	10:30	3.0	68.4	9830	6.25	"	"		
"	10:35	4.75	69.9	1090	6.22	"	"		

SAMPLE INFORMATION

Sample Depth to Water: _____ Sample Turbidity: _____
 Analyses: TPH_g / BTEX / MTBE, TPH_d, TPH_{mo}
 Odor: _____ Sample Vessel/Preservative: 3 Vials, 2 L

PURGING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated _____
 Other: Disposable Bailer
 Pump Depth: _____

SAMPLING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC or disposable)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated _____
 Other: _____

Well Integrity: good Lock #: _____

Remarks: _____

NOTE: Sample after three consecutive readings are within:
 pH - ± 0.1 , turbidity and DO = $\pm 10\%$, conductivity = $\pm 3\%$.

Signature: [Handwritten Signature] Page _____ of _____

SECOR International Incorporated
WATER SAMPLE FIELD DATA SHEET

Project #: 50090-009-04 (003) Purged By: CM Well I.D.: MW-6
 Client Name: SFFB Sampled By: CM Sample I.D.: MW-6
 Location: 580 Julie Ann Way, Oakland QA Samples: —

Date Purged 12-3-98 Start (2400hr) 9:55 End (2400hr) 10:10
 Date Sampled 12-3-98 Sample Time (2400hr) 13:30
 Sample Type: Groundwater Other

Casing Diameter 2" 3" 4" 5" 6" 8" Other

Depth to Bottom (feet) = 15.0 Purge (gal) = 3.92
 Depth to Water (feet) = 7.32 Purge Rate (gal or liter/min)

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (μ mhos/cm)	pH (units)	Color (visual)	Turbidity (NTU)	D.O. (mg/l)	Depth (ft)
12-3	10:00	1.0	66.8	18230	6.19	grey	High		
"	10:05	2.5	69.4	720,000	6.17	thick grey	High		
"	10:10	4.0	69.5	720,000	6.17	"	"		

SAMPLE INFORMATION

Sample Depth to Water: Sample Turbidity:
 Analyses: TPH_g / BTEX / MTBE, TPH_d, TPH_{mo}
 Odor: Sample Vessel/Preservative: 3 vials, 2 L

PURGING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated
 Other: Disposable Bailer
 Pump Depth:

SAMPLING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC or disposable)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated
 Other:

Well Integrity: good Lock #:

Remarks:
 NOTE: Sample after three consecutive readings are within:
 pH - ± 0.1 , turbidity and DO = $\pm 10\%$, conductivity = $\pm 3\%$.

Signature: *Steve E. ...* Page of

SECOR International Incorporated
WATER SAMPLE FIELD DATA SHEET

Project #: 50090-009-04 (003) Purged By: CM Well I.D.: MW-7
 Client Name: SFFB Sampled By: CM Sample I.D.: MW-7
 Location: 580 Julie Ann Way, Oakland QA Samples: —

Date Purged 12-3-98 Start (2400hr) 11:35 End (2400hr) 11:50
 Date Sampled 12-3-98 Sample Time (2400hr) 12:40
 Sample Type: Groundwater Other

Casing Diameter 2" 3" 4" 5" 6" 8" Other

Depth to Bottom (feet) = 15.0 Purge (gal) = 5.39
 Depth to Water (feet) = 4.43 Purge Rate (gal or liter/min) _____

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (μ mhos/cm)	pH (units)	Color (visual)	Turbidity (NTU)	D.O. (mg/l)	Depth (ft)
12-3	11:40	2.0	68.4	9640	6.02	Grey	Mod		
"	11:45	3.5	69.9	10,610	6.01	DK Grey	High		
"	11:50	5.5	69.3	10,420	6.04	"	"		

SAMPLE INFORMATION

Sample Depth to Water: _____ Sample Turbidity: _____

Analyses: TPH_g / BTEX / MTBE, TPH_d, TPH_{mo}
 Odor: _____ Sample Vessel/Preservative: 3 Vials, 2 L

PURGING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated _____

Other: Disposable Bailer
 Pump Depth: _____

SAMPLING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC or disposable)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated _____

Other: _____

Well Integrity: good Lock #: _____

Remarks: _____

NOTE: Sample after three consecutive readings are within:
 pH - ± 0.1 , turbidity and DO = $\pm 10\%$, conductivity = $\pm 3\%$.

