

January 8, 1996

Ms. Jennifer Eberle
Hazardous Materials Specialist
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, #250
Alameda, California 94502-6577

QUARTERLY GROUNDWATER MONITORING REPORT, DECEMBER 1995, 3924 MARKET STREET, OAKLAND, CALIFORNIA, FOR SAN FRANCISCO FRENCH BREAD COMPANY

Dear Ms. Eberle:

On behalf of San Francisco French Bread Company (SFFBC), SECOR International Incorporated (*SECOR*) is submitting this Quarterly Groundwater Monitoring Report for 3924 Market Street in Oakland, California (the Site, see Figure 1, Site Location Map). We are providing this document to the Alameda County Department of Environmental Health (ACDEH) in accordance with recommended activities outlined in *SECOR*'s Summary Report for a soil and groundwater investigation dated June 28, 1995. This report presents monitoring well sounding, groundwater elevation, and groundwater quality data collected from three Site wells on December 7, 1995.

INTRODUCTION

The Site formerly operated a 500-gallon underground storage tank (UST) with associated product line and fuel dispenser for fueling delivery trucks (see Figure 2). The UST and product line were excavated and removed on March 29, 1991. Soil samples collected during the UST excavation revealed the presence of petroleum hydrocarbons. The UST excavation was overexcavated on June 21, 1991; additional soil samples collected for analysis also indicated the presence of petroleum hydrocarbons. On May 25 and 26, 1995, *SECOR* installed three groundwater monitoring wells (MW-1, MW-2 and MW-3) at the locations shown on Figure 2. The three wells were installed to assess groundwater flow patterns and groundwater quality in the vicinity of the former UST.

GROUNDWATER MONITORING PROCEDURES

On December 7, 1995, *SECOR* sounded three groundwater monitoring wells (MW-1 through MW-3) using an electronic water-level indicator. The depth-to-groundwater and total depth were measured for each well and recorded on the Hydrologic and Groundwater Sample Field Data Sheets included in Appendix A. 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 PVC 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 Groundwater Sample Field Data Sheets included in Appendix A. Upon removal of the appropriate purge volume and stabilization of the measured parameters, samples were collected from each well. Groundwater samples were decanted into pre-labeled laboratory-supplied glassware, placed in an ice-filled cooler, and transported to NET Pacific Analytical Laboratory, Inc. (NET) of Santa Rosa, California, a state-certified laboratory under chain-of-custody documentation.

Three samples were submitted for chemical analysis of total petroleum hydrocarbons as gasoline (TPHg) and TPH as diesel (TPHd) by EPA Method 8015, modified, and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8020. The sample collected from well MW-1 was also analyzed for fuel fingerprint by EPA Method 8015, modified to determine the nature of the petroleum hydrocarbons in shallow groundwater. Laboratory analytical reports and chain-of-custody records are included in Appendix B.

SUMMARY OF RESULTS

Monitoring well sounding data 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 7, 1995 groundwater elevation data is presented as Figure 3. During this monitoring event, groundwater was measured at depths between 11.36 and 12.38 feet below the top of the PVC casing. These depths translate to groundwater elevations ranging from 44.19 to 45.10 feet above mean sea level (msl). During this monitoring event groundwater elevations have decreased by up to 0.66 feet when compared with the September 1995 data. Interpretation of the groundwater elevation contour map indicates a groundwater flow direction to the northwest under an average hydraulic gradient of 0.04 feet per foot (ft/ft) which is consistent with historic groundwater flow data.

Groundwater Chemical Results

Groundwater samples exhibited pH values ranging from 7.86 to 10.26 pH units; temperatures ranging from 64.3 to 66.8 degrees Fahrenheit; specific conductivities ranging from 485 to 575 micromhos per centimeter ($\mu\text{mhos/cm}$); brown color; and high turbidity. Groundwater chemical results for December 1995 are shown on Table 2 and displayed graphically on Figure 4. Laboratory analytical reports and chain-of-custody records are included in Appendix B.

During this monitoring event, the groundwater sample collected from well MW-1 was reported to contain TPHg and TPHd at respective concentrations of 260 micrograms per liter ($\mu\text{g/l}$) and 940 $\mu\text{g/l}$; this sample did not yield BTEX compounds above the laboratory reporting limit. The sample collected from well MW-2 was reported to contain TPHd at a concentration of 90 $\mu\text{g/l}$, no other analytes were reported in this sample. The sample collected from well MW-3 did not yield detectable concentrations of TPHg, TPHd, or BTEX. ~~The reported TPHd concentrations decreased significantly relative to the September 1995 results while the TPHg concentration increased in well MW-1.~~

Fuel fingerprint analysis of the sample collected from well MW-1 was indicative of slightly weathered diesel. Chromatograms from this sampling event and the previous quarter sampling event (September 1995) were also compared; both overall patterns were consistent with the carbon range of C9 to C28 (diesel range). A lighter component was also observed in the December 1995 sample accounting for the 260 $\mu\text{g/l}$ reported in the gasoline range.

Ms. Jennifer Eberle
January 8, 1996
Page 3

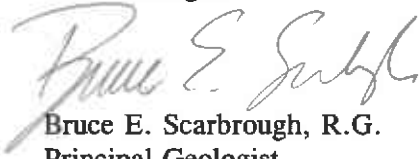
SECOR plans to conduct the next quarterly groundwater monitoring event at the Site in March 1996. Please do not hesitate to contact us at (415) 882-1548 with any question or comments regarding this document.

Sincerely,

SECOR International Incorporated



Liping Zhang
Staff Geologist



Bruce E. Scarbrough, R.G.
Principal Geologist



Donald W. Moore, R.G.
Project Manager



cc: Mr. Peter Sher, SFFBC

Attachments:

Table 1 - Monitoring Well Sounding Data
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 Groundwater Sample Field Data Sheets
Appendix B - Laboratory Analytical Reports and Chain-of-Custody Records

TABLE 1
MONITORING WELL SOUNDING DATA
 3924 Market Street
 Oakland, California

WELL	TOTAL DEPTH ^(a)	SCREENED INTERVAL ^(a)	CASING DIAMETER ^(b)	TOP CASING ELEVATION ^(c)	DEPTH TO GROUNDWATER ^(d)		GROUNDWATER ELEVATION ^(c)
MW-1	21	6-21	2	56.46	6/1/95	9.70	46.76
					9/6/95	10.70	45.76
					12/7/95	11.36	45.10 ↓
MW-2	24	9-24	2	57.41	6/1/95	11.59	45.82
					9/6/95	12.20	45.21
					12/7/95	12.38	45.03 ↓
MW-3	24	9-24	2	56.24	6/1/95	11.53	44.71
					9/6/95	11.92	44.32
					12/7/95	12.05	44.17 ↓

