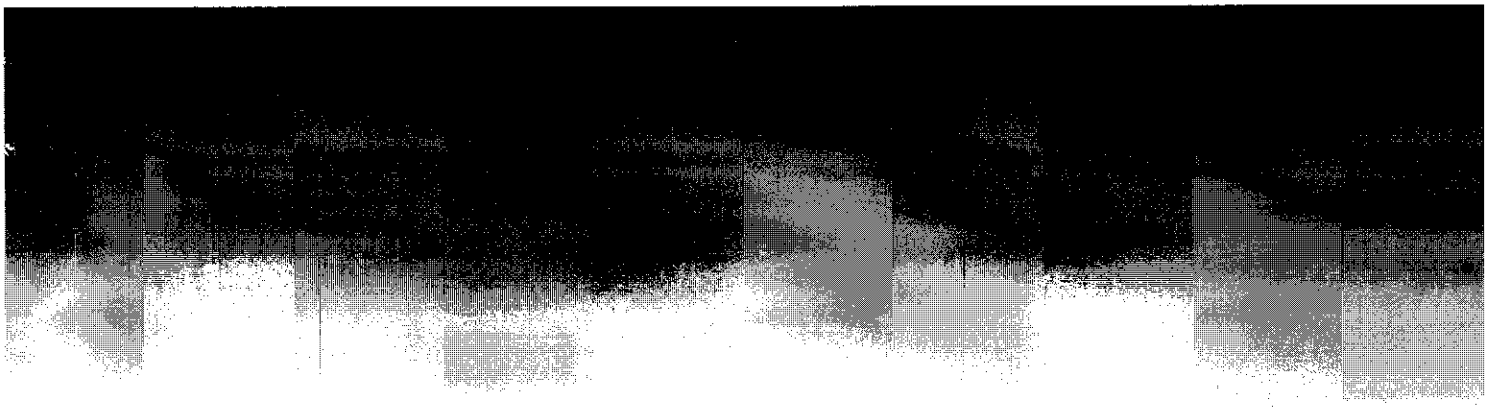
RO-262



QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT

ALBANY HILL MINI MART
800 SAN PABLO AVENUE
ALBANY, CALIFORNIA

JAN 15 2002

Prepared for:

Mr. Mohinder S. & Dr. Joginder K. Sikand
1300 Ptarmigan Drive, #1
Walnut Creek, California 94595

January 8, 2002

ADVANCED ASSESSMENT AND REMEDIATION SERVICES

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January 8, 2002

Ms. eva chu
Alameda County Health Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Subject: **Quarterly Groundwater Monitoring and Sampling Report for Albany Hill Mini Mart, 800 San Pablo Avenue, Albany, California**

Dear Ms. chu:

The enclosed report presents the results and findings of the December 2001, quarterly groundwater monitoring and sampling for the above-referenced facility.

Should you have any questions regarding the report please contact Tridib Guha at (925) 363-1999.

Sincerely,

Advanced Assessment and Remediation Services

Tridib K. Guha, R.G., R.E.A.
Principal

cc: Mr. Mohinder Sikand & Dr. Joginder Sikand, Walnut Creek, CA

AHMMQ8.RPT

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QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT

For

Albany Hill Mini Mart
800 San Pablo Avenue
Albany, California

1.0 INTRODUCTION

This report presents the results and findings of the December 2001, quarterly groundwater monitoring and sampling performed at 800 San Pablo Avenue, Albany, California. This report is intended to fulfill quarterly self-monitoring requirements and to establish a groundwater monitoring history for the site. A site vicinity map is shown in Figure 1.

2.0 GROUNDWATER MONITORING WELLS

This section presents the water level monitoring, field observations, sampling and analysis procedures, as well as the analytical results. The location of the monitoring wells is presented in Figure 2. The work and related field sampling activities were conducted in accordance with the guidelines and requirements of the Alameda County Environmental Health Department (ACEHD) and the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB).

2.1 Groundwater Level Monitoring and Surveying

Groundwater levels in each well were measured to the nearest 0.01 foot from the top of the PVC casing, using an electronic sounder. A groundwater surface elevation map, based on interpretation of groundwater level measurements taken on December 13, 2001, and survey data is presented in Figure 3. The survey data and water level measurements are presented in Table 1.

2.2 Field Observations

The purged water from monitoring, MW-1, MW-2 and MW-3 were clear initially and with continual purging the water turned turbid. However, water samples collected at the time of sampling were clear. No floating product was observed in the groundwater samples from all three monitoring wells. Sheen was observed only in groundwater samples from monitoring well MW-1. Strong petroleum odor was noticed in the groundwater samples from all three monitoring wells.

2.3 Sampling and Analysis Procedures

Groundwater samples were collected on December 13, 2001, following water level measurements. Samples were analyzed by North State Environmental Laboratory of South San Francisco, California which is certified by the California Department of Health Services (DHS) to perform the specified analyses.

Before purging, water levels were measured in all wells with an electronic sounder tape. Purging preceded sampling in order to ensure collection of non-stagnant water. A minimum of three casing volumes were removed before sampling the wells MW-1, MW-2 and MW-3. The purged water was monitored for temperature, pH, and conductivity. Purging was considered complete when these parameters had stabilized. The wells were sampled after 92 percent recovery or greater. The groundwater monitoring well purge/sampling worksheets are presented Appendix A.

To prevent potential cross-contamination, all measuring, purging and sampling equipment was washed in an Alconox detergent solution, rinsed with tap water, and rinsed finally with distilled water between wells.

The sampling procedure for each monitoring well involved extracting well water with a clean PVC bailer on a clean nylon cord. Groundwater collected for analysis of Total Petroleum Hydrocarbon as gasoline (TPHg) and Benzene, Toluene, Ethylbenzene and total Xylenes (BTEX), Methyl Tertiary Butyl Ether (MTBE) was decanted into three 40-milliliter volatile organic analysis vials with Teflon-lined septa. Groundwater collected for analysis of Total Petroleum Hydrocarbon as diesel (TPHd) was decanted into one 1-liter amber glass bottles. Samples to be analyzed for TPHg/BTEX/MTBE were preserved using hydrochloric acid to a pH of 2.0. All samples were labeled and placed in an iced cooler, along with the chain-of-custody document (Appendix B). Samples transported to the laboratory were analyzed within the specified holding time.

