McLaren Hart™

ENVIRONMENTAL PROTECTION
96 APR -3 AM 9:31

April 2, 1996

Ms. Susan Hugo
Alameda County Health Agency
Division of Environmental Protection
Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

RE: FEBRUARY 1996 QUARTERLY MONITORING REPORT
3810 BROADWAY, OAKLAND, CALIFORNIA (ACDEH STID # 435)

Dear Ms. Hugo:

Enclosed is the "February 1996 Quarterly Monitoring Report" for the property located at 3810 Broadway, Oakland, California (ACDEH STID # 435) for your review.

If you have any questions please feel free to call either of us at (510) 521-5200.

Sincerely,

Chris Warwick
Associate Geoscientist

Attachments

cc: File 3810 Broadway

A:\0312BJB1.RP1

FEBRUARY 1996
QUARTERLY
MONITORING REPORT

3810 BROADWAY
OAKLAND, CALIFORNIA

MARCH 28, 1996

Prepared For:
Mr. Gerald Friedkin
300 Grand Avenue
Oakland, California 94610

Prepared By:
McLaren/Hart Environmental
Engineering
1135 Atlantic Avenue
Alameda, California 94501
(510) 521-5200

Project No: 04.0601879.001

Reviewed By

Written By

McLaren Hart ®
ENVIRONMENTAL ENGINEERING CORPORATION

INTRODUCTION

This Quarterly Monitoring Report presents first quarter 1996 quarterly monitoring results for the property located at 3810 Broadway, Oakland, California (Figure 1). Ground water monitoring was performed by McLaren/Hart in accordance with: 1) McLaren Hart's August 16, 1995 "Workplan for Supplemental Site Investigation" (Workplan); and 2) Workplan acceptance letter from the Alameda County Department of Environmental Health (ACDEH) dated September 14, 1995. The field work for this monitoring event was conducted on January 26, 1996.

Activities performed as part of the first quarter 1996 quarterly monitoring event included calculation of ground water levels, measurement of floating product thickness (where applicable), and collection and analysis of ground water samples from site monitoring wells. Monitoring well locations are shown on Figure 2.

METHODOLOGY

Depth to ground water was measured to the nearest one hundredth of a foot, using an electronic water level indicator. An electronic oil/water interface probe was used to obtain floating hydrocarbon thickness measurements. All ground water measurements were recorded on a Hydrodata Sheet, included as Appendix A. Visual observation of floating product was performed using a transparent polyvinyl chloride (PVC) bailer.

Ground water samples were collected with a two-inch diameter disposable bailer with a bottom-emptying low flow disposable port. At least four casing volumes were purged from each monitoring well prior to sample collection using a peristaltic pump. The casing volume for a given well was calculated in the field prior to sampling. Monitoring well construction details are provided in Table 1. For each casing volume purged, conductance (EC), pH, temperature and

turbidity were monitored and recorded on Sampling Event Data Sheets (Appendix A). Purging of each monitoring well continued until:

- a minimum of four casing volumes had been purged from each well; and
- turbidity was below 100 NTUs and pH, temperature and EC values had stabilized to within 0.15 pH units, 1.0 F, and 5% EC, respectively, between two consecutive purge volumes.

All ground water samples, including a trip blank collected for Quality Assurance and Quality Control (QA/QC) purposes, were labeled and shipped to MBT Environmental Laboratories in Rancho Cordova, California for analysis following chain-of-custody procedures and EPA-recommended sample preservation techniques. MBT Environmental Laboratories is a division of McLaren/Hart, and is licensed by the State of California as a hazardous waste and drinking water laboratory.

All samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) in accordance with USEPA Leaking Underground Fuel Tank (LUFT) protocols, and for benzene, toluene, ethyl benzene, and total xylenes (BTEX) by USEPA Method 8020. Certified analytical data sheets are included as Appendix B.

QUARTERLY MONITORING RESULTS

Depth to ground water measurements were collected from MW-1 through MW-4 on January 26, 1996. Potentiometric surface elevations calculated from the depth to water measurements are presented in Table 2. Potentiometric surface elevations from November 1995, collected as part of the Supplemental Site Investigation (McLaren/Hart, 1996), are provided for comparison. Potentiometric surface elevation contours generated from the data in Table 2 are shown on Figure 2.

The contours on Figure 2 infer a southwesterly flow direction under a gradient of approximately 0.0078 feet/foot. This flow direction represents a change from the northeasterly flow direction measured in November 1995, and appears to be the result of relatively large increases in potentiometric surface elevations of MW-1, MW-2, and MW-4 (an average increase of 1.54 feet) coupled with a lesser increase in the potentiometric surface elevation of MW-3 (0.80 feet). These increases are likely a response to increased ground water recharge due to precipitation.

A floating hydrocarbon layer of approximately 0.18 foot was measured in MW-2. The thickness of this floating hydrocarbon is consistent with that measured in November 1995. Upon completion of purging of ground water from MW-3 (prior to sampling), floating hydrocarbons were also observed in MW-3. The thickness of this floating hydrocarbon layer was approximately 0.61 feet, and, based on visual observation, closely resembled the product observed MW-2.

Monitoring wells MW-1 and MW-4 were sampled on January 26, 1996 as part of the quarterly monitoring activities. MW-2 and MW-3 were not sampled, due to the presence of floating hydrocarbon. The sampling results are presented in Table 3 and depicted on Figure 3.