NOTES:

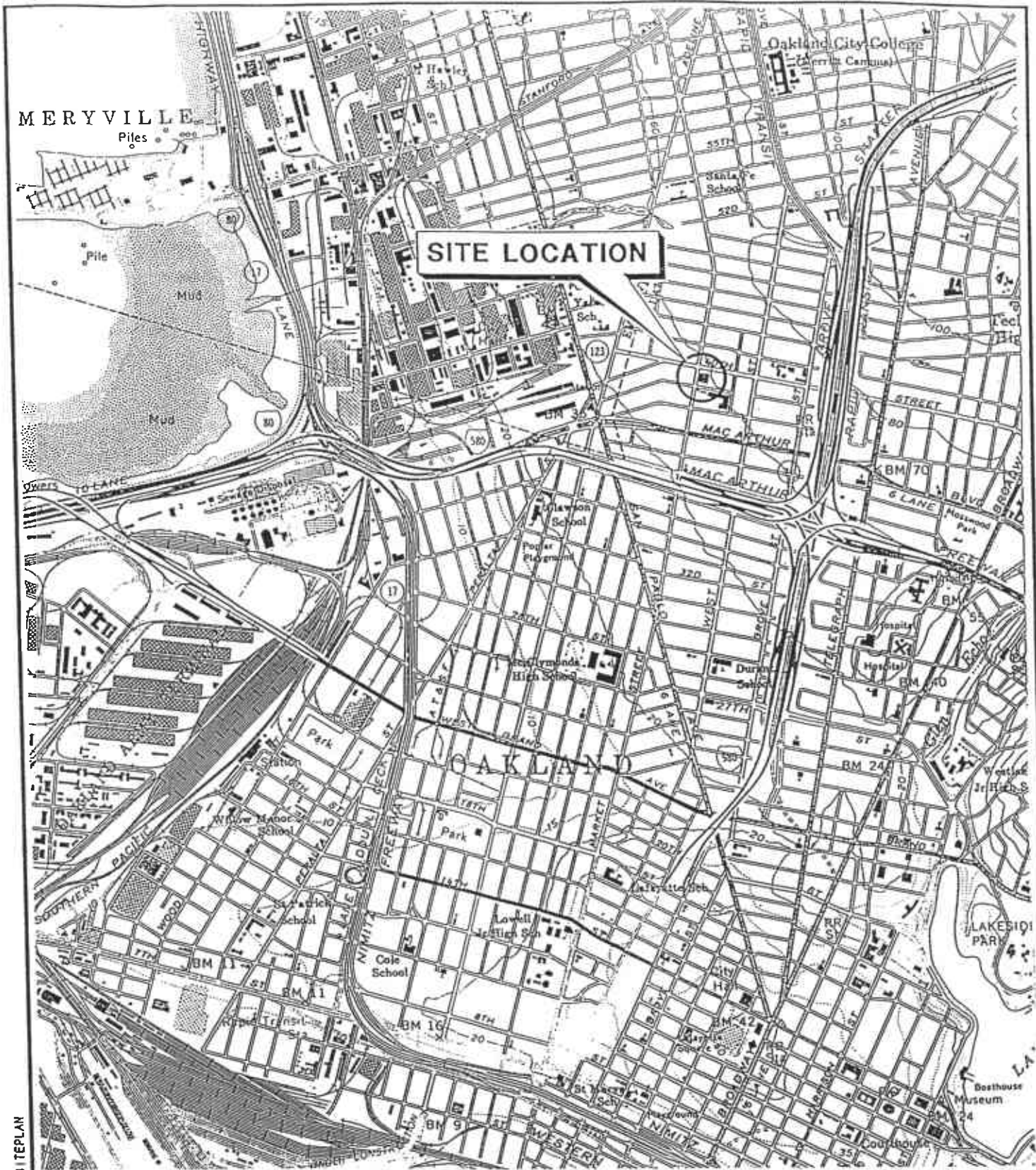
- (a) Measured in feet below ground surface.
- (b) Measured in inches.
- (c) Measured with respect to mean sea level.
- (d) Measured in feet below top of PVC casing.

TABLE 2
GROUNDWATER CHEMICAL RESULTS
 3924 Market Street
 Oakland, California

WELL NUMBER	SAMPLE DATE	TPHg ^(a) (μg/l) ^(b)	TPHd ^(c) (μg/l)	Benzene (μg/l)	Toluene (μg/l)	Ethylbenzene (μg/l)	Xylenes (μg/l)
MW-1	6/1/95	73	3,600	ND ^(d) <0.5	1.0	ND<0.5	3.0
	9/6/95	ND<50	10,000	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	12/7/95	260 ✓	10,000	ND<0.5 ✓	ND<0.5 ✓	ND<0.5 ✓	ND<0.5
MW-2	6/1/95	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	9/6/95	ND<50	500	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	12/7/95	ND<50 ✓	90 ✓	ND<0.5 ✓	ND<0.5 ✓	ND<0.5 ✓	ND<0.5 ✓
MW-3	6/1/95	72	370	1.0	0.6	ND<0.5	0.9
	9/6/95	ND<50	2,800	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	12/7/95	ND<50 ✓	ND<50 ✓	ND<0.5 ✓	ND<0.5 ✓	ND<0.5 ✓	ND<0.5 ✓

NOTES:

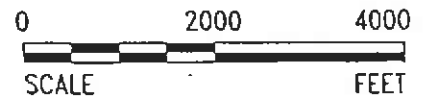
- (a) Total petroleum hydrocarbons as gasoline.
- (b) Micrograms per liter.
- (c) Total petroleum hydrocarbons as diesel.
- (d) ND: Not detected at specified reporting limit.



SOURCE: BASE MAP FROM U.S.G.S. OAKLAND WEST, CA QUADRANGLE. 7.5 MINUTE SERIES TOPOGRAPHIC MAP, PHOTOREVISED 1980.