Signature: [Signature] Page _____ of _____

APPENDIX B

**LABORATORY ANALYTICAL REPORTS AND
CHAIN-OF-CUSTODY**

CHROMALAB, INC.

Environmental Services (SDB)

December 22, 1998

Submission #: 9812079

SECOR OAKLAND
360 20nd, Suite 600
Oakland, CA 94612

Attn: Liping Zhang

RE: Analysis for project SFFB-OAKLAND, number 50090-009-04 TASK 003.

REPORTING INFORMATION

Samples were received cold and in good condition on December 3, 1998. They were refrigerated upon receipt and analyzed as described in the attached report. ChromaLab followed EPA or equivalent methods for all testing reported.

No discrepancies were observed or difficulties encountered with the testing.

<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date collected</u>	<u>Sample #</u>
MW-1	WTR	December 3, 1998	219268
MW-2	WTR	December 3, 1998	219269
MW-3	WTR	December 3, 1998	219270
MW-4	WTR	December 3, 1998	219271
MW-5	WTR	December 3, 1998	219272
MW-6	WTR	December 3, 1998	219273
MW-7	WTR	December 3, 1998	219274


Afsaneh Salimpour
Project Manager

CHROMALAB, INC.

Environmental Services (SDB)

December 14, 1998

Submission #: 9812079

SECOR OAKLAND

Atten: Liping Zhang

Project: SFFB-OAKLAND
Received: December 3, 1998

Project#: 50090-009-04 TASK 003

re: 7 samples for TEPH analysis.
Method: EPA 8015M

Sampled: December 3, 1998 Matrix: WATER Run#: 16362 Extracted: December 8, 1998
Analyzed: December 13, 1998

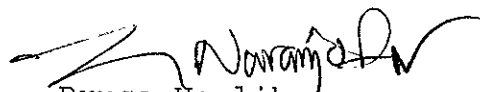
Spl#	CLIENT SPL ID	Diesel (ug/L)	Motor Oil (ug/L)
219268	MW-1	1500	N.D.
	Note: Hydrocarbon reported does not match the pattern of our Diesel Standard.		
219269	MW-2	3800	N.D.
	Note: Hydrocarbon reported does not match the pattern of our Diesel Standard.		
219274	MW-7	780	N.D.
	Note: Hydrocarbon reported does not match the pattern of our Diesel Standard.		

Sampled: December 3, 1998 Matrix: WATER Run#: 16362 Extracted: December 8, 1998
Analyzed: December 14, 1998

Spl#	CLIENT SPL ID	Diesel (ug/L)	Motor Oil (ug/L)
219270	MW-3	1200	N.D.
	Note: Hydrocarbon reported does not match the pattern of our Diesel Standard. Surrogate Recoveries biased high due to Hydrocarbon co-elution.		
219271	MW-4	1700	980
	Note: Hydrocarbon reported does not match the pattern of our Diesel Standard. Surrogate Recoveries biased high due to Hydrocarbon co-elution.		
219272	MW-5	840	N.D.
	Note: Hydrocarbon reported does not match the pattern of our Diesel Standard.		
219273	MW-6	350	N.D.
	Note: Hydrocarbon reported does not match the pattern of our Diesel Standard.		

Reporting Limits 50 500
Blank Result N.D. N.D.
Blank Spike Result (%) 86.8 --


Carolyn House
Analyst


Bruce Havlik
Analyst

CHROMALAB, INC.

Environmental Services (SDB)

December 14, 1998

Submission #: 9812079

SECOR OAKLAND

Atten: Liping Zhang

Project: SFFB-OAKLAND
Received: December 3, 1998

Project#: 50090-009-04 TASK 003

re: **Blank spike and duplicate** report for TEPH analysis.

