

ENVIRONMENTAL
PROTECTION

May 8 1996 MAY 10 PM 12:49

4265

SECOR
International Incorporated

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, MARCH 1996, 3924 MARKET STREET, OAKLAND, CALIFORNIA, FOR METZ BAKING COMPANY

Dear Ms. Eberle:

SECOR International Incorporated (*SECOR*) is pleased to submit this Quarterly Groundwater Monitoring Report presenting the results of groundwater monitoring conducted at 3924 Market Street in Oakland, California (the Site, see Figure 1, Site Location Map). *SECOR* is submitting this document on behalf of the Metz Baking Company (Metz). Metz formerly operated the Site as a San Francisco French Bread Company (SFFBC) facility. *SECOR* is providing this document to the Alameda County Department of Environmental Health (ACDEH) in accordance with recommended activities outlined in *SECOR*'s Site investigation Summary Report dated June 28, 1995. This report presents monitoring well sounding, groundwater elevation, and groundwater quality data collected from three Site wells on March 7, 1996.

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 direction and groundwater quality in the vicinity of the former UST.

GROUNDWATER MONITORING PROCEDURES

On March 7, 1996, *SECOR* sounded three groundwater monitoring wells (MW-1 through MW-3) using an electronic water-level indicator. The depth-to-groundwater and total well 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

Ms. Jennifer Eberle
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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. 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

During this monitoring event, groundwater was measured at depths between 10.11 and 11.70 feet below the top of the PVC casing. These depths translate to groundwater elevations ranging from 44.54 to 46.35 feet above mean sea level (msl). During this monitoring event, groundwater elevations have increased by up to 1.26 feet when compared with the December 1995 data. A groundwater elevation contour map based on the March 7, 1996 groundwater elevation data is presented as Figure 3. Interpretation of Figure 3 indicates a groundwater flow direction to the northwest under an average hydraulic gradient of 0.065 feet per foot (ft/ft) which is consistent with historic groundwater flow data.

Groundwater Chemical Results

Groundwater samples exhibited pH values ranging from 7.76 to 10.26 pH units; temperatures ranging from 62.4 to 67.1 degrees Fahrenheit; specific conductivities ranging from 475 to 648 micromhos per centimeter ($\mu\text{mhos/cm}$); brown color; and moderate turbidity. Groundwater chemical results for March 1996 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 150 micrograms per liter ($\mu\text{g/l}$) and 3,800 $\mu\text{g/l}$; this sample did not contain BTEX compounds above the laboratory reporting limit. The sample collected from well MW-2 was reported to contain TPHd at a concentration of 320 $\mu\text{g/l}$, no other analytes were reported in this sample. The sample collected from well MW-3 was reported to contain TPHg, TPHd, benzene, and xylenes at respective concentrations of 150 $\mu\text{g/l}$, 470 $\mu\text{g/l}$, 3.5 $\mu\text{g/l}$, and 0.6 $\mu\text{g/l}$.


Ms. Jennifer Eberle
May 8, 1996
Page 3


SECOR plans to conduct the next quarterly groundwater monitoring event at the Site in June 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


Donald W. Moore, R.G.
Project Manager




Bruce E. Scarbrough, R.G.
Principal Geologist

cc: Mr. Christopher Rants, Metz Baking Company

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
					3/7/96	10.11	46.35
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
					3/7/96	11.12	46.29
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	44.19
					3/7/96	11.70	44.54

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	940	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	3/7/96	150 ✓	3,800 ✓	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
	3/7/96	ND<50 ✓	320 ✓	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
	3/7/96	150 ✓	470 ✓	3.5 ✓	ND<0.5 ✓	ND<0.5 ✓	0.6 ✓

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.