Groundwater produced during purging and sampling was contained in 55-gallon steel drums. The drummed water was labelled with the source (i.e. well number) and date.

2.4 Analytical Methods

Samples were analyzed for TPHg by Modified EPA SW-846 Methods 5030/8015 modified, for TPHd by EPA Methods 3510/8015 modified, and for BTEX/MTBE by EPA SW-846 Methods 8020.

A summary of the analytical results of groundwater samples from the monitoring wells is presented in Table 2. The certified analytical reports and chromatograms for this sampling events are included in Appendix B.

3.0 INTERPRETATION OF RESULTS

The results of water level measurements and groundwater sampling are discussed in the following sections.

3.1 Groundwater Elevations and Gradients

A relative groundwater elevation contours for December 13, 2001, is presented in Figure 3. The flow direction, based on groundwater level data, was toward the southeast with an average hydraulic gradient of 0.02 foot per foot for this monitoring period. The average depth to stabilized groundwater in these wells was approximately 10 feet below ground surface.

3.2 Analytical Results

The analytical results for groundwater samples from three monitoring wells (MW-1 through MW-3) are presented in Table 2, which also includes the groundwater sampling results from the previous site investigation. Groundwater samples from all three monitoring wells were found to contain TPHg ranging from 172 to 291 parts per billion (ppb); benzene ranging from 53 to 67 ppb; toluene concentrations ranging from 0.9 to 1.4 ppb; ethylbenzene concentrations ranging from 2.6 to 17.4 ppb; xylenes concentrations ranging from 7.2 to 8.4 ppb; and MTBE concentrations ranging from 499 to 6610 ppb. Also, the detection of MTBE was confirmed by analyzing groundwater samples from MW-3 using GC/MS method 8260. TPHd was not detected in any groundwater samples. Figure 4 shows the distribution of dissolved-phase petroleum hydrocarbons at the site.

4.0 SELF-MONITORING PROGRAM SCHEDULE AND RECOMMENDATIONS

The next monitoring event scheduled for the site is March, 2002. The supplemental site investigation conducted at the site in June 2001, identified elevated petroleum hydrocarbon constituents in soil and groundwater near the 10,000 gallon tank area. The ACDEH required additional investigations to delineate the extent of the contaminant plume. A workplan for additional site investigations will be submitted to ACEHD.

5.0 CERTIFICATION

The information provided in this report is based on the groundwater sampling activities conducted at the site. All data presented in this report is believed to be factual and accurate, unless proven otherwise. Any conclusions or recommendations provided within are based on our expertise and experience conducting work for a similar nature.

Advanced Assessment and Remediation Services

Tridib K. Guha, R.G. 5836

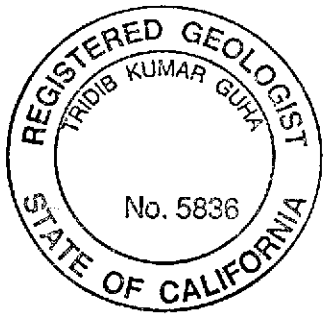


TABLE 1: SURVEY AND WATER LEVEL MONITORING DATA
Albany Hill Mini Mart
800 San Pablo Avenue, Albany, California

Well No.	Date of Measurement	Top of Casing Elevation (Feet - Relative)	Depth to Groundwater (Feet)	Product Thickness (Feet)	Groundwater Elevation (Feet - Relative)
MW-1	08-06-99	101.68	11.95	0.00	89.73
	11-05-99	101.68	12.72	0.00	88.96
	02-07-00	101.68	10.34	0.00	91.34
	05-05-00	101.68	10.59	0.00	91.09
	08-03-00	101.68	11.75	0.00	89.93
	11-08-00	101.68	11.67	0.00	90.01
	02-08-01	101.68	11.20	0.00	90.48
	06-07-01	101.68	11.35	0.00	90.33
	09-07-01	101.68	11.71	0.00	89.97
	12-13-01	101.68	10.67	0.00	91.01
MW-2	08-06-99	101.57	10.83	0.00	90.74
	11-05-99	101.57	11.66	0.00	89.91
	02-07-00	101.57	9.23	0.00	92.34
	05-05-00	101.57	9.54	0.00	92.03
	08-03-00	101.57	10.69	0.00	90.88
	11-08-00	101.57	10.62	0.00	90.95
	02/08/01	101.57	10.17	0.00	91.40
	06-07-01	101.57	10.30	0.00	91.27
	09-07-01	101.57	10.65	0.00	90.92
	12-13-01	101.57	9.65	0.00	91.92
MW-3	08-06-99	100.33	10.58	0.00	89.75
	11-05-99	100.33	11.39	0.00	88.94
	02-07-00	100.33	9.05	0.00	91.28
	05-05-00	100.33	9.29	0.00	91.04
	08-03-00	100.33	10.43	0.00	89.90
	11-08-00	100.33	10.33	0.00	90.00
	02-08-01	100.33	9.94	0.00	90.39
	06-07-01	100.33	10.04	0.00	90.29
	09-07-01	100.33	10.31	0.00	90.02
	12-13-01	100.33	9.38	0.00	90.95

Note: A bench mark, with an assumed elevation of 100.00 feet (Above Mean Sea Level), is located at the corner of Washington Avenue and San Pablo Avenue. The bench mark is the top of the southeast bolt (painted white) in the street signal light base; all well elevations are relative to this. The elevations at each well were taken on the top of the well casing.