NORTH



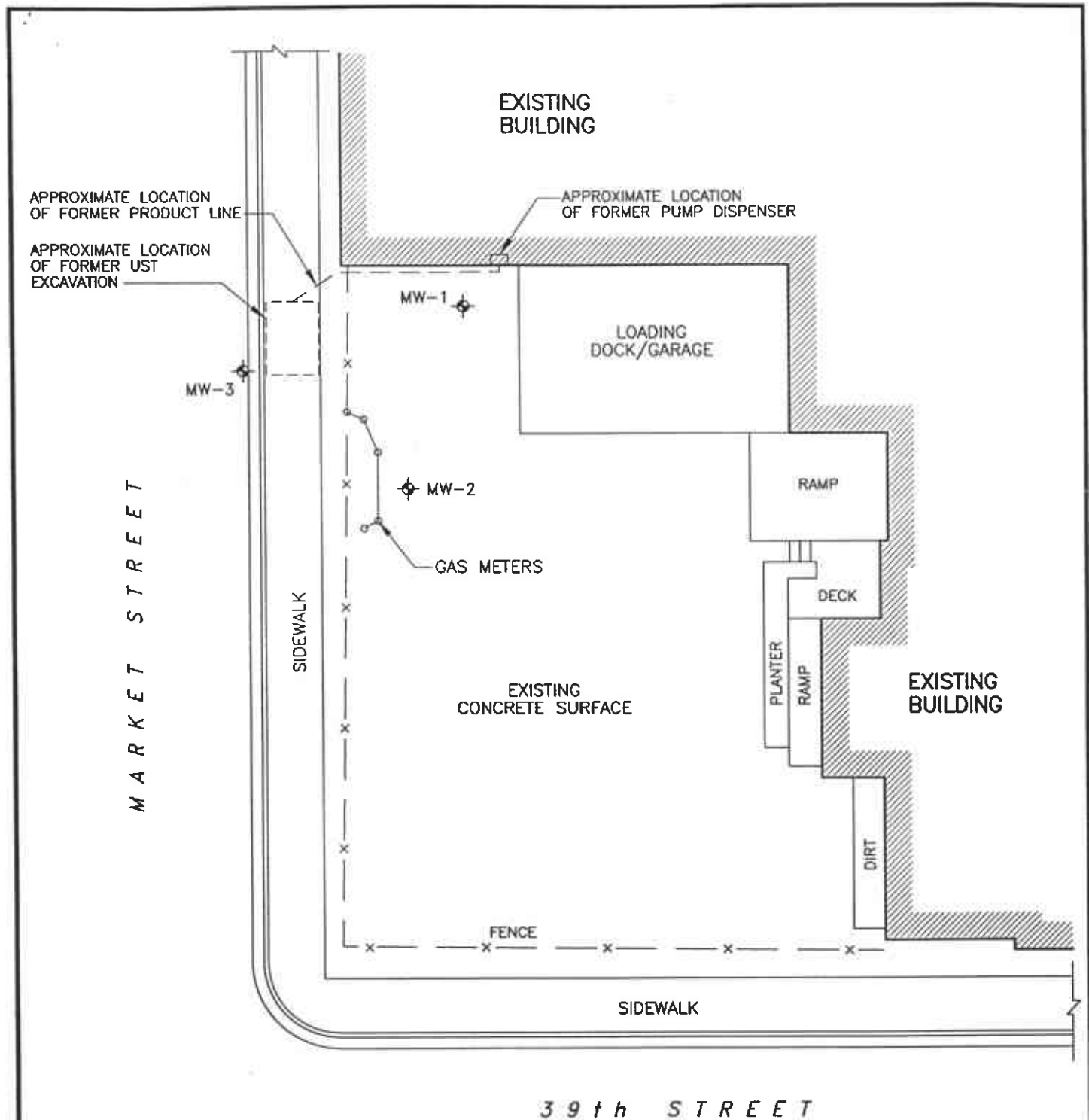
99506 13117 X-1SF-BREADMARKET SITE PLAN

SECOR
INTERNATIONAL
INCORPORATED

DRAWN	CCR
APPR	DWM
DATE	12JUN95
JOB NO.	50090-007-01

FIGURE 1
3924 MARKET STREET
OAKLAND, CALIFORNIA
SITE LOCATION MAP

199508.121246 X:19F-BREAD\MARKET\1\SITEPLAN

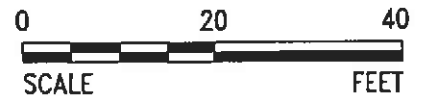


LEGEND:

⊕ MW-1 GROUNDWATER MONITORING WELL



NORTH



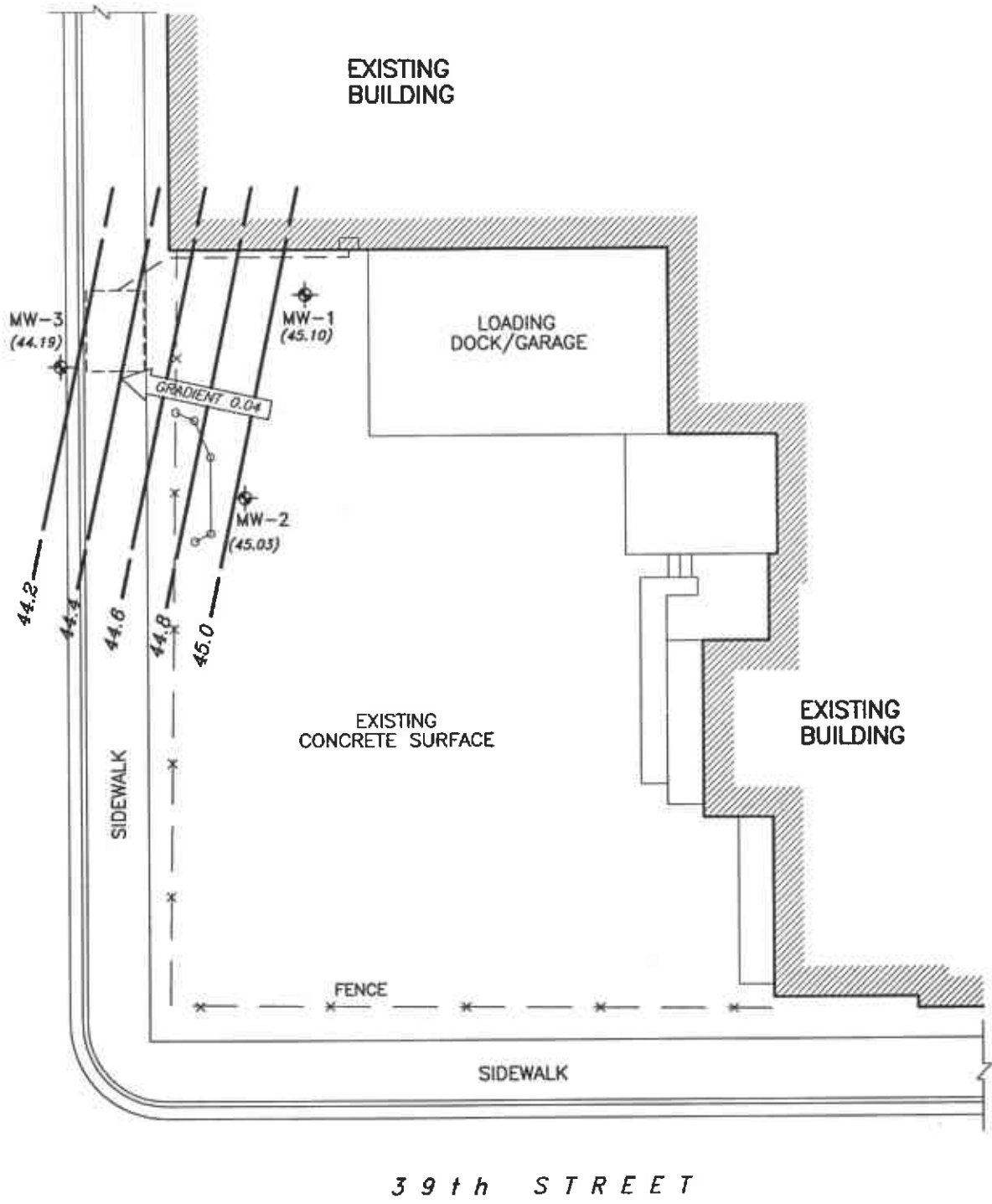
REFERENCE: SURVEYED BY RON ARCHER CIVIL ENGINEER, INC.,
JUNE 2, 1995.