MERYVILLE

SITE LOCATION

OAKLAND

Oakland City College
Herritt Campus

LAKE SIDE PARK

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



NORTH

0 2000 4000

SCALE

FEET

SECOR
INTERNATIONAL
INCORPORATED

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

FIGURE 1
3924 MARKET STREET
OAKLAND, CALIFORNIA

SITE LOCATION MAP

199506.13117 X:\SF-BREAD\MARKET\SITEPLAN

APPROXIMATE LOCATION OF FORMER PRODUCT LINE
 APPROXIMATE LOCATION OF FORMER UST EXCAVATION

EXISTING BUILDING

APPROXIMATE LOCATION OF FORMER PUMP DISPENSER

MW-1

LOADING DOCK/GARAGE

MW-3

MW-2

RAMP

MARKET STREET

SIDEWALK

EXISTING CONCRETE SURFACE

DECK

EXISTING BUILDING

PLANTER

RAMP

DIRT

FENCE

SIDEWALK

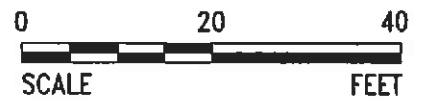
39th STREET

LEGEND:

⊕ MW-1 GROUNDWATER MONITORING WELL



NORTH



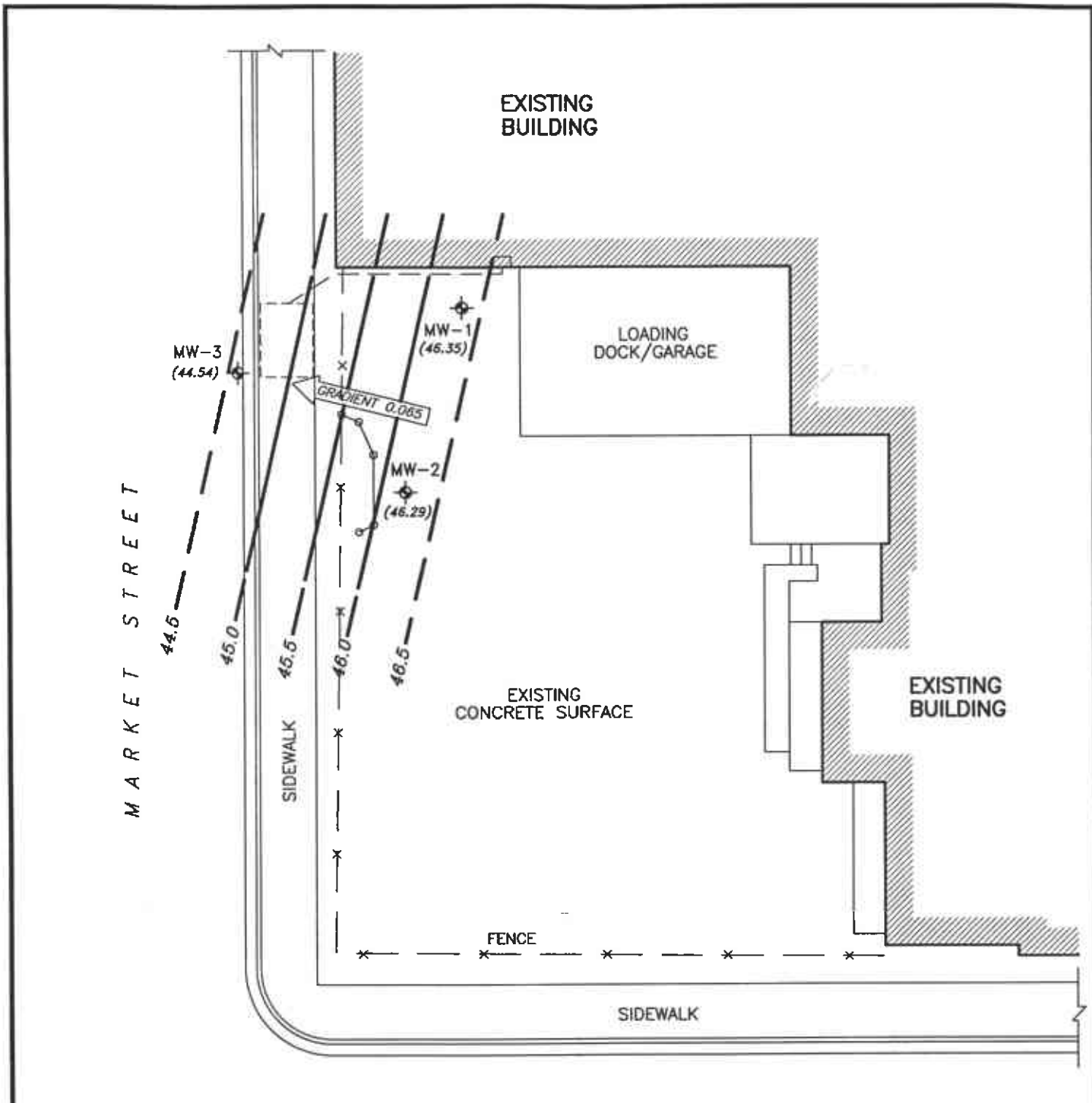
REFERENCE: SURVEYED BY RON ARCHER CIVIL ENGINEER, INC.,
 JUNE 2, 1995.