TABLE 2: SUMMARY OF ANALYTICAL RESULTS OF GROUNDWATER SAMPLING for TPHg, BTEX, MTBE and TPHd

Albany Hill Mini Mart

800 San Pablo Avenue, Albany, California

Sample ID	Date of Sampling	TPHg (µg/L)	MTBE (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPHd µg/L
MW-1 GW	08/06/99	1500	ND	4.3	2.9	9.1	28	1200
	08/06/99	Polynuclear Aromatic Hydrocarbon Analyses by EPA method 610 were non-detect with detection limit 1.0 µg/L						
	11/05/99	1800	ND	5.1	3.2	8.9	33	1400
	02/07/00	1100	ND	3.3	1.9	5.6	21	890
	05/07/00	970	ND	2.9	1.7	4.9	18	650
	08/03/00	1200	360	190	43	41	160	270*
	11/08/00	4200	840**	990	200	130	560	230*
	02/08/01	2800	390	630	130	51	250	380*
	06/07/01	650	320	97	13	20	62	190
	09/07/01	970	460	260	17	44	140	400
	12/13/01	291	499	91.7	1.4	17.4	7.2	ND
MW-2 GW	08/06/99	ND	ND	ND	ND	ND	ND	340
	11/05/99	ND	ND	ND	ND	ND	0.7	420
	02/07/00	ND	ND	ND	ND	ND	0.6	310
	05/05/00	ND	ND	ND	ND	ND	ND	280
	08/03/00	460	3300	79	3	43	8	70*
	11/08/00	200	3000	57	2	13	8	120
	02/08/01	290	3100	50	11	0.6	4	80
	06/07/01	210	2000	18	0.6	3	5	80
	09/07/01	230	2400	51	ND	8	8	ND
	12/13/01	172	1700	53	1.2	7.7	8.4	ND
MW-3 GW	08/06/99	ND	ND	ND	ND	ND	ND	ND
	11/05/99	92	ND	ND	ND	0.6	1.7	54
	02/07/00	120	ND	ND	0.6	0.8	2.2	71
	05/05/00	100	ND	ND	ND	0.7	1.9	68
	08/03/00	910	11000**	220	9	35	16	300*
	11/08/00	990	8000	320	0.8	18	9	200
	02/08/01	990	5200**	180	21	7	24	110
	06/07/01	370	6600**	62	4	8	13	140
	09/07/01	460	9400**	87	1	11	25	ND
	12/13/01	251	6500**	66.8	0.9	2.6	8.4	ND
SB-1/TW	06/07/01	1400	33	120	160	48	240	250*
SB-2/TW	06/07/01	8900	26	1100	1900	280	1300	770*
SB-3/TW	06/07/01	2400	3600	280	31	110	340	430*
SB-4/TW	06/07/01	8800	4500**	1400	190	86	230	19000*
RL		50	0.5	0.5	0.5	0.5	1.0	50

Notes:

ND- Not Detected RL- Reporting Limit NA- Not Analyzed

µg/L- Microgram per liter (parts per billion)

TPHg- Total petroleum hydrocarbon as gasoline (EPA method modified 8015)

TPHd- Total petroleum hydrocarbon as diesel (EPA method modified 8015)

MTBE- Methyl Tertiary Butyl Ether (EPA method 8020)

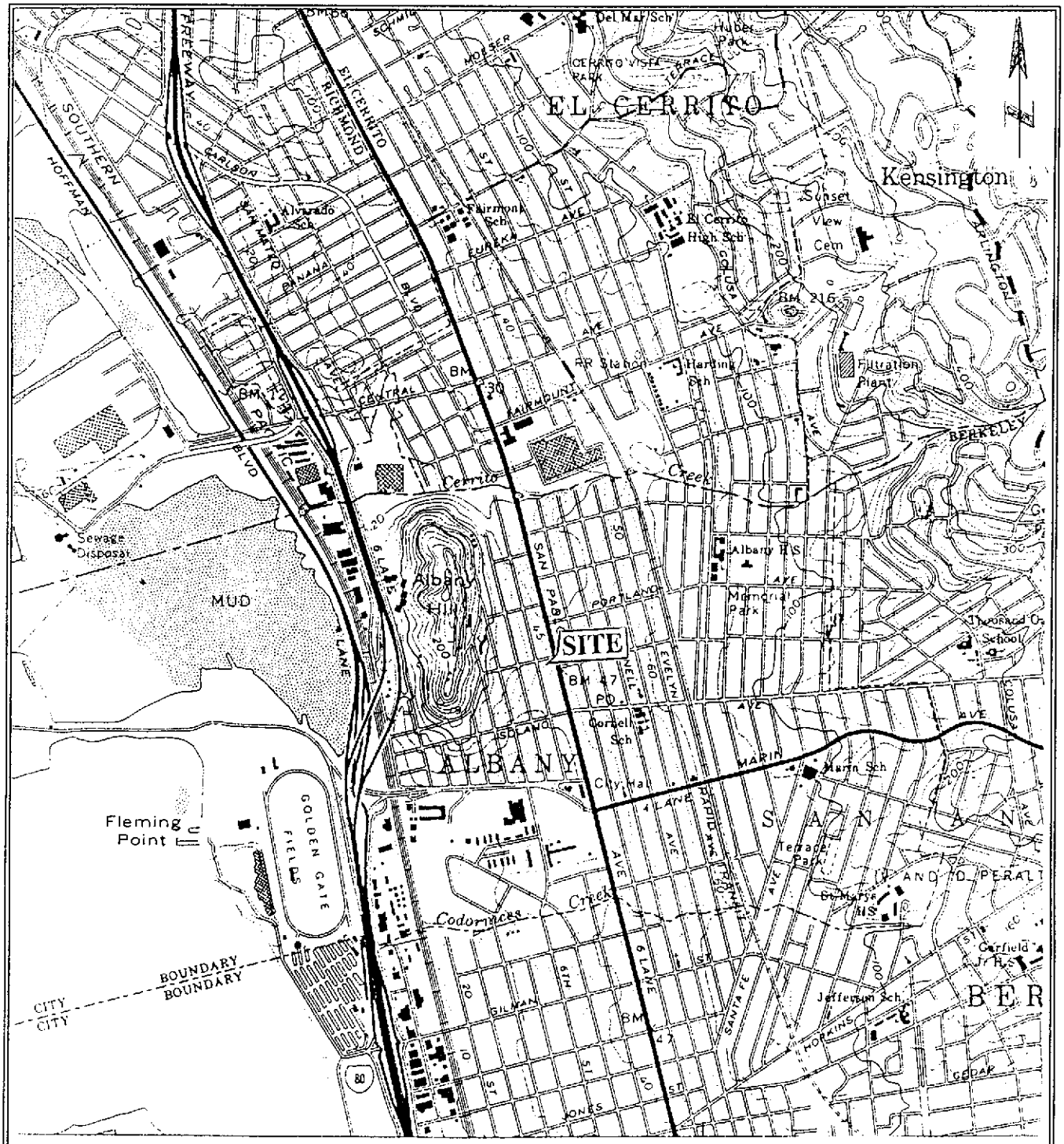
BTEX Benzene, toluene, ethylbenzene, and total xylenes (EPA method 8015)