As indicated by the laboratory results, detectable BTEX or TPH-G concentrations were not recorded in the ground water from MW-4, at detection limits of 0.3 ppb and 50 ppb, respectively. While TPH-G concentrations were not recorded for MW-1, 0.32 ppb total xylenes and 0.47 ppb ethyl benzene were detected in ground water from this well, with detection limits equal to those associated with the sample from MW-4.

SUMMARY OF RESULTS

- The ground water flow direction calculated for the first quarter monitoring event is to the southwest. This flow direction represents a change from the northeasterly flow direction measured in November 1995. The first quarter 1996 potentiometric ground water surface more closely mimics surface topography in the vicinity of the site.

- Floating product was first observed in MW-2 in November 1995, and approximately 0.18 feet of floating hydrocarbon was observed in MW-2 during this quarterly monitoring event. Approximately 0.61 feet of floating hydrocarbon was observed in MW-3 after purging the well prior to sampling. Neither of these wells were sampled due to the hydrocarbon presence. The product observed in MW-3 visually resembled the hydrocarbon layer observed in MW-2.

- Laboratory results indicated that very low concentrations of total xylenes (0.32 ppb) and ethyl benzene (0.47 ppb) were present in ground water at MW-1, while no detectable BTEX constituents were present in the ground water at MW-4. TPH-G was not detected in either well. The trip blank collected for QA/QC purposes did not contain concentrations of TPH-G or BTEX compounds.

REFERENCES

McLaren/Hart, 1995, "Supplemental Site Investigation" for the property located at 3810 Broadway, Oakland, California, January 11, 1996