SECOR
INTERNATIONAL
INCORPORATED


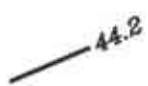

DRAWN	CCR
APPR	DWM
DATE	12JUN95
JOB NO.	50090-007-01

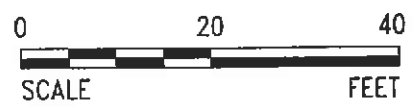
FIGURE 2
3924 MARKET STREET
OAKLAND, CALIFORNIA

SITE PLAN



LEGEND:

-  MW-1
 GROUNDWATER MONITORING WELL
- (45.10)
 GROUNDWATER ELEVATION (FEET MSL)
-  44.2
 GROUNDWATER ELEVATION CONTOUR (FEET MSL)
-  GRADIENT 0.04
 GROUNDWATER FLOW DIRECTION AND GRADIENT

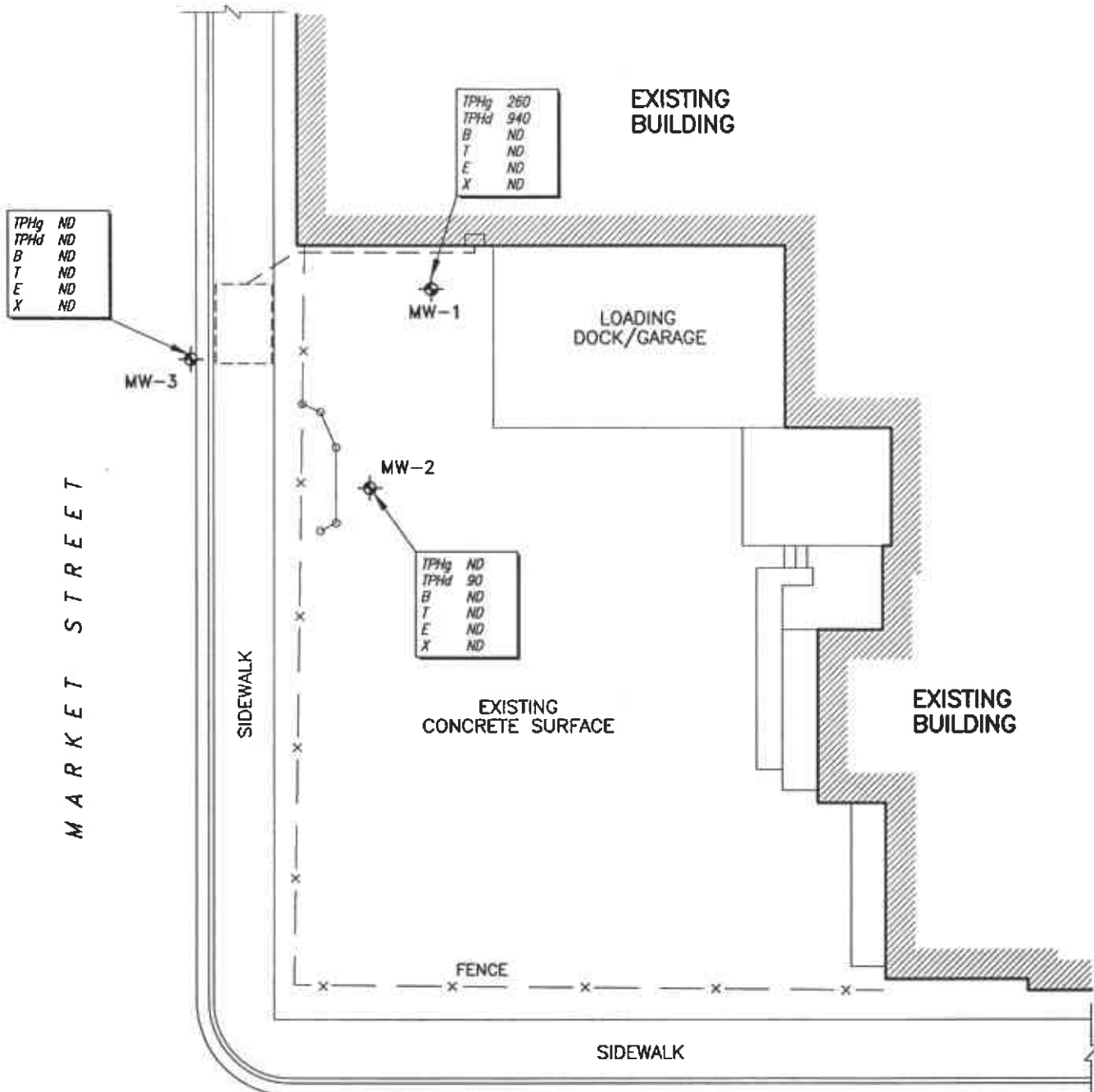


199601.021503 K:\SF-BREAD\MARKET\MARKET06

SECOR
INTERNATIONAL
INCORPORATED

DRAWN	CCR
APPR	DWM
DATE	02JAN96
JOB NO.	50090-007-01

FIGURE 3
3924 MARKET STREET
OAKLAND, CALIFORNIA
**GROUNDWATER ELEVATION
CONTOUR MAP - DECEMBER 7, 1995**



TPHg	ND
TPHd	ND
B	ND
T	ND
E	ND
X	ND

TPHg	260
TPHd	940
B	ND
T	ND
E	ND
X	ND

TPHg	ND
TPHd	90
B	ND
T	ND
E	ND
X	ND

LEGEND:

⊕ MW-1 GROUNDWATER MONITORING WELL

CHEMICAL ANALYTICAL RESULTS

ANALYTES

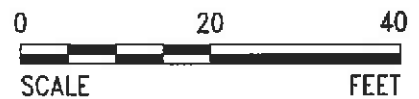
- Total Petroleum Hydrocarbons as Gasoline
- Total Petroleum Hydrocarbons as Diesel
- Benzene
- Toluene
- Ethylbenzene
- Xylenes

TPHg	ND
TPHd	90
B	ND
T	ND
E	ND
X	ND

← Concentration (ug/l)

← Not Detected at or Above the Laboratory Reporting Limit

39th STREET



199512.211802 X11SF-BREAD\MARKET\MARKET05

SECOR
INTERNATIONAL
INCORPORATED

DRAWN	CCR
APPR	DWM
DATE	20DEC95
JOB NO.	50090-007-02

FIGURE 4
3924 MARKET STREET
OAKLAND, CALIFORNIA
**GROUNDWATER CHEMICAL
RESULTS - DECEMBER 7, 1995**

APPENDIX A

**HYDROLOGIC AND GROUNDWATER
SAMPLE FIELD DATA SHEETS**

SEACOR WATER SAMPLE FIELD DATA SHEET

PROJECT NO: 50090-007-02
 PURGED BY: LZ
 SAMPLED BY: LZ

WELL ID: MW-1
 SAMPLE ID: MW-1
 CLIENT NAME: SFRB Market St
 LOCATION: Oakland, CA

TYPE: Groundwater Surface Water _____ Treatment Effluent _____ Other _____
 CASING DIAMETER (inches): 2 3 _____ 4 _____ 4.5 _____ 6 _____ Other _____

CASING ELEVATION: (feet/MSL): _____	VOLUME IN CASING (gal): <u>1.7</u>
DEPTH TO WATER (feet): <u>11.36</u>	CALCULATED PURGE (gal): <u>5.1</u>
DEPTH OF WELL (feet): <u>21.11</u>	ACTUAL PURGE VOL. (gal): <u>5.5</u>

DATE PURGED: 12/7/95 Start (2400 Hr) 105J End (2400 Hr) 1115
 DATE SAMPLED: 12/7/95 Start (2400 Hr) _____ End (2400 Hr) 1125

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, X-DUP-1): _____

FIELD MEASUREMENTS

TIME (2400 Hr)	VOLUME (gal)	pH (units)	E.C. (umho/cm@25°C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (NTU) visual
<u>1104</u>	<u>2</u>	<u>8.49</u>	<u>573</u>	<u>65.3</u>	<u>Brown</u>	<u>High</u>
<u>1109</u>	<u>4</u>	<u>8.18</u>	<u>549</u>	<u>65.7</u>	<u>√</u>	<u>√</u>
<u>1115</u>	<u>5.5</u>	<u>8.24</u>	<u>557</u>	<u>65.8</u>	<u>√</u>	<u>√</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

D.O. (ppm): _____ COLOR, COBALT (0-100): _____

- Clear
- Cloudy
- Yellow
- Brown

ODOR: Chemical Odor, Heavy Sween

PURGING EQUIPMENT

- _____ 2" Bladder Pump _____ Bailor (Teflon®)
- _____ Centrifugal Pump _____ Bailor (PVC)
- _____ Submersible Pump _____ Bailor (Stainless Steel)
- _____ Well Wizard™ _____ Dedicated

Other: Disposable Bailor

SAMPLING EQUIPMENT

- _____ 2" Bladder Pump _____ Bailor (Teflon®)
- _____ DDL Sampler Bailor (PVC/Disposable)
- _____ Submersible Pump _____ Bailor (Stainless Steel)
- _____ Well Wizard™ _____ Dedicated

Other: _____

WELL INTEGRITY: Good LOCK #: Dolphin
 REMARKS: _____

SEACOR WATER SAMPLE FIELD DATA SHEET

PROJECT NO: 10690-007-02
 PURGED BY: CB
 SAMPLED BY: CB

WELL ID: MW-2
 SAMPLE ID: MW-2
 CLIENT NAME: SFFB Market St.
 LOCATION: Oakland, CA

TYPE: Groundwater Surface Water _____ Treatment Effluent _____ Other _____
 CASING DIAMETER (inches): 2 3 _____ 4 _____ 4.5 _____ 6 _____ Other _____

CASING ELEVATION: (feet/MSL): _____	VOLUME IN CASING (gal): <u>2.0</u>
DEPTH TO WATER (feet): <u>12.38</u>	CALCULATED PURGE (gal): <u>6.0</u>
DEPTH OF WELL (feet): <u>23.93</u>	ACTUAL PURGE VOL (gal): <u>6.0</u>

DATE PURGED: 12/7/91 Start (2400 Hr) 0950 End (2400 Hr) 1005
 DATE SAMPLED: 12/7/91 Start (2400 Hr) _____ End (2400 Hr) 1015

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, X-DUP-1): _____

FIELD MEASUREMENTS

TIME (2400 Hr)	VOLUME (gal)	pH (unit)	E.C. (micro/cm@25°C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (NTU) visual
<u>0956</u>	<u>2</u>	<u>10.26</u>	<u>518</u>	<u>66.0</u>	<u>Brown</u>	<u>High</u>
<u>1001</u>	<u>4</u>	<u>9.74</u>	<u>572</u>	<u>66.4</u>	<u>v</u>	<u>v</u>
<u>1005</u>	<u>6</u>	<u>9.76</u>	<u>575</u>	<u>66.8</u>	<u>v</u>	<u>v</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

D.O. (ppm): _____ COLOR, COBALT (0-100): _____
 ODOR: _____
 Clear
 Cloudy
 Yellow
Brown

PURGING EQUIPMENT

- _____ 2" Bladder Pump _____ Bailor (Teflon®)
- _____ Centrifugal Pump _____ Bailor (PVC)
- _____ Submersible Pump _____ Bailor (Stainless Steel)
- _____ Well Wizard™ _____ Dedicated