PAH Polynuclear Aromatic Hydrocarbon (EPA method 610)

Fuel Oxygenates Ethanol, Di-isopropyl Ether, Tertiary Butyl Alcohol, Ethyl-t-Butyl Ether, t-Amyl Methyl Ether, MTBE (EPA Method 8260) were non-detect (06-07-01)

* Does not match diesel pattern

** Confirmed by GC/MS method 8260



Source: U.S.G.S. Map Richmond Quadrangle
7.5 Minute Series (Topographic)
Aerial Photograph taken 1959 Map Edited 1980

FIGURE 1: SITE VICINITY MAP
ALBANY HILL MINI MART
800 San Pablo Avenue
Albany, California

ADVANCED ASSESSMENT AND REMEDIATION SERVICES
2380 Salvio Street, Suite 202
Concord, California

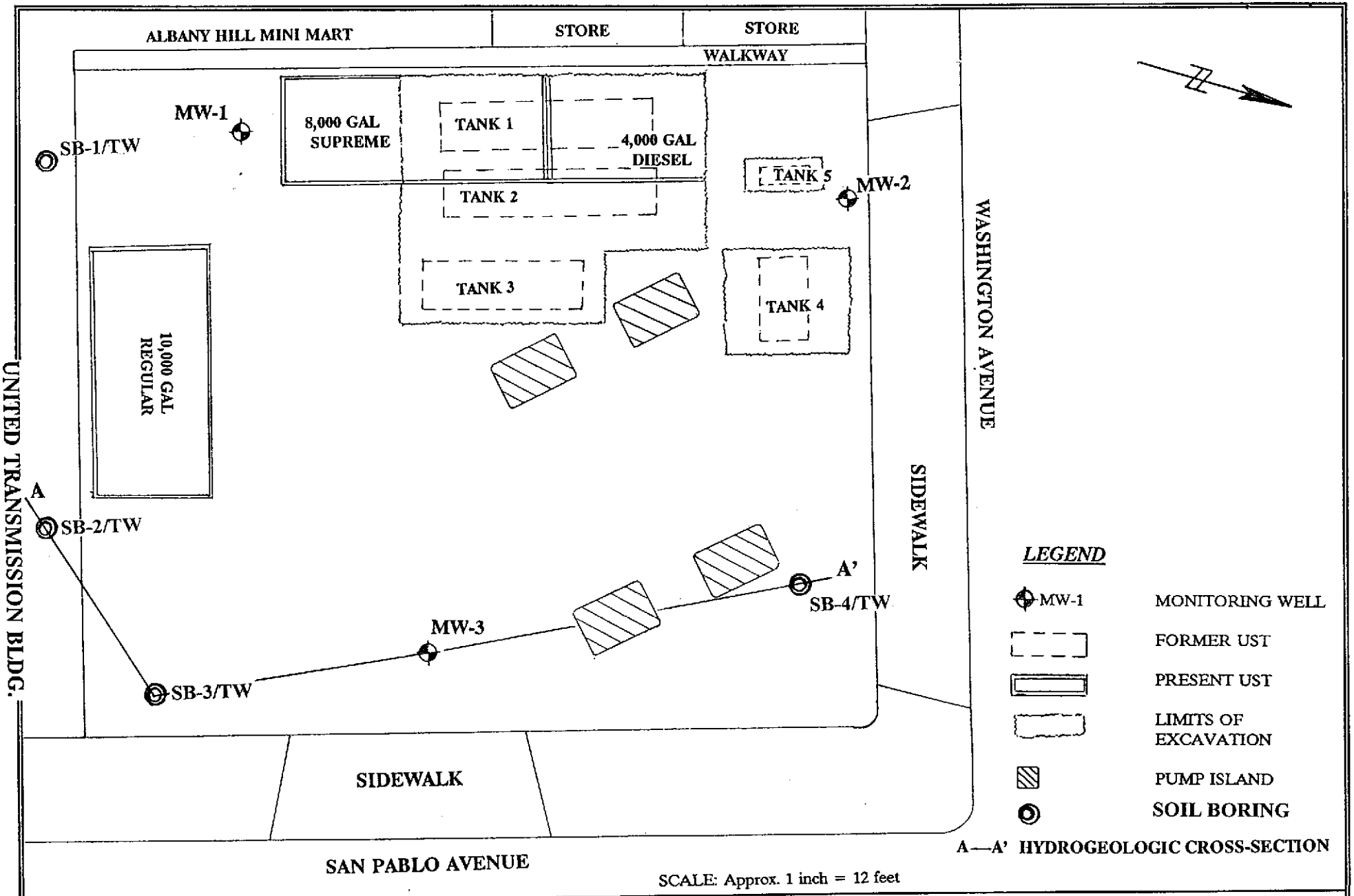
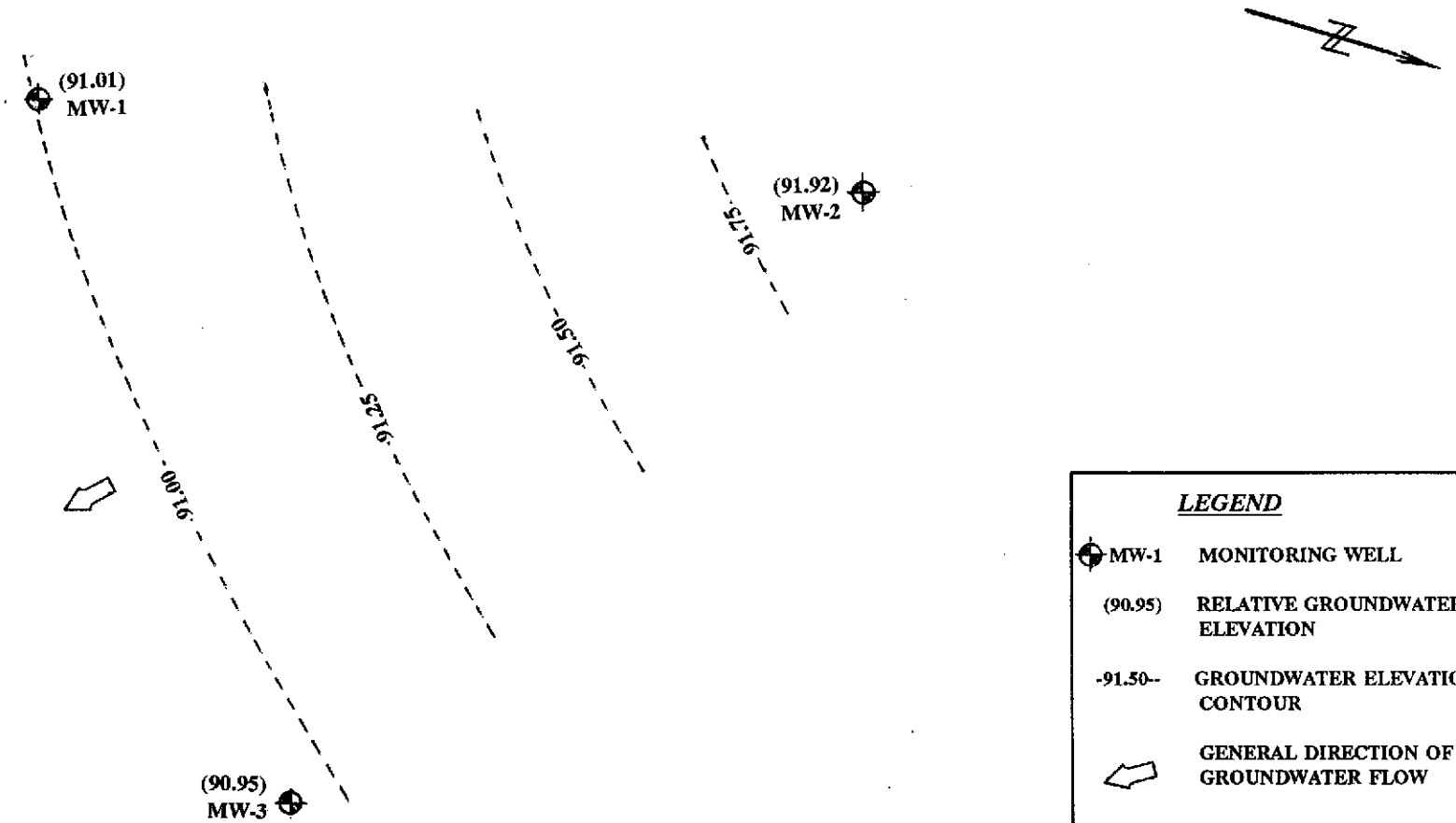