FIGURES

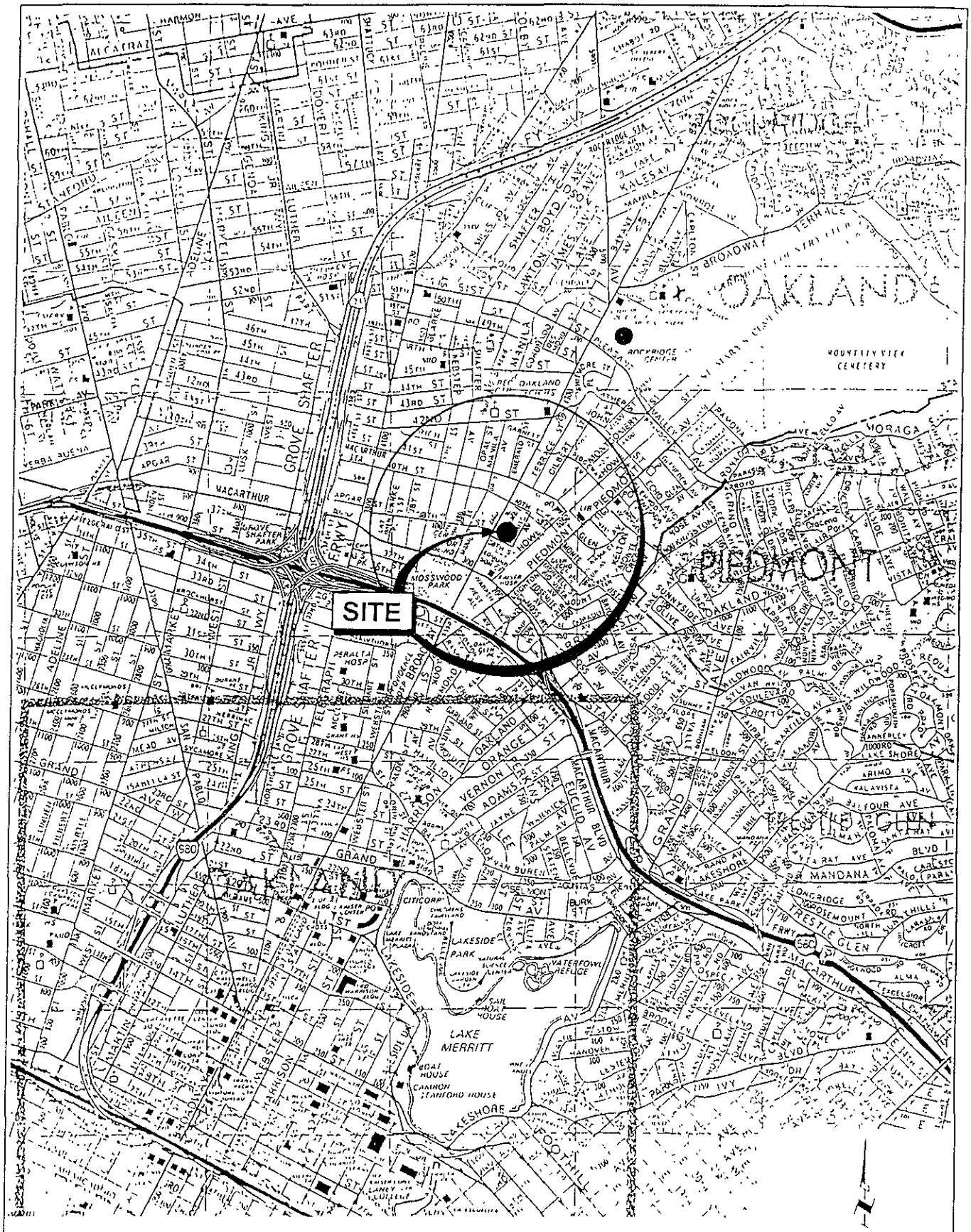

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FIGURE 1

SITE LOCATION MAP
3810 BROADWAY, OAKLAND, CALIFORNIA

04 0601679 001 004\friedkin cdr\7-19-95

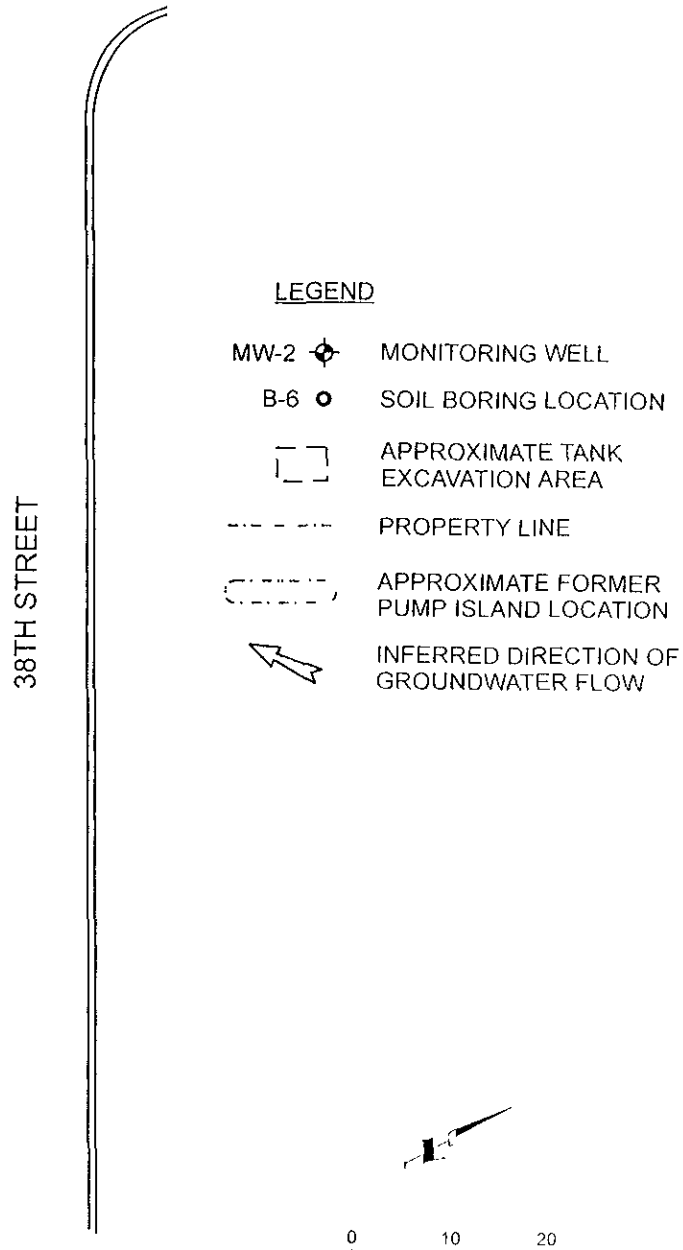

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FIGURE 2
POTENTIOMETRIC SURFACE ELEVATION CONTOURS
JANUARY 26, 1996
3810 BROADWAY, OAKLAND, CALIFORNIA