SECOR
 INTERNATIONAL
 INCORPORATED




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

FIGURE 2
 3924 MARKET STREET
 OAKLAND, CALIFORNIA

SITE PLAN



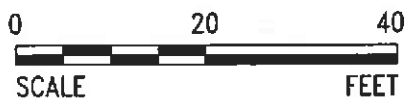
LEGEND:

-  MW-1
 GROUNDWATER MONITORING WELL
 (46.29)
 GROUNDWATER ELEVATION (FEET MSL)
-  44.5
 GROUNDWATER ELEVATION CONTOUR (FEET MSL)
-  GRADIENT 0.065
 GROUNDWATER FLOW DIRECTION AND GRADIENT

39th STREET



NORTH



199603.26/318 X:1SF-BREAD/MARKET/MARKET08

SECOR
INTERNATIONAL
INCORPORATED

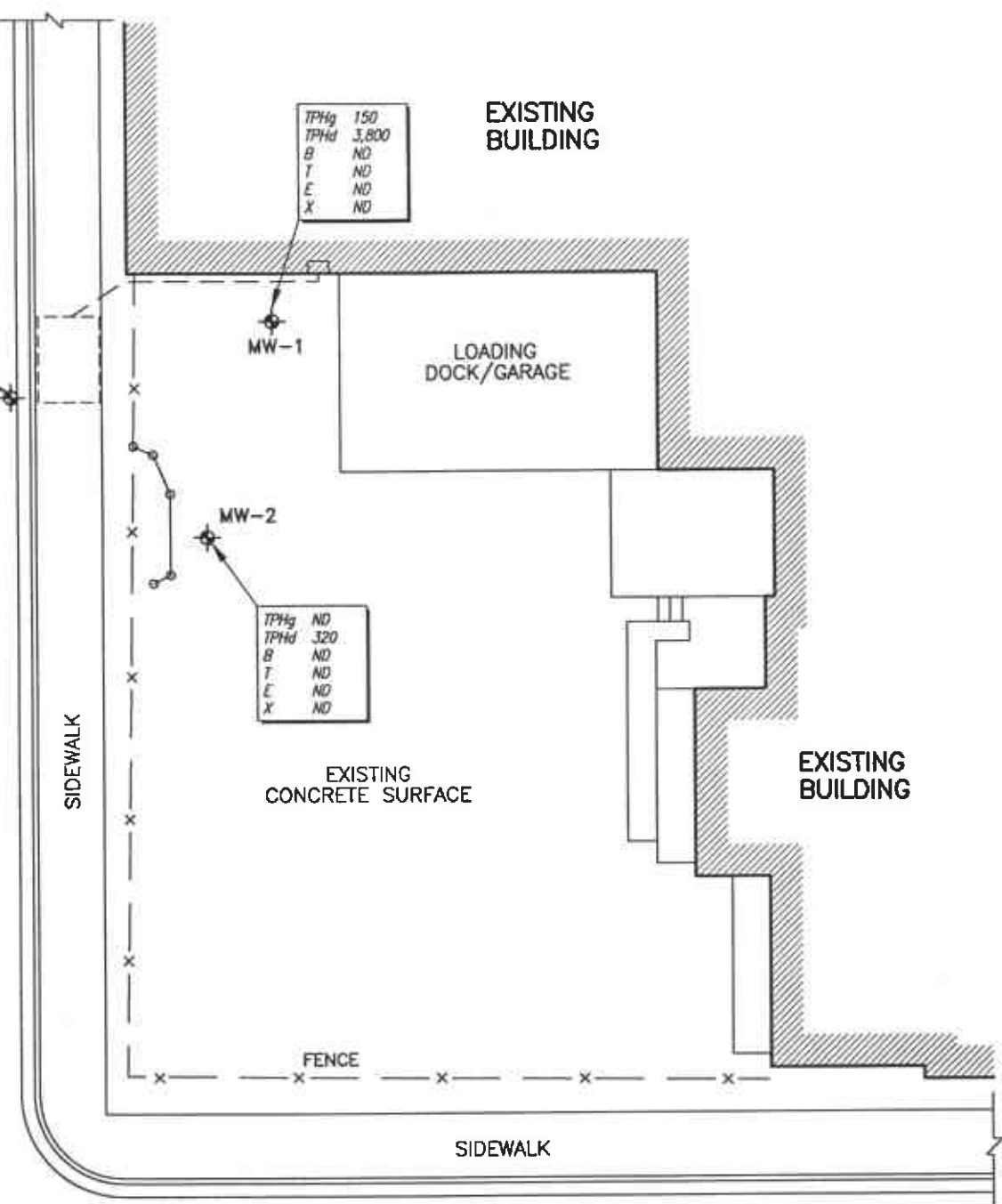
DRAWN	CCR
APPR	DWM
DATE	26MAR96
JOB NO.	50090-007-02