FIGURE 2: SITE PLAN
ALBANY HILL MINI MART
800 San Pablo Avenue
Albany, California

ADVANCED ASSESSMENT AND REMEDIATION SERVICES
2380 Salvio Street, Suite 202
Concord, California 94520



LEGEND

MW-1	MONITORING WELL
(90.95)	RELATIVE GROUNDWATER ELEVATION
-91.50-	GROUNDWATER ELEVATION CONTOUR
	GENERAL DIRECTION OF GROUNDWATER FLOW

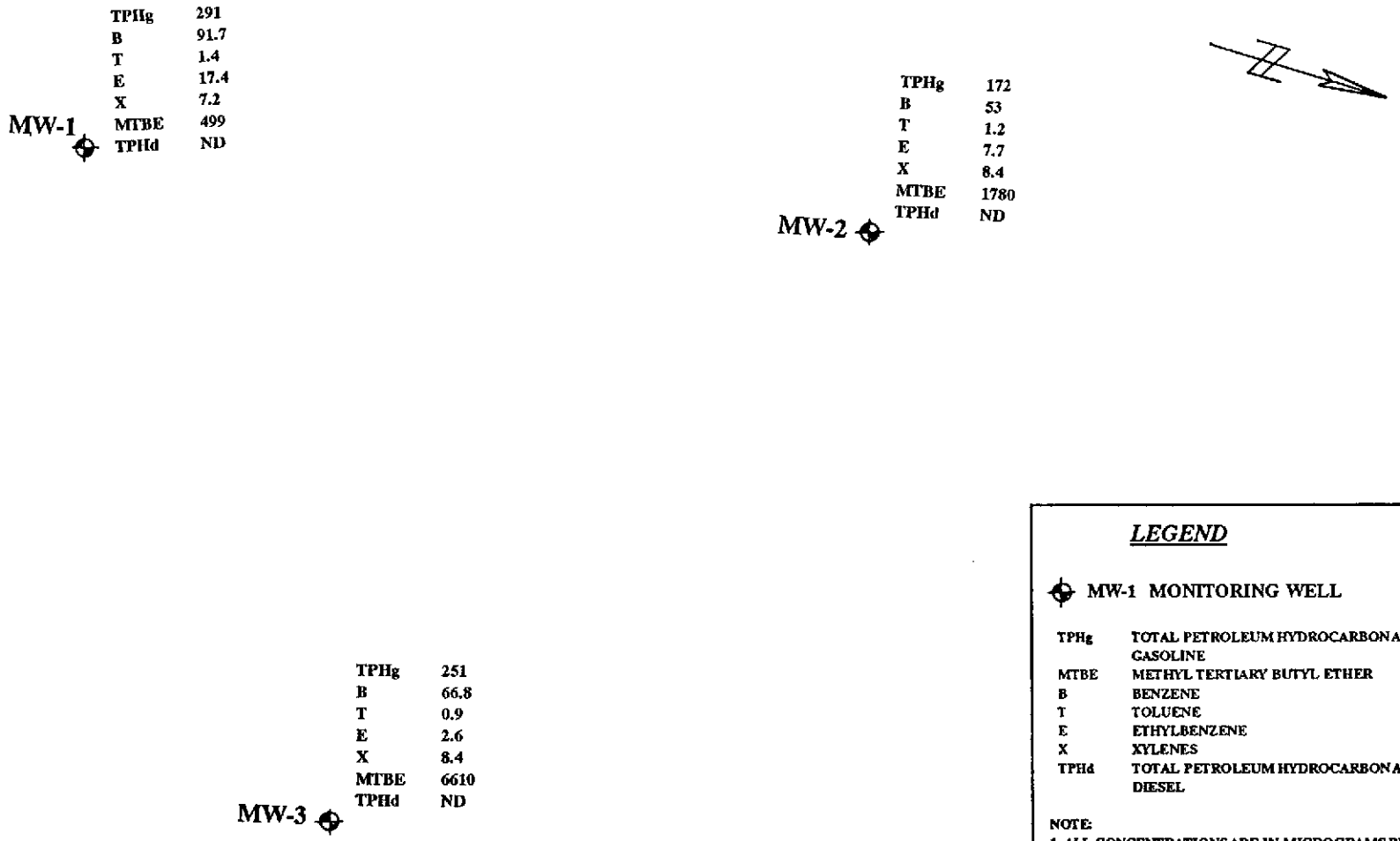
NOTE:
1. WATER LEVELS IN MONITORING WELLS MEASURED ON DECEMBER 13, 2001
2. CONTOUR INTERVAL = 0.25 FOOT
3. HYDRAULIC GRADIENT = 0.02 FOOT/FOOT