04 0601879 001 004\frdk0196 cdr 03-07-96

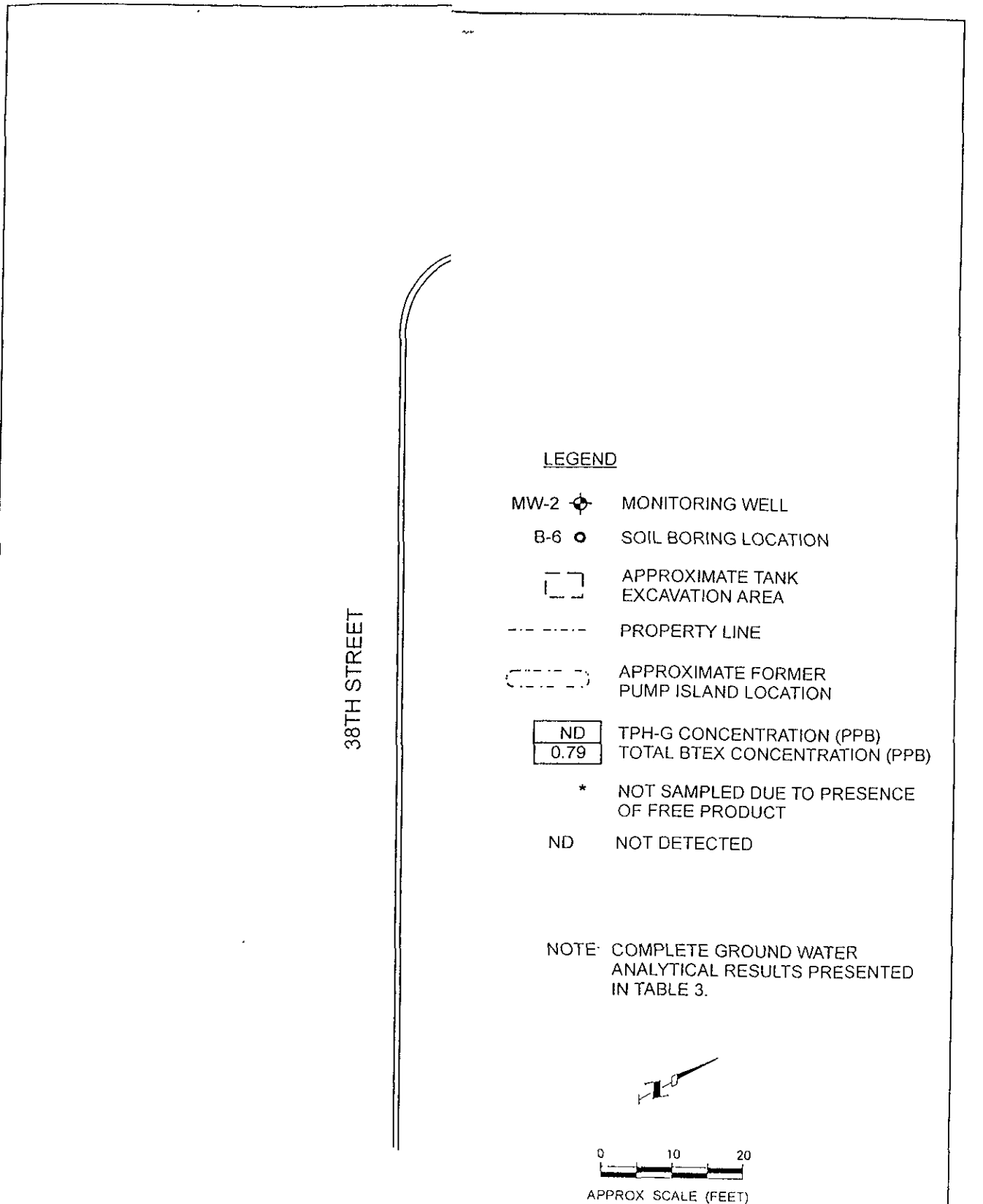

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FIGURE 3
TPH-G AND TOTAL BTEX CONCENTRATIONS IN GROUND WATER (PPB)
JANUARY 26, 1996
3810 BROADWAY, OAKLAND, CALIFORNIA

04 0601879 001 004\frdk0196.cdr 03-07-96

TABLES

TABLE 1
MONITORING WELL CONSTRUCTION DETAILS
3810 BROADWAY, OAKLAND, CALIFORNIA

Location	Elevation Top of Casing (ft., msl)	Well Diameter (inches)	Screened Interval from Surface (ft)
MW-1	86.69	2	24.0-34.0*
MW-2	85.96	2	25.0-35.0*
MW-3	83.43	2	20.0-25.0
MW-4	83.62	2	25.5-35.5

ft., msl = feet mean sea level
* = screened interval information obtained from Kaldveer reports (Kaldveer, 1991 and Kaldveer, 1992)

TABLE 2
POTENTIOMETRIC SURFACE ELEVATIONS
JANUARY 26, 1996
3810 BROADWAY, OAKLAND, CALIFORNIA

Well No.	Top of Casing (ft., msl)	Depth to Groundwater	Potentiometric Surface Elevation (ft., msl) Nov-95	Jan-96
MW-1	86.69	21.49	63.71	65.20
MW-2	85.96	20.68 [1]	63.70	65.28
MW-3	83.43	18.60	64.03	64.83
MW-4	83.62	18.34	63.73	65.28

ft., msl feet, mean sea level

[1] 0.18 feet of floating hydrocarbon was measured in MW-2 during the February 1996 quarterly monitoring event. The depth to groundwater in MW-2, as presented in Table 2, reflects the adjustment made to the depth to groundwater to account for the density difference in the floating hydrocarbon.

TABLE 3
GROUNDWATER ANALYTICAL RESULTS
JANUARY 26, 1996
3810 BROADWAY, OAKLAND, CALIFORNIA

Sample Location	Sample Date	TPH-G (ppb)	TPH-D (ppb)	TPH-MO (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
B-1	9/11/95	190,000	---	---	24,000	47,000	2,900	15,300
B-2	9/11/95	3,400	<110	340	240	540	120	540
B-3	9/12/95	1,500	---	---	140	66	130	670
B-5	9/12/95	5,600	---	---	270	540	110	420
B-6	9/12/95	360	---	---	24	26	16	44
MW-1	11/3/95	<50	---	---	<0.3	<0.3	0.36	<0.3
	1/26/96	<50	---	---	<0.3	<0.3	0.47	0.32
MW-2	11/3/95	*	---	---				
	1/26/96	*	---	---				
MW-3	11/3/95	67,000	---	---	12,000	15,000	980	4,700
	1/26/96	*	---	---				
MW-4	11/3/95	<50	---	---	<0.3	<0.3	<0.3	<0.3
	1/26/96	<50	---	---	<0.3	<0.3	<0.3	<0.3

TPH-G = Total petroleum hydrocarbons quantified against gasoline by DHS/LUFT method.

TPH-D = Total petroleum hydrocarbons quantified against diesel by EPA Method 8015 Modified.

TPH-MO = Total petroleum hydrocarbons quantified against motor oil by EPA Method 8015 Modified.

ppb = Parts per billion.

--- = Not analyzed.

< = Compound not detected at or above the specified laboratory reporting limit.

*= Not sampled due to the presence of free product in well.

APPENDIX A

HYDRODATA AND SAMPLING EVENT DATA SHEETS

Mylan Hart

HYDRODATA

DATE: 1/26/94

PROJECT: 3810 BRDWY EVENT: 2ND EVENT SAMPLER: CG

NO.	WELL OR LOCATION	DATE MO	DATE DA	DATE YR	TIME HR	TIME MIN	MEASUREMENT	CODE	COMMENTS
1	MW-1	1	26	96	7	36	21.49	SWL	MTD: 34.30
2	MW-2				7	42	20.64/20.82	OIL/OWI	
3	MW-3				7	36	18.60	SWL	MTD 25.50 Z
4	MW-4				7	33	18.34	SWL	MTD: 35.20
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

CODES:

- *SWL - Static Water Level (Feet)
- *IWL - Instant Water Level; Non-Static (Feet)
- *OIL - Oil Level (Feet)
- *OWI - Oil/Water Interface (Feet)
- *MTD - Measured Total Depth (Feet)
- FLO - Flow Rate (Gallons/Minute)
- CUM - Cumulative (Gallons)
- HRS - Total (Hours)
- PSI - Pressure (psi)²
- pH - 1 to 14
- Ec - Conductivity (µm HOS)
- TMP - Temperature (°C)
- TRB - Turbidity (NTU)
- ___ - _____ (Additional Code)

*All levels are depth from inner casing - describe any other reference points in comments column; when in doubt, describe reference point.