Other: Disposable Bailor

SAMPLING EQUIPMENT

- _____ 2" Bladder Pump _____ Bailor (Teflon®)
- _____ DDL Sampler Bailor (PVC) (Disposable)
- _____ Submersible Pump _____ Bailor (Stainless Steel)
- _____ Well Wizard™ _____ Dedicated

Other: _____

WELL INTEGRITY: Good LOCK #: Dolphin
 REMARKS: _____

SEACOR WATER SAMPLE FIELD DATA SHEET

PROJECT NO: 5009c-007-02
 PURGED BY: LF
 SAMPLED BY: LF

WELL ID: MW-3
 SAMPLE ID: MW-3
 CLIENT NAME: SFFB Market St.
 LOCATION: Oakland, CA

TYPE: Groundwater Surface Water _____ Treatment Effluent _____ Other _____

CASING DIAMETER (inches): 2 3 _____ 4 _____ 4.5 _____ 6 _____ Other _____

CASING ELEVATION: (feet/MSL): _____	VOLUME IN CASING (gal) <u>2.0</u>
DEPTH TO WATER (feet): <u>12.05</u>	CALCULATED PURGE (gal) <u>6.0</u>
DEPTH OF WELL (feet): <u>23.99</u>	ACTUAL PURGE VOL (gal) <u>6.0</u>

DATE PURGED: 12/7/95 Start (2400 Hr) 1020 End (2400 Hr) 1039
 DATE SAMPLED: 12/7/95 Start (2400 Hr) _____ End (2400 Hr) 1050

FIELD QC SAMPLES COLLECTED AT THIS WELL (I.e. FB-1, X-DUP-1): _____

FIELD MEASUREMENTS

TIME (2400 Hr)	VOLUME (gal)	pH (units)	E.C. (micro/cm @ 25°C)	TEMPERATURE (°F)	COLOR (Nephel)	TURBIDITY (NTU) visual
<u>1026</u>	<u>2</u>	<u>7.86</u>	<u>490</u>	<u>64.3</u>	<u>Brown</u>	<u>High</u>
<u>1032</u>	<u>4</u>	<u>7.83</u>	<u>485</u>	<u>64.4</u>	<u>✓</u>	<u>✓</u>
<u>1039</u>	<u>6</u>	<u>7.98</u>	<u>489</u>	<u>64.7</u>	<u>✓</u>	<u>✓</u>
_____	_____	_____	_____	_____	_____	_____

D.O. (ppm): _____ COLOR, COBALT (0-100): _____

ODOR: Sheen

Clear
 Cloudy
 Yellow
 Brown

PURGING EQUIPMENT

2" Bladder Pump Bailor (Teflon®)
 Centrifugal Pump Bailor (PVC)
 Submersible Pump Bailor (Stainless Steel)
 Well Wizard™ Dedicated
 Other: Disposable Bailor

SAMPLING EQUIPMENT

2" Bladder Pump Bailor (Teflon®)
 DDL Sampler Bailor (PVC (disposable))
 Submersible Pump Bailor (Stainless Steel)
 Well Wizard™ Dedicated
 Other: _____

WELL INTEGRITY: Good LOCK #: Dolphin

REMARKS: _____

SIGNATURE: [Signature] Page 1 of 1

APPENDIX B

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



NATIONAL
ENVIRONMENTAL
TESTING, INC.

Santa Rosa Division
3636 North Laughlin Road
Suite 110
Santa Rosa, CA 95403-8226
Tel: (707) 526-7200
Fax: (707) 541-2333

Don Moore
SECOR
90 New Montgomery
Suite 620
San Francisco, CA 94105

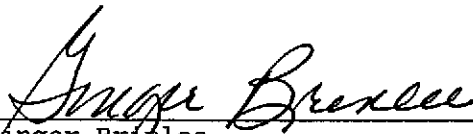
Date: 12/20/1995
NET Client Acct. No: 74000
NET Job No: 95.04694
Received: 12/09/1995

Client Reference Information

SFFB Market St./Project No. 50090-007-02

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel free to call me at (707) 541-2305.

Submitted by:



Ginger Brinlee
Project Coordinator

Enclosure (s)





Client Name: SECOR
 Client Acct: 74000
 NET Job No: 95.04694

Date: 12/20/1995
 ELAP Cert: 1386
 Page: 2

Ref: SFFB Market St./Project No. 50090-007-02

SAMPLE DESCRIPTION: MW-1 ✓
 Date Taken: 12/07/1995 ✓
 Time Taken:
 NET Sample No: 257102

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE, Liquid)								
METHOD 5030/M8015	--						12/15/1995	3412
DILUTION FACTOR*	1						12/15/1995	3412
as Gasoline	0.26	✓	0.05	mg/L	5030		12/15/1995	3412
METHOD 8020 (GC, Liquid)								
Benzene	ND		0.5	ug/L	8020		12/15/1995	3412
Toluene	ND		0.5	ug/L	8020		12/15/1995	3412
Ethylbenzene	ND		0.5	ug/L	8020		12/15/1995	3412
Xylenes (Total)	ND	✓	0.5	ug/L	8020		12/15/1995	3412
SURROGATE RESULTS								
Bromofluorobenzene (SURR)	103			% Rec.	5030		12/15/1995	3412
METHOD M8015 (EXT., Liquid)								
						12/13/1995		
DILUTION FACTOR*	1						12/18/1995	1133
as Bunker C	ND		0.5	mg/L	3510		12/18/1995	1133
as Creosote	ND		0.5	mg/L	3510		12/18/1995	1133
as Cutting Oil	ND		0.5	mg/L	3510		12/18/1995	1133
as Diesel ✓	0.94	✓	0.05	mg/L	3510		12/18/1995	1133
as Hydraulic Oil	ND		0.5	mg/L	3510		12/18/1995	1133
as Jet Fuel	ND		0.05	mg/L	3510		12/18/1995	1133
as Jet A	ND		0.05	mg/L	3510		12/18/1995	1133
as Kerosene	ND		0.05	mg/L	3510		12/18/1995	1133
as Motor Oil	ND		0.5	mg/L	3510		12/18/1995	1133
as Stoddard Solvent	ND		0.05	mg/L	3510		12/18/1995	1133
as Thinner	ND		0.05	mg/L	3510		12/18/1995	1133
as Transformer Oil	ND		0.05	mg/L	3510		12/18/1995	1133
as Transmission Fluid	ND		0.05	mg/L	3510		12/18/1995	1133
FINGERPRINT	--		0.5	mg/L	3510		12/18/1995	1133
SURROGATE RESULTS								
Ortho-terphenyl (SURR)	79			% Rec.	3510		12/18/1995	1133
Carbon Range:	C9-C28						12/18/1995	1133