Method: EPA 8015M

Matrix: WATER
Lab Run#: 16362

Analyzed: December 11, 1998

Analyte	Spike Amount		Spike Amount Found		Spike Recov		Control % Limits RPD	% RPD Lim
	BSP (ug/L)	Dup	BSP (ug/L)	Dup	BSP (%)	Dup (%)		
DIESEL	2500	2500	2170	2260	86.8	90.4	60-130 4.06	25

CHROMALAB, INC.

Environmental Services (SDB)

December 14, 1998

Submission #: 9812079

SECOR OAKLAND

Atten: Liping Zhang

Project: SFFB-OAKLAND
Received: December 3, 1998

Project#: 50090-009-04 TASK 003

re: **Surrogate** report for 7 samples for TEPH analysis.

Method: EPA 8015M
Lab Run#: 16362
Matrix: WATER

<u>Sample#</u>	<u>Client Sample ID</u>	<u>Surrogate</u>	<u>% Recovered</u>	<u>Recovery Limits</u>
219268-1	MW-1	O-TERPHENYL	128	60-130
219269-1	MW-2	O-TERPHENYL	126	60-130
219270-1	MW-3	O-TERPHENYL	142	60-130
219271-1	MW-4	O-TERPHENYL	148	60-130
219272-1	MW-5	O-TERPHENYL	118	60-130
219273-1	MW-6	O-TERPHENYL	109	60-130
219274-1	MW-7	O-TERPHENYL	125	60-130

<u>Sample#</u>	<u>QC Sample Type</u>	<u>Surrogate</u>	<u>% Recovered</u>	<u>Recovery Limits</u>
219953-1	Reagent blank (MDB)	O-TERPHENYL	93.6	60-130
219954-1	Spiked blank (BSP)	O-TERPHENYL	112	60-130
219955-1	Spiked blank duplicate (BSD)	O-TERPHENYL	114	60-130

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CHROMALAB, INC.

Environmental Services (SDB)

December 11, 1998

Submission #: 9812079

SECOR OAKLAND

Atten: Liping Zhang

Project: SFFB-OAKLAND
Received: December 3, 1998

Project#: 50090-009-04 TASK 003

re: One sample for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: MW-1


Spl#: 219268
Sampled: December 3, 1998

Matrix: WATER
Run#: 16412

Analyzed: December 8, 1998

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	100	N.D.	87	2
MTBE	N.D.	10	N.D.	102	2
BENZENE	140	1.0	N.D.	107	2
TOLUENE	5.7	1.0	N.D.	106	2
ETHYL BENZENE	170	1.0	N.D.	102	2
XYLENES	1.4	1.0	N.D.	99	2

Note: Hydrocarbon found in Gasoline Range is uncharacteristic of Gasoline Profile. If quantified using Gasoline's response factor, concentration would equal 1600ug/L.


Vincent Vancil
Analyst


Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

December 11, 1998

Submission #: 9812079

SECOR OAKLAND

Atten: Liping Zhang

Project: SFFB-OAKLAND
Received: December 3, 1998

Project#: 50090-009-04 TASK 003

re: One sample for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: MW-2

Spl#: 219269

Matrix: WATER

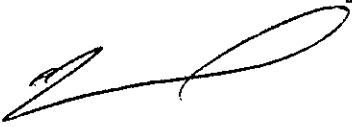
Sampled: December 3, 1998

Run#:16412

Analyzed: December 7, 1998

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	100	N.D.	87	2
MTBE	N.D.	10	N.D.	102	2
BENZENE	15	1.0	N.D.	107	2
TOLUENE	4.3	1.0	N.D.	106	2
ETHYL BENZENE	3.5	1.0	N.D.	102	2
XYLENES	5.3	1.0	N.D.	99	2

Note: Hydrocarbon found in Gasoline Range is uncharacteristic of Gasoline Profile. If quantified using Gasoline's response factor, concentration would equal 1800ug/L.