Note in comments column if well is not: properly labeled, locked, or able to be locked. Describe corrective action.

Note flooding of vault box, odor, access problems.

²Negative pressure (Vacuum) psi =

McLaren Hart — SAMPLING EVENT DATA SHEET

(fill out completely)

WELL OR LOCATION MW - 1

PROJECT 3810 BROWN EVENT 2ND EVENT SAMPLER C&I DATE 1/26/96

Well / Hydrologic statistics

Well type MW (MW, EW, etc.)

d — diameter 2

SWL 21.49 (if above screen)

equals 0.16 gal/ft. casing

packer / intake / bailer depth 26 ft. (circle one)

24 TOP

SWL (if in screen)

34 BOP

measured T.D. 34.30

34 T.D. (as built)

Action	Time	Pump rate	IWL (low yield)
Start pump / Begin	920	0.5 GPM	
Stop	938	↓	25.50
Sampled	942		
(Final IWL)	955		21.65

Purge calculation

0.16 gal/ft. * 12.81 ft. = 2 gals x 4 = 8 gals.

SWL to BOP or packer to BOP — one volume — purge volume- 3 casings

Head purge calculation (Airlift only)

____ gal/ft. * ____ ft. = ____ gals.

packer to SWL

Equipment Used / Sampling Method / Description of Event:

CENTRIFUGAL PUMP w/ DISPOSABLE BAILER

Actual gallons purged 9 +

Actual volumes purged 4 +

Well yield ⊕ (see below) MY

COC # 12463

Sample I.D.	Analysis	Lab
50Z417-20	TPH-G/BTEX/MBT	

Additional comments:

	Gallons purged *	TEMP °C / °F (circle one)	EC (µs / cm)	PH	TURBIDITY (NTU)		
1.	2	64.5	2800	6.70	32.0		
2.	4	64.0	2920	6.66	16.50		
3.	6	65.0	3000	6.65	6.40		
4.	8	65.0	3010	6.63	4.80		
5.	SAMPLE				5.50		

* Take measurement at approximately each casing volume purged.

⊕ HY- Minimal W.L. drop

MY - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump.

LY - Able to purge 3 volumes by returning later or next day.

VLY - Minimal recharge unable to purge 3 volumes.

McLaren Hart — SAMPLING EVENT DATA SHEET

(fill out completely)

WELL OR LOCATION MW-3

PROJECT 3810 BROWN EVENT 2ND EVENT SAMPLER CH DATE 1/26/96

Well / Hydrologic statistics

Well type MW (MW, EW, etc.)

diameter 2

equals 0.16 gal/ft. casing

SWL 18.60 (if above screen)

packer / intake / bailer depth 20 ft (circle one)

20 TOP

SWL (if in screen)

25 BOP

measured T.D. 25.52

25 T.D. (as built)

Action	Time	Pump rate	IWL (low yield)
Start pump / Begin	814	0.15 GPM	
Stop	849	↓	19.77
Sampled			
(Final IWL)			

10

Purge calculation

0.16 gal/ft. * 6.90 ft. = 1.2 gals x 3/4 = 4.8 gals.

SWL to BOP or packer to BOP — one volume — purge volume- 3 casings

Head purge calculation (Airlift only)

____ gal/ft. * ____ ft. = ____ gals.

packer to SWL

Equipment Used / Sampling Method / Description of Event:

PERISTALTIC PUMP w/ DISPOSABLE BAILER

Actual gallons purged 5.2

Actual volumes purged 4+

Well yield ⊕ MY
(see below)

COC # ____

Sample I.D.	Analysis	Lab

Additional comments:

SURFACE SHEEN ON PURGE WATER

6" OF PRODUCT IN BAILER @ SAMPLING

NO SAMPLE COLLECTED.

END OF PURGING: 17.82/18.43 (O.L/OWS)

Gallons purged *	TEMP °C / °F (circle one)	EC (µs / cm)	PH	TURBIDITY (NTU)		
1. 1.2	65.5	1100	6.72	4.00		
2. 2.4	65.5	1080	6.63	2.80		
3. 3.6	65.5	1040	6.60	3.20		
4. 4.8	65.5	1010	6.64	2.20		
5.						

* Take measurement at approximately each casing volume purged.

⊕ HY- Minimal W.L drop

MY - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump.

LY - Able to purge 3 volumes by returning later or next day.

VLY - Minimal recharge - unable to purge 3 volumes.