Scale:

Approximately 1 inch = 12 feet

FIGURE 3: GROUNDWATER SURFACE ELEVATIONS (12/13/01)
ALBANY HILL MINI MART
800 San Pablo Avenue
Albany, California

ADVANCED ASSESSMENT AND REMEDIATION SERVICES
2380 Salvio Street, Suite 202
Concord, California 94520



LEGEND

MW-1 MONITORING WELL

TPHg	TOTAL PETROLEUM HYDROCARBON AS GASOLINE
MTBE	METHYL TERTIARY BUTYL ETHER
B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	XYLENES
TPHd	TOTAL PETROLEUM HYDROCARBON AS DIESEL

NOTE:
1. ALL CONCENTRATIONS ARE IN MICROGRAMS PER LITER (PARTS PER BILLION)
2. HYDROCARBON CONSTITUENTS WHICH WERE NOT DETECTED ARE NOT LISTED

SCALE

Approx. 1 inch = 12 feet

FIGURE 4: DISTRIBUTION OF DISSOLVED-PHASE HYDROCARBONS
ALBANY HILL MINI MART
800 San Pablo Avenue
Albany, California

ADVANCED ASSESSMENT AND REMEDIATION SERVICES
2380 Salvio Street, Suite 202
Concord, California 94520

GROUNDWATER MONITORING WELL PURGE/SAMPLING WORKSHEET

PROJECT NAME: Albany Hill Mini Mart PROJECT NUMBER: 99005

SITE ADDRESS: 800 San Pablo Avenue, Albany, CA

WELL NUMBER: MW-1 WELL CASING DIA.: 2" DATE: 12-13-01

Stagnant Volume Calculation

Total Well Depth (ft)	-	Initial Depth to Water	=	Water Column Height (ft)	-	Time: 8:05
24		10.67		13.33		

Water column Height (ft)	x	Gallons/Linear Foot	=	Stagnant Volume (Gallons)
13.33		0.17		2.27

(Gallons/Linear Foot: 2" dia. = 0.17; 4" dia. = 0.66; 6" dia. = 1.5)

Groundwater Inspection

Floating Product (ft. or in.): NONE Sheen/Iridescence: YES Odor: YES

Time	Volume Purged (gal)	Temperature (degrees F)	pH	Conductivity µS	Color/Turbidity/Other
10:00	0	63.9	6.76	1984	CLEAR
10:10	2	64.1	6.89	2020	SLIGHTLY TURBID
10:20	5	63.9	7.00	2048	" "
10:30	7	63.8	7.00	2108	" "

Purged Water Containment Purge Method Used:

7 gals stored in 1 55 gal (drums); Any previous drums? 1 Capacity 55

Groundwater Sampling Water Level Recovery (Depth to groundwater in feet)

(P) After purging: 11.60 (I) Initially: 10.67 (S) Before sampling: 10.74 Time: 12:33

(P-S)/P-I) x 100 = 100 % Total Recovery: 92% SAMPLE TIME: 12.35

Sample Containers (How many? Preservatives?)

1 liter amber glass: 1 ; 40 ml VOA: 3 ; 500 ml polypropylene: —

REMARKS:

SAMPLER: TRIDIB GUHA **SIGNATURE:** Tridib K. Guha

(Print)

ADVANCED ASSESSMENT AND REMEDIATION SERVICES

GROUNDWATER MONITORING WELL PURGE/SAMPLING WORKSHEET

PROJECT NAME: Albany Hill Mini Mart PROJECT NUMBER: 99005

SITE ADDRESS: 800 San Pablo Avenue, Albany, CA

WELL NUMBER: MW-2 WELL CASING DIA.: 2" DATE: 12-13-01

Stagnant Volume Calculation

Total Well Depth (ft)	-	Initial Depth to Water	=	Water Column Height (ft)	-	Time: 8:00
24		9.65		14.35		

Water column Height (ft)	x	Gallons/Linear Foot	=	Stagnant Volume (Gallons)
14.35		0.17		2.44

(Gallons/Linear Foot: 2" dia. = 0.17; 4" dia. = 0.66; 6" dia. = 1.5)

Groundwater Inspection

Floating Product (ft. or in.): NONE Sheen/Iridescence: NONE Odor: [redacted]

Time	Volume Purged (gal)	Temperature (degrees F)	pH	Conductivity µS	Color/Turbidity/Other
8:20	0	65.7	6.38	664	CLEAR
8:30	2	65.9	6.41	805	SLIGHTLY TURBID
8:40	5	65.8	6.48	950	" "
8:50	7	65.7	6.64	1001	" "

Purged Water Containment Purge Method Used:

7 gals stored in 1 55 gal (drums); Any previous drums? 1 Capacity 55 GAL

Groundwater Sampling Water Level Recovery (Depth to groundwater in feet)

(P) After purging: 10.57 (I) Initially: 9.65 (S) Before sampling: 9.69 Time: 12:03

(P-S)/P-I) x 100 = 100 % Total Recovery: 96% SAMPLE TIME: 12:05

Sample Containers (How many? Preservatives?)