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Name: SECOR
Client Acct: 74000
NET Job No: 95.04694

Date: 12/20/1995
ELAP Cert: 1386
Page: 3

Ref: SFFB Market St./Project No. 50090-007-02

SAMPLE DESCRIPTION: MW-2 ✓
Date Taken: 12/07/1995 ✓
Time Taken:
NET Sample No: 257103

Parameter	Results	Flags	Reporting			Method	Date	Date	Run
			Limit	Units	Extracted		Analyzed	Batch No.	
TPH (Gas/BTXE,Liquid)									
METHOD 5030/M8015	--						12/14/1995	3414	
DILUTION FACTOR*	1						12/14/1995	3414	
as Gasoline	ND ✓		0.05	mg/L	5030		12/14/1995	3414	
METHOD 8020 (GC,Liquid)	--						12/14/1995	3414	
Benzene	ND		0.5	ug/L	8020		12/14/1995	3414	
Toluene	ND		0.5	ug/L	8020		12/14/1995	3414	
Ethylbenzene	ND		0.5	ug/L	8020		12/14/1995	3414	
Xylenes (Total)	ND ✓		0.5	ug/L	8020		12/14/1995	3414	
SURROGATE RESULTS	--						12/14/1995	3414	
Bromofluorobenzene (SURR)	99			% Rec.	5030		12/14/1995	3414	
METHOD M8015 (EXT., Liquid)							12/13/1995		
DILUTION FACTOR*	1						12/14/1995	1130	
as Diesel	0.09 ✓		0.05	mg/L	3510		12/14/1995	1130	

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



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SAMPLE DESCRIPTION: MW-3
 Date Taken: 12/07/1995
 Time Taken:
 NET Sample No: 257104

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						12/14/1995	3414
DILUTION FACTOR*	1						12/14/1995	3414
as Gasoline	ND		0.05	mg/L	5030		12/14/1995	3414
METHOD 8020 (GC,Liquid)								
Benzene	ND		0.5	ug/L	8020		12/14/1995	3414
Toluene	ND		0.5	ug/L	8020		12/14/1995	3414
Ethylbenzene	ND		0.5	ug/L	8020		12/14/1995	3414
Xylenes (Total)	ND		0.5	ug/L	8020		12/14/1995	3414
SURROGATE RESULTS								
Bromofluorobenzene (SURR)	91			% Rec.	5030		12/14/1995	3414
METHOD M8015 (EXT., Liquid)								
DILUTION FACTOR*	1					12/13/1995	12/14/1995	1130
as Diesel	ND		0.05	mg/L	3510		12/14/1995	1130

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CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV	CCV	CCV	Units	Date Analyzed	Analyst Initials	Run Batch Number
	Standard % Recovery	Standard Amount Found	Standard Amount Expected				
TPH (Gas/BTXE,Liquid)							
as Gasoline	96.0	0.48	0.50	mg/L	12/15/1995	dld	3412
Benzene	104.4	5.22	5.00	ug/L	12/15/1995	dld	3412
Toluene	101.4	5.07	5.00	ug/L	12/15/1995	dld	3412
Ethylbenzene	103.6	5.18	5.00	ug/L	12/15/1995	dld	3412
Xylenes (Total)	104.7	15.7	15.0	ug/L	12/15/1995	dld	3412
Bromofluorobenzene (SURR)	100.0	100	100	% Rec.	12/15/1995	dld	3412
TPH (Gas/BTXE,Liquid)							
as Gasoline	96.0	0.48	0.50	mg/L	12/14/1995	dld	3414
Benzene	107.6	5.38	5.00	ug/L	12/14/1995	dld	3414
Toluene	104.6	5.23	5.00	ug/L	12/14/1995	dld	3414
Ethylbenzene	106.6	5.33	5.00	ug/L	12/14/1995	dld	3414
Xylenes (Total)	108.7	16.3	15.0	ug/L	12/14/1995	dld	3414
Bromofluorobenzene (SURR)	104.0	104	100	% Rec.	12/14/1995	dld	3414
METHOD M8015 (EXT., Liquid)							
as Diesel	104.0	1040	1000	mg/L	12/14/1995	tts	1130
as Motor Oil	96.0	960	1000	mg/L	12/14/1995	tts	1130
Ortho-terphenyl (SURR)	95.0	95	100	% Rec.	12/14/1995	tts	1130
METHOD M8015 (EXT., Liquid)							
as Diesel	95.4	954	1000	mg/L	12/18/1995	tts	1133
as Motor Oil	94.4	944	1000	mg/L	12/18/1995	tts	1133
Ortho-terphenyl (SURR)	86.0	86	100	% Rec.	12/18/1995	tts	1133

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METHOD BLANK REPORT

Parameter	Method			Date Analyzed	Analyst Initials	Run Batch Number
	Blank Amount Found	Reporting Limit	Units			
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	12/15/1995	dld	3412
Benzene	ND	0.5	ug/L	12/15/1995	dld	3412
Toluene	ND	0.5	ug/L	12/15/1995	dld	3412
Ethylbenzene	ND	0.5	ug/L	12/15/1995	dld	3412
Xylenes (Total)	ND	0.5	ug/L	12/15/1995	dld	3412
Bromofluorobenzene (SURR)	98		% Rec.	12/15/1995	dld	3412
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	12/14/1995	dld	3414
Benzene	ND	0.5	ug/L	12/14/1995	dld	3414
Toluene	ND	0.5	ug/L	12/14/1995	dld	3414
Ethylbenzene	ND	0.5	ug/L	12/14/1995	dld	3414
Xylenes (Total)	ND	0.5	ug/L	12/14/1995	dld	3414
Bromofluorobenzene (SURR)	102		% Rec.	12/14/1995	dld	3414
METHOD M8015 (EXT., Liquid)						
as Bunker C	ND	0.5	mg/L	12/14/1995	tts	1130
as Creosote	ND	0.5	mg/L	12/14/1995	tts	1130
as Cutting Oil	ND	0.5	mg/L	12/14/1995	tts	1130
as Diesel	ND	0.05	mg/L	12/14/1995	tts	1130
as Hydraulic Oil	ND	0.5	mg/L	12/14/1995	tts	1130
as Jet Fuel	ND	0.05	mg/L	12/14/1995	tts	1130
as Kerosene	ND	0.05	mg/L	12/14/1995	tts	1130
as Motor Oil	ND	0.5	mg/L	12/14/1995	tts	1130
as Stoddard Solvent	ND	0.05	mg/L	12/14/1995	tts	1130
as Thinner	ND	0.05	mg/L	12/14/1995	tts	1130
as Transformer Oil	ND	0.05	mg/L	12/14/1995	tts	1130
as Transmission Fluid	ND	0.05	mg/L	12/14/1995	tts	1130
FINGERPRINT	--	0.5	mg/L	12/14/1995	tts	1130
Ortho-terphenyl (SURR)	69		% Rec.	12/14/1995	tts	1130
METHOD M8015 (EXT., Liquid)						
as Bunker C	ND	0.5	mg/L	12/18/1995		1133
as Creosote	ND	0.5	mg/L	12/18/1995		1133
as Cutting Oil	ND	0.5	mg/L	12/18/1995		1133
as Diesel	ND	0.05	mg/L	12/18/1995		1133
as Hydraulic Oil	ND	0.5	mg/L	12/18/1995		1133
as Jet Fuel	ND	0.05	mg/L	12/18/1995		1133
as Kerosene	ND	0.05	mg/L	12/18/1995		1133
as Motor Oil	ND	0.5	mg/L	12/18/1995		1133
as Stoddard Solvent	ND	0.05	mg/L	12/18/1995		1133
as Thinner	ND	0.05	mg/L	12/18/1995		1133
as Transformer Oil	ND	0.05	mg/L	12/18/1995		1133
as Transmission Fluid	ND	0.05	mg/L	12/18/1995		1133
FINGERPRINT	--	0.5	mg/L	12/18/1995		1133
Ortho-terphenyl (SURR)	75		% Rec.	12/18/1995		1133