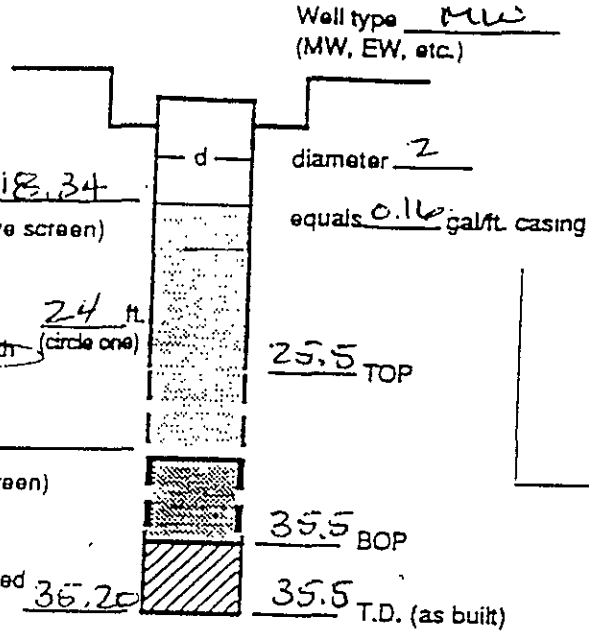
McLaren Hart — SAMPLING EVENT DATA SHEET

(fill out completely)

WELL OR LOCATION MW-4

PROJECT 3810 BDWY EVENT 2ND EVENT SAMPLER CM DATE 1/26/96

Well / Hydrologic statistics



Action	Time	Pump rate	IWL (low yield)
Start pump / Begin	750	0.56PM	
Stop	814	↓	23.50
Sampled	818		
(Final IWL)	830		18.47

Purge calculation

0.16 gal/ft. * 17.16 ft. = 2.8 gals x 3/4 = 11.2 gals.

SWL to BOP or packer to BOP — one volume — purge volume- 3 casings

Head purge calculation (Airlift only)

____ gal/ft. * ____ ft. = ____ gals.

packer to SWL

Equipment Used / Sampling Method / Description of Event:

CENTRIFUGAL PUMP w/ DISPOSABLE BAILER

Actual gallons purged 12

Actual volumes purged 4+

Well yield ⊕ MY
(see below)

COC # 12463

Sample I.D.	Analysis	Lab
502409-12	TPH-G/BTEX	HBT
502405-08	↓ (TB)	↓

Additional comments:

Gallons purged *	TEMP °C / (F) (circle one)	EC (µs / cm)	PH	TURBIDITY (NTU)		
1. 3	65.0	590	7.03	185.0		
2. 6	65.5	540	7.01	165.0		
3. 9	66.0	530	6.96	34.0		
4. 12	66.0	530	6.98	19.50		
5. SAMPLE				11.50		

* Take measurement at approximately each casing volume purged.

⊕ HY- Minimal W.L drop

MY - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump.

LY - Able to purge 3 volumes by returning later or next day.

VLY - Minimal recharge - unable to purge 3 volumes.

APPENDIX B

CERTIFIED ANALYTICAL REPORTS

GENERAL NARRATIVE

Comments:
Test methods may include minor modifications of published EPA methods (e.g., reporting limits or parameter lists). Reporting limits are adjusted to reflect dilution of the sample when appropriate. Solids and waste are analyzed with no correction made for moisture content.

Percent recoveries for laboratory control samples and matrix spikes have been calculated using unrounded concentration values. Therefore, percent recoveries reported may differ slightly from those obtained from the rounded concentration values which appear on the report.

The surrogate recoveries for the analytes flagged on the data sheet were beyond acceptance limits for the following samples: 13414-1, 13414-2, 13414-3, Method Blank.

The LCS recoveries for the analytes flagged on the LCS data sheets are outside of advisory quality control limits; however, all other QC meets the laboratory's acceptance criteria.

Abbreviations and Definitions:

MB	*Method Blank* - An aliquot of a blank matrix carried throughout the entire analytical process
LCS	*Laboratory Control Sample* - A blank to which known quantities of specific analytes are added prior to sample preparation and analysis to assess the accuracy of the method
MS/MSD	*Matrix Spike/Matrix Spike Duplicate* - Duplicate samples to which known quantities of specific analytes are added prior to sample preparation and analysis to assess the extent of matrix bias or interference on analyte recovery
RPD	*Relative Percent Difference* - The measurement of precision between duplicate analyses
BRL	*Below Reporting Limit*
NS	*Not Specified*
NA	*Not Applicable*

Flags:

Organics -

J	Estimated value below the reporting limit and at or above the method detection limit.
B	Analyte found in the associated blank, as well as in the sample.

(CN13414)

Inorganics -

B Estimated value below the reporting limit and at or above the method detection limit.

VOLATILE AROMATIC COMPOUNDS

Analytical Method: Modified EPA 8020 (BTEX) and TPH/G by LUFT
Preparation Method: EPA 5030

Company: Mclaren/Hart
Project Name: 3810 Broadway
Sample Description: Trip Blank
Sample Number: 502405
Date/Time Received: 01/27/96 09:30
Date Prepared: NA
Initial Wt./Volume: NA
Final Volume: NA

SDG #: 13414
Project Number: 040601879001002
Lab ID: 13414-1/39375-4107
Date/Time Sampled: 01/26/96 08:00
Matrix: Water (W)
Batch Number: 5454

Instrument/Column: vgc04/DB-WAX
Data File: 96031d10-0

Analyte	Result ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor	Date Analyzed
Benzene	BRL	0.30	1	01/31/96
Toluene	BRL	0.30	1	01/31/96
Ethyl benzene	BRL	0.30	1	01/31/96
1,2-Xylene	BRL	0.30	1	01/31/96
1,3-Xylene	BRL	0.30	1	01/31/96
1,4-Xylene	BRL	0.30	1	01/31/96
TPH - Gasoline	BRL	50	1	01/31/96

Surrogates	% Recovery	Limits
Orthochlorotoluene (PID)	93	80 - 120
Orthochlorotoluene (FID)	66 *	80 - 120