1 liter amber glass: 1 ; 40 ml VOA: 3 ; 500 ml polypropylene: —

REMARKS:

SAMPLER: TRIDIB GUHA SIGNATURE: [signature]

(Print)

ADVANCED ASSESSMENT AND REMEDIATION SERVICES

GROUNDWATER MONITORING WELL PURGE/SAMPLING WORKSHEET

PROJECT NAME: Albany Hill Mini Mart PROJECT NUMBER: 99005

SITE ADDRESS: 800 San Pablo Avenue, Albany, CA

WELL NUMBER: MW-3 WELL CASING DIA.: 2" DATE: 12-13-01

Stagnant Volume Calculation

Total Well Depth (ft)	- Initial Depth to Water	= Water Column Height (ft)	- Time: 8:02
24	9.38	14.62	

Water column Height (ft) x	Gallons/Linear Foot	= Stagnant Volume (Gallons)
14.62	0.17	2.48

(Gallons/Linear Foot: 2" dia. = 0.17; 4" dia. = 0.66; 6" dia. = 1.5)

Groundwater Inspection

Floating Product (ft. or in.): NONE Sheen/Iridescence: NONE Odor: YES

Time	Volume Purged (gal)	Temperature (degrees F)	pH	Conductivity µS	Color/Turbidity/Other
9:10	0	66.5	6.58	1711	CLEAR
9:20	2	67.1	6.56	1762	SLIGHTLY TURBID GRAY
9:30	5	67.2	6.61	1759	" " "
9:40	7	67.2	6.62	1743	" " "

Purged Water Containment Purge Method Used:

7 gals stored in 1 55 gal (drums); Any previous drums? 1 Capacity 55GAL

Groundwater Sampling Water Level Recovery (Depth to groundwater in feet)

(P) After purging: 10.29 (I) Initially: 9.38 (S) Before sampling: 9.43 Time: 12:18

(P-S)/P-I) x 100 = 100 % Total Recovery: 95% SAMPLE TIME - 12:20

Sample Containers (How many? Preservatives?)

1 liter amber glass: 1 ; 40 ml VOA: 3 ; 500 ml polypropylene: —

REMARKS:

SAMPLER: TRIDIB GUHA **SIGNATURE:** Tridib Guha

(Print)

ADVANCED ASSESSMENT AND REMEDIATION SERVICES

Case Narrative

North State Environmental, South San Francisco, CA

Report Date: 12/21/2001	Project: 800 SAN PABLO
Report Number: 01-1803	Order #: 01-1803

Three water samples received 12/13/2001 for Diesel, Gasoline, MTBE, and BTEX analysis. Sample MW-3/GW was confirmed for MTBE by method SW8260B.

Approved by: _____ Date: 12/21/01

Laboratory Report Project Overview

EDF 1.2a

Laboratory:	North State Environmental, South San Francisco, CA
Lab Report Number:	01-1803
Project Name:	800 SAN PABLO AVE.,ALBANY
Work Order Number:	01-1803
Control Sheet Number:	NA

Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run Sub
01-1803	MW-1/GW	01-1803-01	W	CS	CATFH	SW3510	12/13/2001	12/18/2001	12/19/2001	12181TPHDW	1
01-1803	MW-1/GW	01-1803-01	W	CS	SW8020F	SW5030B	12/13/2001	12/18/2001	12/18/2001	12181MGBXW	1
01-1803	MW-2/GW	01-1803-02	W	CS	CATFH	SW3510	12/13/2001	12/18/2001	12/19/2001	12181TPHDW	1
01-1803	MW-2/GW	01-1803-02	W	CS	SW8020F	SW5030B	12/13/2001	12/18/2001	12/18/2001	12181MGBXW	1
01-1803	MW-3/GW	01-1803-03	W	CS	CATFH	SW3510	12/13/2001	12/18/2001	12/19/2001	12181TPHDW	1
01-1803	MW-3/GW	01-1803-03	W	CS	SW8020F	SW5030B	12/13/2001	12/18/2001	12/18/2001	12181MGBXW	1
01-1803	MW-3/GW	01-1803-03	W	CS	SW8260B	SW5030B	12/13/2001	12/20/2001	12/21/2001	12181MGBXW	1
		01-1797-01	W	NC	SW8020F	SW5030B	/ /	12/18/2001	12/18/2001	12181MGBXW	1
		LCSD	W	BD1	CATFH	SW3510	/ /	12/18/2001	12/18/2001	12181TPHDW	1
		LCS	W	BS1	CATFH	SW3510	/ /	12/18/2001	12/18/2001	12181TPHDW	1
		BLK	W	LB1	CATFH	SW3510	/ /	12/18/2001	12/18/2001	12181TPHDW	1
		BLK	W	LB1	SW8020F	SW5030B	/ /	12/18/2001	12/18/2001	12181MGBXW	1
		1797-01MS	W	MS1	SW8020F	SW5030B	/ /	12/18/2001	12/18/2001	12181MGBXW	1
		1797-01MSD	W	SD1	SW8020F	SW5030B	/ /	12/18/2001	12/18/2001	12181MGBXW	1

North State Environmental, South San Francisco, CA

Lab Report No.: 01-1803 Date: 12/21/2001 Page: 1

Project Name:	800 SAN PABLO	Analysis:	CA LUFT Method for Total Fuel Hydrocarbons
Project No:	01-1803	Method:	CATFH
		Prep Meth:	SW3510
Field ID:	MW-1/GW	Lab Samp ID:	01-1803-01
Descr/Location:	NA	Rec'd Date:	12/13/2001
Sample Date:	12/13/2001	Prep Date:	12/18/2001
Sample Time:	1235	Analysis Date:	12/19/2001
Matrix:	Water	QC Batch:	12181TPHDW
Basis:	Wet	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Diesel Fuel #2	0.02	0.05	PQL		ND	MG/L	1