Vincent Vancil
Analyst


Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

December 10, 1998

Submission #: 9812079

SECOR OAKLAND

Atten: Liping Zhang

Project: SFFB-OAKLAND
Received: December 3, 1998

Project#: 50090-009-04 TASK 003

re: One sample for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: MW-3

Spl#: 219270

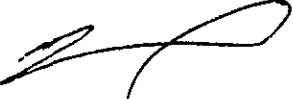
Matrix: WATER


Sampled: December 3, 1998

Run#:16344

Analyzed: December 7, 1998

<u>ANALYTE</u>	<u>RESULT</u> <u>(ug/L)</u>	<u>REPORTING</u> <u>LIMIT</u> <u>(ug/L)</u>	<u>BLANK</u> <u>RESULT</u> <u>(ug/L)</u>	<u>BLANK</u> <u>SPIKE</u> <u>(%)</u>	<u>DILUTION</u> <u>FACTOR</u>
GASOLINE	N.D.	50	N.D.	92	1
MTBE	N.D.	5.0	N.D.	90	1
BENZENE	3.3	0.50	N.D.	97	1
TOLUENE	2.1	0.50	N.D.	95	1
ETHYL BENZENE	N.D.	0.50	N.D.	94	1
XYLENES	N.D.	0.50	N.D.	89	1


Vincent Vancil
Analyst


Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

December 11, 1998

Submission #: 9812079

SECOR OAKLAND

Atten: Liping Zhang

Project: SFFB-OAKLAND
Received: December 3, 1998

Project#: 50090-009-04 TASK 003

re: One sample for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: MW-4

Spl#: 219271

Matrix: WATER

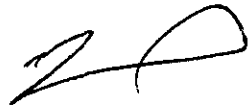
Sampled: December 3, 1998

Run#:16344


Analyzed: December 7, 1998

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	50	N.D.	92	1
MTBE	N.D.	5.0	N.D.	90	1
BENZENE	23	0.50	N.D.	97	1
TOLUENE	2.1	0.50	N.D.	95	1
ETHYL BENZENE	2.3	0.50	N.D.	94	1
XYLENES	2.4	0.50	N.D.	89	1

Note: Hydrocarbon found in Gasoline Range is uncharacteristic of Gasoline Profile. If quantified using Gasoline's response factor, concentration would equal 890ug/L.



Vincent Vancil
Analyst



Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

December 10, 1998

Submission #: 9812079

SECOR OAKLAND

Atten: Liping Zhang

Project: SFFB-OAKLAND
Received: December 3, 1998

Project#: 50090-009-04 TASK 003

re: One sample for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: MW-5

Spl#: 219272

Matrix: WATER


Sampled: December 3, 1998


Run#:16344

Analyzed: December 7, 1998

<u>ANALYTE</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u> (ug/L)	<u>BLANK</u> <u>RESULT</u> (ug/L)	<u>BLANK</u> <u>SPIKE</u> (%)	<u>DILUTION</u> <u>FACTOR</u>
GASOLINE	N.D.	50	N.D.	92	1
MTBE	N.D.	5.0	N.D.	90	1
BENZENE	8.4	0.50	N.D.	97	1
TOLUENE	N.D.	0.50	N.D.	95	1
ETHYL BENZENE	N.D.	0.50	N.D.	94	1
XYLENES	N.D.	0.50	N.D.	89	1

Note: Hydrocarbon found in Gasoline Range is uncharacteristic of Gasoline Profile. If quantified using Gasoline's response factor, concentration would equal 120ug/L.


Vincent Vancil
Analyst


Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

December 10, 1998

Submission #: 9812079

SECOR OAKLAND

Atten: Liping Zhang

Project: SFFB-OAKLAND
Received: December 3, 1998

Project#: 50090-009-04 TASK 003

re: One sample for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: MW-6

Spl#: 219273


Matrix: WATER

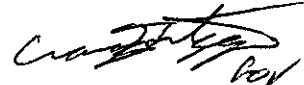
Sampled: December 3, 1998

Run#: 16344

Analyzed: December 7, 1998

<u>ANALYTE</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u> (ug/L)	<u>BLANK</u> <u>RESULT</u> (ug/L)	<u>BLANK</u> <u>SPIKE</u> (%)	<u>DILUTION</u> <u>FACTOR</u>
GASOLINE	N.D.	50	N.D.	92	1
MTBE	N.D.	5.0	N.D.	90	1
BENZENE	N.D.	0.50	N.D.	97	1
TOLUENE	2.6	0.50	N.D.	95	1
ETHYL BENZENE	N.D.	0.50	N.D.	94	1
XYLENES	N.D.	0.50	N.D.	89	1