FIGURE 3
3924 MARKET STREET
OAKLAND, CALIFORNIA
**GROUNDWATER ELEVATION
CONTOUR MAP - MARCH 7, 1996**

TPHg	150
TPHd	470
B	3.5
T	ND
E	ND
X	0.6

TPHg	150
TPHd	3,800
B	ND
T	ND
E	ND
X	ND

TPHg	ND
TPHd	320
B	ND
T	ND
E	ND
X	ND



LEGEND:

⊕ MW-1 GROUNDWATER MONITORING WELL

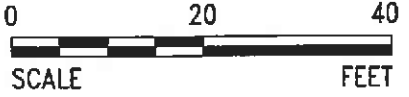
CHEMICAL ANALYTICAL RESULTS

ANALYTES

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

TPHg	ND
TPHd	320
B	ND
T	ND
E	ND
X	ND

← Concentration (ug/l)
 ← Not Detected at or Above the Laboratory Reporting Limit



199603.201704 X:\SF-BREAD\MARKET\MARKET07

SECOR
INTERNATIONAL
INCORPORATED

DRAWN	CCR
APPR	DWM
DATE	20MAR96
JOB NO.	50090-007-02

FIGURE 4
3924 MARKET STREET
OAKLAND, CALIFORNIA
GROUNDWATER CHEMICAL RESULTS - MARCH 7, 1996

APPENDIX A
HYDROLOGIC AND GROUNDWATER
SAMPLE FIELD DATA SHEETS

SEACOR WATER SAMPLE FIELD DATA SHEET

PROJECT NO: 12090-007-02
 PURGED BY: UB
 SAMPLED BY: UB

WELL ID: MW-1
 SAMPLE ID: MW-1
 CLIENT NAME: SFFBC
 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>1.9</u>
DEPTH TO WATER (feet): <u>10.11</u>	CALCULATED PURGE (gal): <u>5.17</u>
DEPTH OF WELL (feet): <u>21.0</u>	ACTUAL PURGE VOL. (gal): <u>6.6</u>

DATE PURGED: 3/7/96 Start (2400 Hr) 1015 End (2400 Hr) 1035
 DATE SAMPLED: 3/7/96 Start (2400 Hr) _____ End (2400 Hr) 1045

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. (umhos/cm@25°C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (NTU) visual
<u>1023</u>	<u>2</u>	<u>8.50</u>	<u>495</u>	<u>65.1</u>	<u>Brown</u>	<u>Med.</u>
<u>1027</u>	<u>4</u>	<u>8.47</u>	<u>524</u>	<u>65.4</u>	<u>"</u>	<u>"</u>
<u>1035</u>	<u>6</u>	<u>8.44</u>	<u>522</u>	<u>65.1</u>	<u>"</u>	<u>"</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