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike			Spike Amount	Sample Conc.	Matrix Spike			Date Analyzed	Run Batch	Sample Spiked
	Matrix Spike % Rec.	Dup % Rec.	RPD			Matrix Spike Conc.	Dup. Conc.	Units			
TPH (Gas/BTXE, Liquid)											257220
as Gasoline	96.0	92.0	4.3	0.50	ND	0.48	0.46	mg/L	12/15/1995	3412	257220
Benzene	75.6	71.8	5.2	10.32	ND	7.80	7.41	ug/L	12/15/1995	3412	257220
Toluene	99.5	95.1	4.5	27.13	ND	27.00	25.81	ug/L	12/15/1995	3412	257220
TPH (Gas/BTXE, Liquid)											257058
as Gasoline	96.0	96.0	0.0	0.50	ND	0.48	0.48	mg/L	12/14/1995	3414	257058
Benzene	94.6	93.8	0.8	8.56	ND	8.10	8.03	ug/L	12/14/1995	3414	257058
Toluene	98.3	98.3	0.0	28.7	ND	28.2	28.2	ug/L	12/14/1995	3414	257058
METHOD M8015 (EXT., Liquid)											257079
as Diesel	56.5	56.5	0.0	2.00	0.19	1.32	1.32	mg/L	12/14/1995	1130	257079
METHOD M8015 (EXT., Liquid)											251343
as Diesel	62.5	140.1	76.5	2.00	3.1	4.35	6.28	mg/L	12/18/1995	1133	251343

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



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LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS % Recovery	Duplicate		LCS Amount Found	Duplicate		Units	Date Analyzed	Analyst Initials	Run Batch
		LCS % Recovery	RPD		LCS Amount Found	LCS Amount Expected				
METHOD M8015 (EXT., Liquid)										
as Diesel	39.6			0.396		1.00	mg/L	12/14/1995	tts	1130
Ortho-terphenyl (SURR)	74.0			74		100	% Rec.	12/14/1995	tts	1130
METHOD M8015 (EXT., Liquid)										
as Diesel	55.4			0.554		1.00	mg/L	12/18/1995		1133
Ortho-terphenyl (SURR)	77.0			77		100	% Rec.	12/18/1995		1133

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



KEY TO ABBREVIATIONS and METHOD REFERENCES

- < : Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
- * : Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
- ICVS : Initial Calibration Verification Standard (External Standard).
- mean : Average; sum of measurements divided by number of measurements.
- mg/Kg (ppm) : Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
- mg/L : Concentration in units of milligrams of analyte per liter of sample.
- mL/L/hr : Milliliters per liter per hour.
- MPN/100 mL : Most probable number of bacteria per one hundred milliliters of sample.
- N/A : Not applicable.
- NA : Not analyzed.
- ND : Not detected; the analyte concentration is less than applicable listed reporting limit.
- NTU : Nephelometric turbidity units.
- RPD : Relative percent difference, $100 \text{ [Value 1 - Value 2]}/\text{mean value}$.
- SNA : Standard not available.
- ug/Kg (ppb) : Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
- ug/L : Concentration in units of micrograms of analyte per liter of sample.
- umhos/cm : Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

SEACOR Chain-of-Custody Record

Field Office: San Francisco
 Address: 90 New Montgomery St #620
San Francisco, CA 94105

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

Job Name: SFFB Market St.
 Location: Oakland, CA

Project # 50090-007-02 Task # _____
 Project Manager Don Moore
 Laboratory NET
 Turnaround Time Standard

Sampler's Name Liping Zhang
 Sampler's Signature [Signature]

Analysis Request

Sample ID	Date	Time	Matrix	HCID	TPH/g/BTEX/WTPH-G 8015 (modified)/8020	TPH/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 (13)	TCLP Metals	Comments/ Instructions	Number of Containers
MW-1	12/7		water		X	X											6
MW-2					X	X											5
MW-3					X	X											5

CHAIN OF CUSTODY SEALED
 Date 12/17/95 Time 16:00 Initials [Signature]
 SEAL INTACT?
 Yes [Signature] No [Signature] Initials [Signature]

Special Instructions/Comments:

MW-1:
 - Extract twice,
 - Hold 2nd extract for
 further analysis.

Relinquished by:
 Sign [Signature]
 Print Liping Zhang
 Company SEACOR
 Time 11:57 Date 12/7/95

Received by:
 Sign [Signature]
 Print P. Smart
 Company NET
 Time 10:30 Date 12/8/95

Sample Receipt

Total no. of containers: 16
 Chain of custody seals: _____
 Rec'd. good condition/cold: _____
 Conforms to record: _____

Relinquished by:
 Sign [Signature]
 Print P. Smart
 Company NET
 Time 11:00 Date 12/8/95

Received by:
 Sign [Signature]
 Print PAUL PROSSER
 Company NET-S.R.
 Time 0900 Date 12/9/95

Client: SEACOR
 Client Contact: Don Moore
 Client Phone: (415) 882-1528