Qualifier Legend:
* - Values outside QC limits

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 2/7/96

MBT Environmental Laboratories

Master Builders Technologies

Report Generated: 02/06/96

VOLATILE AROMATIC COMPOUNDS

Analytical Method: Modified EPA 8020 (BTEX) and TPH/G by LUFT
Preparation Method: EPA 5030

Company: Mclaren/Hart
Project Name: 3810 Broadway
Sample Description: MW-4
Sample Number: 502409
Date/Time Received: 01/27/96 09:30
Date Prepared: NA
Initial Wt./Volume: NA
Final Volume: NA

SDG #: 13414
Project Number: 040601879001002
Lab ID: 13414-2/39376-4107
Date/Time Sampled: 01/26/96 08:18
Matrix: Water (W)
Batch Number: 5454

Instrument/Column: vgc04/DB-WAX
Data File: 96031d11-0

Analyte	Result ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor	Date Analyzed
Benzene	BRL	0.30	1	01/31/96
Toluene	BRL	0.30	1	01/31/96
Ethyl benzene	BRL	0.30	1	01/31/96
1,2-Xylene	BRL	0.30	1	01/31/96
1,3-Xylene	BRL	0.30	1	01/31/96
1,4-Xylene	BRL	0.30	1	01/31/96
TPH - Gasoline	BRL	50	1	01/31/96

Surrogates	% Recovery	Limits
Orthochlorotoluene (PID)	98	80 - 120
Orthochlorotoluene (FID)	69 *	80 - 120

Qualifier Legend:
* - Values outside QC limits

The cover letter and enclosures are integral parts of this report.

Approved by: CM Date: 2/7/96

MBT Environmental Laboratories

Master Builders Technologies

Report Generated: 02/06/96

VOLATILE AROMATIC COMPOUNDS

Analytical Method: Modified EPA 8020 (BTEX) and TPH/G by LUFT
Preparation Method: EPA 5030

Company: Mclaren/Hart
Project Name: 3810 Broadway
Sample Description: MW-1
Sample Number: 502417
Date/Time Received: 01/27/96 09:30
Date Prepared: NA
Initial Wt./Volume: NA
Final Volume: NA

SDG #: 13414
Project Number: 040601879001002
Lab ID: 13414-3/39377-4107
Date/Time Sampled: 01/26/96 09:42
Matrix: Water (W)
Batch Number: 5454

Instrument/Column: vgc04/DB-WAX
Data File: 96031d12-0

Analyte	Result ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor	Date Analyzed
Benzene	BRL	0.30	1	01/31/96
Toluene	BRL	0.30	1	01/31/96
Ethyl benzene	0.47	0.30	1	01/31/96
1,2-Xylene	BRL	0.30	1	01/31/96
1,3-Xylene	0.32	0.30	1	01/31/96
1,4-Xylene	BRL	0.30	1	01/31/96
TPH - Gasoline	BRL	50	1	01/31/96

Surrogates	% Recovery	Limits
Orthochlorotoluene (PID)	98	80 - 120
Orthochlorotoluene (FID)	74 *	80 - 120

Qualifier Legend:
* - Values outside QC limits

The cover letter and enclosures are integral parts of this report.

Approved by: CM Date: 2/7/96

MBT Environmental Laboratories

Master Builders Technologies

Report Generated: 02/06/96

METHOD BLANK

VOLATILE AROMATIC COMPOUNDS

Analytical Method: Modified EPA 8020 (BTEX) and TPH/G by LUFT
Preparation Method: EPA 5030

Sample ID: 01/31/96 MB/39749
Date Prepared: NA

Lab ID: 39749-MB /4107
Matrix: Water
Batch Number: 5454
Instrument/Column: vgc04/DB-WAX
Data File: 96031d15-0

Analyte	Result ug/L (ppb)	Reporting Limit ug/L (ppb)	Date Analyzed
Benzene	BRL	0.30	01/31/96
Toluene	BRL	0.30	01/31/96
Ethyl benzene	BRL	0.30	01/31/96
1,2-Xylene	BRL	0.30	01/31/96
1,3-Xylene	BRL	0.30	01/31/96
1,4-Xylene	BRL	0.30	01/31/96
TPH - Gasoline	BRL	50	01/31/96

Surrogates	% Recovery	Limits
Orthochlorotoluene (PID)	96	80 - 120
Orthochlorotoluene (FID)	69 *	80 - 120

Qualifier Legend:
* - Values beyond QC limits

The cover letter and enclosures are integral parts of this report.

Approved by: CM Date: 2/7/96

MBT Environmental Laboratories

Master Builders Technologies

Report Generated. 02/06/96

LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE

VOLATILE AROMATIC COMPOUNDS

Analytical Method: Modified EPA 8020 (BTEX) and TPH/G by LUFT
Preparation Method: EPA 5030

Date Prepared: NA

Lab ID: 39748-LS1 /4107
Matrix: Water Units: ug/L (ppb)
Batch Number: 5454

LCS Date Analyzed: 01/31/96

LCSD Date Analyzed: NA
Instrument/Column: /DB-WAX
Data File: 96031d21-0

Analyte	(a) Sample Conc.	(b) Spike Conc.	(c) Sample + Spike Conc.	(d) Spike Rec %	(e) Sample Dup. + Spike Conc.	(f) Spike Dup. Rec %	(g) RPD %	Acceptance Limits % Rec.	Acceptance Limits RPD
Benzene	0	10	11	110	NA	NA	NA	72-134	≤20
Ethyl benzene	0	10	11	110	NA	NA	NA	72-128	≤20
TPH - Gasoline	0	100	87	87*	NA	NA	NA	90-114	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Surrogate	(h) LCS/ LCSD Surr. Spike Conc.	(i) Sample + Surr. Spike Conc.	(j) Surr. Spike Rec %	(k) Sample Dup. + Surr. Spike Conc.	(l) Surr. Spike Dup. Rec %	Acceptance Limits
Orthochlorotoluene (PID)	4.0	3.6	91	NA	NA	80-120
Orthochlorotoluene (FID)	4.0	4.6	115	NA	NA	80-120

Surrogate % Recovery = j = (i-h) x 100
Surrogate Duplicate Recovery = l = (k/h) x 100

Qualifier Legend:
* - Values outside QC

The cover letter and enclosures are integral parts of this report.