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

ODOR: Chemical 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

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: Sheen

SEACOR WATER SAMPLE FIELD DATA SHEET

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

WELL ID: MW-2
 SAMPLE ID: MW-2
 CLIENT NAME: SFFBC
 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>2.2</u>
DEPTH TO WATER (feet): <u>11.2</u>	CALCULATED PURGE (gal): <u>6.6</u>
DEPTH OF WELL (feet): <u>24.0</u>	ACTUAL PURGE VOL (gal): <u>7.0</u>

DATE PURGED: 3/7/96 Start (2400 Hr) 1050 End (2400 Hr) 1115
 DATE SAMPLED: 3/7/96 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 (water)	E.C. (micro/cm @ 25°C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (NTU) visual
<u>1100</u>	<u>2</u>	<u>10.26</u>	<u>644</u>	<u>66.8</u>	<u>Brown</u>	<u>Cloudy</u>
<u>1105</u>	<u>4</u>	<u>9.22</u>	<u>633</u>	<u>66.6</u>	<u>v</u>	<u>v</u>
<u>1109</u>	<u>6</u>	<u>8.66</u>	<u>638</u>	<u>66.6</u>	<u>v</u>	<u>v</u>
<u>1115</u>	<u>7</u>	<u>8.29</u>	<u>648</u>	<u>67.1</u>	<u>v</u>	<u>v</u>

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

ODOR: _____

Clear
 Cloudy
 Yellow
 Brown

PURGING EQUIPMENT

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

Other: Disposable

SAMPLING EQUIPMENT

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

Other: _____

WELL INTEGRITY: Good LOCK #: Dolphin

REMARKS: _____

SIGNATURE: [Signature] Page 1 of 1

SEACOR WATER SAMPLE FIELD DATA SHEET

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

WELL ID: MW-3
 SAMPLE ID: MW-3
 CLIENT NAME: SFFBC
 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>2.1</u>
DEPTH TO WATER (feet): <u>11.70</u>	CALCULATED PURGE (gal) <u>6.3</u>
DEPTH OF WELL (feet): <u>24.0</u>	ACTUAL PURGE VOL (gal) <u>6.5</u>

DATE PURGED: 3/7/96 Start (2400 Hr) 0940 End (2400 Hr) 1000
 DATE SAMPLED: 3/7/96 Start (2400 Hr) _____ End (2400 Hr) 1010

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. (umhos/cm@25°C)	TEMPERATURE (°F)	COLOR (Visual)	TURBIDITY (NTU) <u>visual</u>
<u>0946</u>	<u>3</u>	<u>7.82</u>	<u>475</u>	<u>62.4</u>	<u>Brown</u>	<u>Med.</u>
<u>0951</u>	<u>5</u>	<u>7.79</u>	<u>480</u>	<u>62.6</u>	<u>✓</u>	<u>✓</u>
<u>1000</u>	<u>6.5</u>	<u>7.76</u>	<u>480</u>	<u>63.0</u>	<u>✓</u>	<u>✓</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

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

ODOR: Faint Chemical Odor

Clear
Cloudy
Yellow
Brown

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
_____ 2" Bladder Pump	_____ Baller (Teflon®)	_____ 2" Bladder Pump	_____ Baller (Teflon®)
_____ Centrifugal Pump	_____ Baller (PVC)	_____ DDL Sampler <input checked="" type="checkbox"/>	_____ Baller (PVC <u>disposable</u>)
_____ Submersible Pump	_____ Baller (Stainless Steel)	_____ Submersible Pump	_____ Baller (Stainless Steel)
_____ Well Wizard™	_____ Dedicated	_____ Well Wizard™	_____ Dedicated
Other: <u>Disposable</u>	_____	Other: _____	_____

WELL INTEGRITY: Good LOCK #: Dolphin
 REMARKS: Sheen

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: 03/18/1996
NET Client Acct. No: 74000
NET Job No: 96.00887
Received: 03/08/1996

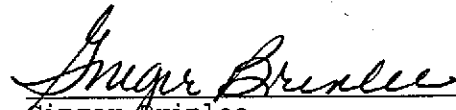
Client Reference Information

SFFBC Market St./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.