Vincent Vancil
Analyst


Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

December 10, 1998

Submission #: 9812079

SECOR OAKLAND

Atten: Liping Zhang

Project: SFFB-OAKLAND
Received: December 3, 1998

Project#: 50090-009-04 TASK 003

re: One sample for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: MW-7

Spl#: 219274


Matrix: WATER

Sampled: December 3, 1998


Run#:16344

Analyzed: December 7, 1998

<u>ANALYTE</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u> (ug/L)	<u>BLANK</u> <u>RESULT</u> (ug/L)	<u>BLANK</u> <u>SPIKE</u> (%)	<u>DILUTION</u> <u>FACTOR</u>
GASOLINE	N.D.	50	N.D.	92	1
MTBE	N.D.	5.0	N.D.	90	1
BENZENE	N.D.	0.50	N.D.	97	1
TOLUENE	N.D.	0.50	N.D.	95	1
ETHYL BENZENE	N.D.	0.50	N.D.	94	1
XYLENES	N.D.	0.50	N.D.	89	1



Vincent Vancil
Analyst



Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

December 10, 1998

Submission #: 9812079

SECOR OAKLAND

Atten: Liping Zhang

Project: SFFB-OAKLAND
Received: December 3, 1998

Project#: 50090-009-04 TASK 003

re: **Blank spike and duplicate** report for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Matrix: WATER
Lab Run#: 16344

Analyzed: December 7, 1998

Analyte	Spike Amount		Spike Amount Found		Spike Recov		Control Limits	% RPD	% Lim
	BSP (ug/L)	Dup	BSP (ug/L)	Dup	BSP (%)	Dup (%)			
GASOLINE	500	500	462	466	92.4	93.2	75-125	0.86	20
MTBE	100	100	89.6	85.5	89.6	85.5	75-125	4.68	20
BENZENE	100	100	96.5	92.5	96.5	92.5	77-123	4.23	20
TOLUENE	100	100	94.8	91.7	94.8	91.7	78-122	3.32	20
ETHYL BENZENE	100	100	94.3	89.7	94.3	89.7	70-130	5.00	20
XYLENES	300	300	267	267	89.0	89.0	75-125	0	20

CHROMALAB, INC.

Environmental Services (SDB)

December 22, 1998

Submission #: 9812079

SECOR OAKLAND

Atten: Liping Zhang

Project: SFFB-OAKLAND
Received: December 3, 1998

Project#: 50090-009-04 TASK 003

re: **Matrix spike** report for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Matrix: WATER

Lab Run#: 16344 Instrument: 3400-3

Analyzed: December 7, 1998

Analyte	Spiked		Amt Found		Spike Recov		Control Limits	% RPD	% Lim	
	Sample Amount (ug/L)	Spike Amt MS MSD (ug/L)	MS MSD (ug/L)	MS MSD (%) (%)						
GASOLINE	N.D.	500	500	499	500	99.8	100	65-135	0.20	20
MTBE	N.D.	100	100	100	89.9	100	89.9	65-135	10.6	20
BENZENE	N.D.	100	100	105	98.8	103	97.0	65-135	6.00	20
TOLUENE	N.D.	100	100	103	97.9	101	96.1	65-135	4.97	20
ETHYL BENZENE	N.D.	100	100	103	99.6	101	97.8	65-135	3.22	20
XYLENES	N.D.	300	300	295	287	96.5	93.9	65-135	2.73	20

Sample Spiked: 218871

Submission #: 9812041

Client Sample ID: MW-4

CHROMALAB, INC.