Approved by: CM Date: 2/6/96

MBT Environmental Laboratories

Master Builders Technologies

Report Generated: 02/05/96

ANALYTICAL REPORT

LABORATORY PROJECT (LP) NUMBER 13414

3810 BROADWAY

The analyses performed by MBT Environmental Laboratories in this report comply with the requirements under the following certification/approval:

	ARIZONA:	Hazardous Waste, #AZ0468 Waste Water, # AZ0468 Drinking Water, #AZ0468
✓	CALIFORNIA:	Hazardous Waste, #1417 Waste Water, # 1417 Drinking Water, #1417 Mobile Lab, #2070
	CONNECTICUT:	Waste Water, #PH0799
	FLORIDA:	Environmental Water, #E87298 CQAPP #930105
	NEW HAMPSHIRE:	Waste Water, #253195-B Drinking Water, #253195-A
	NEW JERSEY:	Waste Water, #44818
	NEW YORK:	Hazardous Waste, #11241 Waste Water, #11241 CLP, #11241
	OKLAHOMA:	Hazardous Waste, #9318 Waste Water, #9318
	SOUTH CAROLINA:	Hazardous Waste, #87013 Waste Water, #87013
	TENNESSEE:	Underground Storage Tank
	WASHINGTON:	Hazardous Waste, #C048
	WISCONSIN:	Hazardous Waste, #999940920 Waste Water, #999940920
	USACOE:	Hazardous Waste Waste Water
	AFCEE	Hazardous Waste Waste Water

(CN13414)

MBT Environmental Laboratories
3083 Gold Canal Drive
Rancho Cordova
CA 95670
Phone 916/852-6600
Fax 916/852-7292

CHAIN OF CUSTODY RECORD 12463

SEE SIDE 2 FOR COMPLETE INSTRUCTIONS

Project Name: 3810 BROADWAY
Project Number: 04.0601879.001.002
Project Location: (State) CA

FOR LABORATORY USE ONLY
Laboratory Project #: 13414 Storage ID: 4-9 (A) 1
Sample Condition Upon Receipt: Temp: 2 °C Geiger:
Custody Seals Present? Yes/No Intact? Yes/No Samples Intact? Yes/No

Sample Disposal (check one)
☒ Laboratory Standard
☐ Other

Level of QC (see Side 2): ☒ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6A ☐ 6B ☐ 6C ☐ 6D ☐ 6E ☐ 6F ☐ 7 ☐ 8 ☐ A

Write in Analysis Method →

SAMPLE INFORMATION

ANALYSES REQUESTED

FOR LABORATORY USE ONLY Lab ID	Sample ID Number	Date	Time	Description: Locator	Description: Depth	Container(s): #	Container(s): Type	Matrix Type	Pres. Type	TAT (24HR)	TPH-G (LUFT)	BTEX/8020
1 13414 001	502405-08	1/24/96	800	TRIP BLANK	—	4	V	H_2O	HCl	4	X	X
2 002	502407-12		818	MW-4	—	4					X	X
3 003	502407-20		942	MW-1	—	4					X	X
4												
5												
6												
7												
8												
9												
10												

Common Analytical Methods
413.1
413.2 Long Method
413.2 Short Method
418.1 Long Method
418.1 Short Method
420.1
502.2
503E
503.1
524.2
601
602
604
608
610
624
625
8010
8015
8015 Mod.
8020
8021
8040
8080
8100
8150
8240
8270
8310
Acidity
Alkalinity
BTEX
Chloride
CLP (see Side 2)
COD
Color
Conductivity
Corrosivity
Cyanide
Flashpoint
Fluoride
General Mineral
Hex. Chromium
Ion Balance
Metals (write specific metal & method #)*
Metals 6010*
Metals PP*
Metals Title 22:
TTLC Level
STLC Level
(see Side 2)
Nitrate
Nitrite
Odor
Org. Lead
Org. Mercury
Percent Moisture
Percent Solid
Perchlorate
pH
Phosphates
Phosphorus
Sulfate
Sulfides
TCLP:
VOA
Semivos
Metals
Pesticide
TDS
Total Hardness
Total Solids
TPH/D
TPH/G
TSS
Turbidity

SEND REPORT TO:
Company Name
Client Name CHRIS WARWICK
Address ALAMEDA
Phone Fax

BILL TO (if different):
Company Name
Address
PO #
Phone Fax

Special Instructions/Comments

Sampler Name CHRIS GIUNTOLI Signature
PPE Worn in Field D

Relinquished By: Date/Time 1/26/96 1630 Received By or Method of Shipment/Shipment I.D. EXPRESS-IT Date/Time 1/26/96 1630

Relinquished By: Expressit Date/Time Received By or Method of Shipment/Shipment I.D. Date/Time 1:27 PM

Relinquished By: Date/Time Received By or Method of Shipment/Shipment I.D. Date/Time