The recoveries for the Matrix Spike, Spike Duplicate and the Laboratory Control Sample for Diesel are low for this analytical event due to difficulties in extraction. There was no sample volume remaining for re-extraction and re-analysis. The Matrix Spike Duplicate and the Laboratory Control Sample are within the established Quality Control windows for Diesel analysis. Results are reported herein.

Submitted by:


Ginger Brinlee
Project Coordinator

Enclosure(s)



Client Name: SECOR
Client Acct: 74000
NET Job No: 96.00887

Date: 03/18/1996
ELAP Cert: 1386
Page: 2

Ref: SFFBC Market Street, Oakland, CA/50090-007-02

SAMPLE DESCRIPTION: MW-1
Date Taken: 03/07/1996
Time Taken: 10:45
NET Sample No: 261861

Parameter	Results	Flags	Reporting			Date	Date	Run
			Limit	Units	Method	Extracted	Analyzed	Batch No.
TPH (Gas/BTEX, Liquid)								
5030/M8015	--						03/14/1996	3593
DILUTION FACTOR*	1						03/14/1996	3593
as Gasoline	0.15 ✓		0.05	mg/L	5030		03/14/1996	3593
8020 (GC, Liquid)	--						03/14/1996	3593
Benzene	ND ✓		0.5	ug/L	8020		03/14/1996	3593
Toluene	ND ✓		0.5	ug/L	8020		03/14/1996	3593
Ethylbenzene	ND ✓		0.5	ug/L	8020		03/14/1996	3593
Xylenes (Total)	ND ✓		0.5	ug/L	8020		03/14/1996	3593
SURROGATE RESULTS	--						03/14/1996	3593
Bromofluorobenzene (SURR)	107			% Rec.	5030		03/14/1996	3593
M8015 (EXT., Liquid)						03/13/1996		
DILUTION FACTOR*	1						03/14/1996	1205
as Diesel	3.8 ✓		0.05	mg/L	3510		03/14/1996	1205

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: 96.00887

Date: 03/18/1996
ELAP Cert: 1386
Page: 3

Ref: SFFBC Market Street, Oakland, CA/50090-007-02

SAMPLE DESCRIPTION: MW-2
Date Taken: 03/07/1996
Time Taken: 11:25
NET Sample No: 261862

Parameter	Results	Flags	Reporting		Method	Date	Date	Run
			Limit	Units		Extracted	Analyzed	Batch No.
TPH (Gas/BTXE,Liquid)								
5030/M8015	--						03/14/1996	3593
DILUTION FACTOR*	1						03/14/1996	3593
as Gasoline	ND		0.05	mg/L	5030		03/14/1996	3593
8020 (GC,Liquid)	--						03/14/1996	3593
Benzene	ND		0.5	ug/L	8020		03/14/1996	3593
Toluene	ND		0.5	ug/L	8020		03/14/1996	3593
Ethylbenzene	ND		0.5	ug/L	8020		03/14/1996	3593
Xylenes (Total)	ND		0.5	ug/L	8020		03/14/1996	3593
SURROGATE RESULTS	--						03/14/1996	3593
Bromofluorobenzene (SURR)	100			% Rec.	5030		03/14/1996	3593
M8015 (EXT., Liquid)						03/13/1996		
DILUTION FACTOR*	1						03/14/1996	1205
as Diesel	0.32		0.05	mg/L	3510		03/14/1996	1205

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

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Client Acct: 74000
NET Job No: 96.00887

Date: 03/18/1996
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SAMPLE DESCRIPTION: MW-3
Date Taken: 03/07/1996
Time Taken: 10:10
NET Sample No: 261863