Environmental Services (SDB)

December 10, 1998

Submission #: 9812079

SECOR OAKLAND

Atten: Liping Zhang

Project: SFFB-OAKLAND
Received: December 3, 1998

Project#: 50090-009-04 TASK 003

re: **Surrogate** report for 6 samples for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod
Lab Run#: 16344
Matrix: WATER

Sample#	Client Sample ID	Surrogate	% Recovered	Recovery Limits
219269-1	MW-2	TRIFLUOROTOLUENE	110	58-124
219269-1	MW-2	4-BROMOFLUOROBENZENE	101	50-150
219270-1	MW-3	TRIFLUOROTOLUENE	85.9	58-124
219270-1	MW-3	4-BROMOFLUOROBENZENE	92.8	50-150
219271-1	MW-4	TRIFLUOROTOLUENE	100	58-124
219271-1	MW-4	4-BROMOFLUOROBENZENE	89.3	50-150
219272-1	MW-5	TRIFLUOROTOLUENE	92.1	58-124
219272-1	MW-5	4-BROMOFLUOROBENZENE	106	50-150
219273-1	MW-6	TRIFLUOROTOLUENE	93.6	58-124
219273-1	MW-6	4-BROMOFLUOROBENZENE	102	50-150
219274-1	MW-7	TRIFLUOROTOLUENE	88.6	58-124
219274-1	MW-7	4-BROMOFLUOROBENZENE	112	50-150

Sample#	QC Sample Type	Surrogate	% Recovered	Recovery Limits
219681-1	Reagent blank (MDB)	TRIFLUOROTOLUENE	100	58-124
219681-1	Reagent blank (MDB)	4-BROMOFLUOROBENZENE	95.4	50-150
219682-1	Spiked blank (BSP)	TRIFLUOROTOLUENE	92.0	58-124
219682-1	Spiked blank (BSP)	4-BROMOFLUOROBENZENE	92.5	50-150
219683-1	Spiked blank duplicate (BSD)	TRIFLUOROTOLUENE	86.4	58-124
219683-1	Spiked blank duplicate (BSD)	4-BROMOFLUOROBENZENE	90.2	50-150
219684-1	Matrix spike (MS)	TRIFLUOROTOLUENE	95.6	58-124
219684-1	Matrix spike (MS)	4-BROMOFLUOROBENZENE	92.6	50-150
219685-1	Matrix spike duplicate (MSD)	TRIFLUOROTOLUENE	90.8	58-124
219685-1	Matrix spike duplicate (MSD)	4-BROMOFLUOROBENZENE	108	50-150

V132
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CHROMALAB, INC.

Environmental Services (SDB)

December 10, 1998

Submission #: 9812079

SECOR OAKLAND

Atten: Liping Zhang

Project: SFFB-OAKLAND
Received: December 3, 1998

Project#: 50090-009-04 TASK 003

re: **Blank spike and duplicate** report for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Matrix: WATER
Lab Run#: 16412

Analyzed: December 10, 1998

Analyte	Spike Amount		Spike Amount Found		Spike Recov		Control Limits	% RPD	% Lim
	BSP (ug/L)	Dup	BSP (ug/L)	Dup	BSP (%)	Dup (%)			
GASOLINE	500	500	436	467	87.2	93.4	75-125	6.87	20
MTBE	100	100	102	100	102	100	75-125	1.98	20
BENZENE	100	100	107	103	107	103	77-123	3.81	20
TOLUENE	100	100	106	103	106	103	78-122	2.87	20
ETHYL BENZENE	100	100	102	99.5	102	99.5	70-130	2.48	20
XYLENES	300	300	298	291	99.3	97.0	75-125	2.34	20

CHROMALAB, INC.

Environmental Services (SDB)

December 22, 1998

Submission #: 9812079

SECOR OAKLAND

Atten: Liping Zhang

Project: SFFB-OAKLAND
Received: December 3, 1998

Project#: 50090-009-04 TASK 003

re: **Matrix spike** report for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Matrix: WATER

Lab Run#: 16412 Instrument: 3400-3

Analyzed: December 10, 1998

Analyte	Spiked Sample Amount (ug/L)		Amt Found (ug/L)		Spike Recov (%)		Control Limits	% RPD	Lim
	MS	MSD	MS	MSD	MS	MSD			
GASOLINE	56	500	506	527	101	105	65-135	3.88	20
MTBE	N.D.	100	110	106	110	106	65-135	3.70	20
BENZENE	N.D.	100	112	107	112	107	65-135	4.57	20
TOLUENE	N.D.	100	111	107	111	107	65-135	3.67	20
ETHYL BENZENE	N.D.	100	110	105	110	105	65-135	4.65	20
XYLENES	N.D.	300	312	301	104	100	65-135	3.92	20

Sample Spiked: 219502

Submission #: 9812090

Client Sample ID: VE/S-12

CHROMALAB, INC.

Environmental Services (SDB)

December 10, 1998

Submission #: 9812079

SECOR OAKLAND

Atten: Liping Zhang

Project: SFFB-OAKLAND
Received: December 3, 1998

Project#: 50090-009-04 TASK 003

re: **Surrogate** report for 2 samples for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod
Lab Run#: 16412
Matrix: WATER

<u>Sample#</u>	<u>Client Sample ID</u>	<u>Surrogate</u>	<u>% Recovered</u>	<u>Recovery Limits</u>
219268-3	MW-1	TRIFLUOROTOLUENE	106	58-124
219268-3	MW-1	4-BROMOFLUOROBENZENE	84.6	50-150
219269-3	MW-2	TRIFLUOROTOLUENE	114	58-124
219269-3	MW-2	4-BROMOFLUOROBENZENE	102	50-150

<u>Sample#</u>	<u>QC Sample Type</u>	<u>Surrogate</u>	<u>% Recovered</u>	<u>Recovery Limits</u>
220439-1	Reagent blank (MDB)	TRIFLUOROTOLUENE	114	58-124
220439-1	Reagent blank (MDB)	4-BROMOFLUOROBENZENE	101	50-150
220440-1	Spiked blank (BSP)	TRIFLUOROTOLUENE	106	58-124
220440-1	Spiked blank (BSP)	4-BROMOFLUOROBENZENE	87.8	50-150
220441-1	Spiked blank duplicate (BSD)	TRIFLUOROTOLUENE	101	58-124
220441-1	Spiked blank duplicate (BSD)	4-BROMOFLUOROBENZENE	93.2	50-150

V132
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9812079/219268-74

SUBM #: 9812879 REP: ASLEV2
 CLIENT: SECOR-OAK
 DUE: 12/18/98
 REF #: 43448

43448

Chain-of Custody Number:

Field Office:

Oakland

Address:

Additional documents are attached, and are a part of this Record.

Job Name:

SFFB - Oakland

Location:

580 Julie Ann Way
Oakland

Project # 50090-009-04 Task # 003
 Project Manager Liping Zhang
 Laboratory Chromalab
 Turnaround Time Standard

Analysis Request

Sampler's Name Charles Melancon
 Sampler's Signature Charles Melancon

Sample ID	Date	Time	Matrix	TPH motor oil 8015	TPH/BTEX/WTPH-G/MPK 8015 (modified)/8020	TPHd/WTPH-D 8015 (modified)	TPH 418.1/WTPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCBs 608/8080	Total Lead 7421	Priority Pollutant Metals (19)	TCLP Metals	Comments/ Instructions	Number of Containers
MW-1	12-3-98	12:50	Water	X	X	X											6
MW-2		12:20															6
MW-3		13:00															6
MW-4		9:50															6
MW-5		13:20															6
MW-6		13:30															6
MW-7		12:40															6

Special Instructions/Comments:

Relinquished by:
 Sign Charles Melancon
 Print Charles Melancon
 Company SECOR
 Time 14:30 Date 12-3-98

Received by:
 Sign E Cassidy
 Print E Cassidy
 Company CL
 Time 14:30 Date 12-3-98

Sample Receipt
 Total no. of containers: _____
 Chain of custody seals: _____
 Rec'd. in good condition/cold: _____
 Conforms to record: _____

Relinquished by: _____
 Sign _____
 Print _____
 Company _____
 Time _____ Date _____

Received by: _____
 Sign _____
 Print _____
 Company _____
 Time _____ Date _____

Client: _____
 Client Contact: _____
 Client Phone: _____