Parameter	Results	Flags	Reporting		Method	Date	Date	Run
			Limit	Units		Extracted	Analyzed	Batch No.
TPH (Gas/BTXE, Liquid)								
5030/M8015	--						03/14/1996	3593
DILUTION FACTOR*	1						03/14/1996	3593
as Gasoline	0.15		0.05	mg/L	5030		03/14/1996	3593
8020 (GC, Liquid)	--						03/14/1996	3593
Benzene	3.5		0.5	ug/L	8020		03/14/1996	3593
Toluene	ND		0.5	ug/L	8020		03/14/1996	3593
Ethylbenzene	ND		0.5	ug/L	8020		03/14/1996	3593
Xylenes (Total)	0.6		0.5	ug/L	8020		03/14/1996	3593
SURROGATE RESULTS	--						03/14/1996	3593
Bromofluorobenzene (SURR)	105			µ Rec.	5030		03/14/1996	3593
M8015 (EXT., Liquid)						03/13/1996		
DILUTION FACTOR*	1						03/14/1996	1205
as Diesel	0.47		0.05	mg/L	3510		03/14/1996	1205

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

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CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV	CCV	CCV	Flags	Units	Date Analyzed	Analyst Initials	Run Batch Number
	Standard % Recovery	Standard Amount Found	Standard Amount Expected					
TPH (Gas/BTXE,Liquid)								
as Gasoline	102.0	0.51	0.50		mg/L	03/14/1996	aal	3593
Benzene	90.4	4.52	5.00		ug/L	03/14/1996	aal	3593
Toluene	85.4	4.27	5.00		ug/L	03/14/1996	aal	3593
Ethylbenzene	88.4	4.42	5.00		ug/L	03/14/1996	aal	3593
Xylenes (Total)	90.4	13.56	15.0		ug/L	03/14/1996	aal	3593
Bromofluorobenzene (SURR)	90.0	90	100		% Rec.	03/14/1996	aal	3593
M8015 (EXT., Liquid)								
as Diesel	110.6	1106	1000		mg/L	03/14/1996	dla	1205
M8015 (EXT., Liquid)								
as Diesel	112.7	1127	1000		mg/L	03/14/1996	dla	1205

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

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METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Flags	Units	Date Analyzed	Analyst Initials	Run Batch Number
TPH (Gas/BTXE, Liquid)							
as Gasoline	ND	0.05		mg/L	03/14/1996	aal	3593
Benzene	ND	0.5		ug/L	03/14/1996	aal	3593
Toluene	ND	0.5		ug/L	03/14/1996	aal	3593
Ethylbenzene	ND	0.5		ug/L	03/14/1996	aal	3593
Xylenes (Total)	ND	0.5		ug/L	03/14/1996	aal	3593
Bromofluorobenzene (SURR)	95			% Rec.	03/14/1996	aal	3593
M8015 (EXT., Liquid)							
as Diesel	ND	0.05		mg/L	03/14/1996	dla	1205

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

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix		RPD	Spike Amount	Sample Conc.	Matrix		Flags	Units	Date Analyzed	Run Batch	Sample Spiked
	Matrix Spike % Rec.	Spike Dup % Rec.				Matrix Spike Conc.	Spike Dup. Conc.					
TPH (Gas/BTXE,Liquid)												261971
as Gasoline	102.0	100.0	2.0	0.50	ND	0.51	0.50		mg/L	03/14/1996	3593	261971
Benzene	100.9	101.8	0.9	6.83	ND	6.89	6.95		ug/L	03/14/1996	3593	261971
Toluene	101.0	100.8	0.2	25.69	ND	25.95	25.90		ug/L	03/14/1996	3593	261971
Bromofluorobenzene (SURR)	106.0	108.0	1.9	100	92	106	108		% Rec.	03/14/1996	3593	261971
M8015 (EXT., Liquid)												261653
as Diesel	45.3	84.2	60.1	1.90	0.80	1.66	2.4	DH	mg/L	03/14/1996	1205	261653

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	DUP	RPD	LCS	DUP	Flags	Units	Date	Analyst	Run
	% Rec.	LCS		Amount	LCS			LCS	Analyzed	Initials
M8015 (EXT., Liquid) as Diesel	50.0			0.50	1.00		mg/L	03/14/1996	dla	1205

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

KEY TO RESULT FLAGS

- * : RPD between sample duplicates exceeds 30%.
- *M : RPD between sample duplicates or MS/MSD exceeds 20%.
- + : Correlation coefficient for the Method of Standard Additions is less than 0.995.
- < : Sample result is less than reported value.
- B-I : Value is between Method Detection Limit and Reporting Limit.
- B-0 : Analyte found in blank and sample.
- C : The result confirmed by secondary column or GC/MS analysis.
- CNA : Cr+6 not analyzed; Total Chromium concentration below Cr+6 regulatory level.
- COMP : Sample composited by equal volume prior to analysis.
- D- : The result has an atypical pattern for Diesel analysis.
- D1 : The result for Diesel is an unknown hydrocarbon which consists of a single peak.
- DH : The result appears to be a heavier hydrocarbon than Diesel.
- DL : The result appears to be a lighter hydrocarbon than Diesel.
- DR : Elevated Reporting Limit due to Matrix.
- DS : Surrogate diluted out of range.
- DX : The result for Diesel is an unknown hydrocarbon which consists of several peaks.
- FA : Compound quantitated at a 2X dilution factor.
- FB : Compound quantitated at a 5X dilution factor.
- FC : Compound quantitated at a 10X dilution factor.
- FD : Compound quantitated at a 20X dilution factor.
- FE : Compound quantitated at a 50X dilution factor.
- FF : Compound quantitated at a 100X dilution factor.
- FG : Compound quantitated at a 200X dilution factor.
- FH : Compound quantitated at a 500X dilution factor.
- FI : Compound quantitated at a 1000X dilution factor.
- FJ : Compound quantitated at a greater than 1000x dilution factor.
- FK : Compound quantitated at a 25X dilution factor.
- FL : Compound quantitated at a 250X dilution factor.
- G- : The result has an atypical pattern for Gasoline.
- G1 : The result for Gasoline is an unknown hydrocarbon which consists of a single peak.
- GH : The result appears to be a heavier hydrocarbon than Gasoline.
- GL : The result appears to be a lighter hydrocarbon than Gasoline.
- GX : The result for Gasoline is an unknown hydrocarbon which consists of several peaks.
- HX : Peaks detected within the quantitation range do not match standard used.
- J : Value is estimated.
- MI : Matrix Interference Suspected.
- MSA : Value determined by Method of Standard Additions.
- MSA* : Value obtained by Method of Standard Additions; Correlation coefficient is <0.995.
- NI1 : Sample spikes outside of QC limits; matrix interference suspected.
- NI2 : Sample concentration is greater than 4X the spiked value; the spiked value is considered insignificant.
- NI3 : Matrix Spike values exceed established QC limits, post digestion spike is in control.
- P7 : pH of sample > 2; sample analyzed past 7 days.
- RSC : Refer to subcontract laboratory report for QC data.
- S2 : Matrix interference confirmed by repeat analysis.
- SCN : Thiocyanate not analyzed separately; total value is below the Reporting Limit for Free Cyanide.
- UMDL : Undetected at the Method Detection Limit.

0637

Chain-of-Custody Number:

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: SFFRC 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 _____

Analysis Request

Sample ID	Date	Time	Matrix	HCID	TPHg/BTEX/WTPH-G 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 (13)	TCLP Metals	Comments/ Instructions	Number of Containers
MW-1	3/7	1045	Water		X	X											1
MW-2	↓	1125	↓		X	X											1
MW-3	✓	1010	✓		X	X											1

Special Instructions/Comments:

Relinquished by: _____
 Sign Liping Zhang
 Print Liping Zhang
 Company SEACOR
 Time 2321 Date 3/7/96

Relinquished by: _____
 Sign P. Smart
 Print P. Smart
 Company NET
 Time 1635 Date 3/8/96

Received by: _____
 Sign P. Smart
 Print P. Smart
 Company NET
 Time 1038 Date 3/8/96

Received by: _____
 Sign M. Dunning
 Print M. Dunning
 Company NET
 Time 1635 Date 3/8/96

Sample Receipt

Total no. of containers: 12
 Chain of custody seals: _____
 Rec'd. good condition/cold: _____
 Conforms to record: _____

Client: SEACOR
 Client Contact: Don Moore
 Client Phone: (415) 882-1171

Relinquished by: M. Dunning 3/8/96 1620
 Received by: Don Moore 3/8/96 1420