Approved by: _____ Date: _____

Project Name:	800 SAN PABLO	Analysis:	CA LUFT Method for Total Fuel Hydrocarbons
Project No:	01-1803	Method:	CATFH
		Prep Meth:	SW3510
Field ID:	MW-2/GW	Lab Samp ID:	01-1803-02
Descr/Location:	NA	Rec'd Date:	12/13/2001
Sample Date:	12/13/2001	Prep Date:	12/18/2001
Sample Time:	1205	Analysis Date:	12/19/2001
Matrix:	Water	QC Batch:	12181TPHDW
Basis:	Wet	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Diesel Fuel #2	0.02	0.05	PQL		ND	MG/L	1

Approved by: _____ Date: _____

Lab Report No.: 01-1803 Date: 12/21/2001 Page: 3

Project Name:	800 SAN PABLO	Analysis:	CA LUFT Method for Total Fuel Hydrocarbons
Project No:	01-1803	Method:	CATFH
		Prep Meth:	SW3510
Field ID:	MW-3/GW	Lab Samp ID:	01-1803-03
Descr/Location:	NA	Rec'd Date:	12/13/2001
Sample Date:	12/13/2001	Prep Date:	12/18/2001
Sample Time:	1220	Analysis Date:	12/19/2001
Matrix:	Water	QC Batch:	12181TPHDW
Basis:	Wet	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Diesel Fuel #2	0.02	0.05	PQL		ND	MG/L	1

Approved by: _____ Date: _____

Project Name:	800 SAN PABLO	Analysis:	BTEX/Gasoline Range Organics (SW8020/8015)
Project No:	01-1803	Method:	SW8020F
		Prep Meth:	SW5030B

Field ID:	MW-1/GW	Lab Samp ID:	01-1803-01
Descr/Location:	NA	Rec'd Date:	12/13/2001
Sample Date:	12/13/2001	Prep Date:	12/18/2001
Sample Time:	1235	Analysis Date:	12/18/2001
Matrix:	Water	QC Batch:	12181MGBXW
Basis:	Wet	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics	27.	50.	PQL		291.	UG/L	1
Benzene	0.26	0.5	PQL		91.7	UG/L	1
Toluene	0.48	0.5	PQL		1.4	UG/L	1
Ethylbenzene	0.44	0.5	PQL		17.4	UG/L	1
Xylenes	0.51	1.0	PQL		7.2	UG/L	1
Methyl-tert-butyl ether	0.16	0.5	PQL		499.	UG/L	1

Approved by: _____ Date: _____

Project Name:	800 SAN PABLO	Analysis:	BTEX/Gasoline Range Organics (SW8020/8015)
Project No:	01-1803	Method:	SW8020F
		Prep Meth:	SW5030B
Field ID:	MW-2/GW	Lab Samp ID:	01-1803-02
Descr/Location:	NA	Rec'd Date:	12/13/2001
Sample Date:	12/13/2001	Prep Date:	12/18/2001
Sample Time:	1205	Analysis Date:	12/18/2001
Matrix:	Water	QC Batch:	12181MGBXW
Basis:	Wet	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics	27.	50.	PQL		172.	UG/L	1
Benzene	0.26	0.5	PQL		53.	UG/L	1
Toluene	0.48	0.5	PQL		1.2	UG/L	1
Ethylbenzene	0.44	0.5	PQL		7.7	UG/L	1
Xylenes	0.51	1.0	PQL		8.4	UG/L	1
Methyl-tert-butyl ether	0.16	0.5	PQL		1780.	UG/L	1

Approved by: _____ Date: _____

Project Name:	800 SAN PABLO	Analysis:	BTEX/Gasoline Range Organics (SW8020/8015)
Project No:	01-1803	Method:	SW8020F
		Prep Meth:	SW5030B

Field ID:	MW-3/GW	Lab Samp ID:	01-1803-03
Descr/Location:	NA	Rec'd Date:	12/13/2001
Sample Date:	12/13/2001	Prep Date:	12/18/2001
Sample Time:	1220	Analysis Date:	12/18/2001
Matrix:	Water	QC Batch:	12181MGBXW
Basis:	Wet	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics	27.	50.	PQL		251.	UG/L	1
Benzene	0.26	0.5	PQL		66.8	UG/L	1
Toluene	0.48	0.5	PQL		0.9	UG/L	1
Ethylbenzene	0.44	0.5	PQL		2.6	UG/L	1
Xylenes	0.51	1.0	PQL		8.4	UG/L	1
Methyl-tert-butyl ether	0.16	0.5	PQL		6610	UG/L	1

Approved by: _____ Date: _____

Project Name:	800 SAN PABLO	Analysis:	Volatile Organic Compounds by GC/MS
Project No:	01-1803	Method:	SW8260B
		Prep Meth:	SW5030B

Field ID:	MW-3/GW	Lab Samp ID:	01-1803-03
Descr/Location:	NA	Rec'd Date:	12/13/2001
Sample Date:	12/13/2001	Prep Date:	12/20/2001
Sample Time:	1220	Analysis Date:	12/21/2001
Matrix:	Water	QC Batch:	12181MGBXW
Basis:	Wet	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Methyl-tert-butyl ether	0.31	25.	PQL		8190.	UG/L	MS 1

Approved by: _____ Date: _____

QA/QC Report
Method Blank Summary

North State Environmental, South San Francisco, CA

Lab Report No.: 01-1803 Date: 12/21/2001

QC Batch:	12181MGBXW	Analysis:	BTEX/Gasoline Range Organics
Matrix:	Water	Method:	SW8020F
Lab Samp ID:	BLK	Prep Meth:	SW5030B
Analysis Date:	12/18/2001	Prep Date:	12/18/2001
Basis:	Wet	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics	27.	50.	PQL		ND	UG/L	1
Benzene	0.26	0.5	PQL		ND	UG/L	1
Toluene	0.48	0.5	PQL		ND	UG/L	1
Ethylbenzene	0.44	0.5	PQL		ND	UG/L	1
Xylenes	0.51	1.0	PQL		ND	UG/L	1
Methyl-tert-butyl ether	0.16	0.5	PQL		ND	UG/L	1

QA/QC Report
Matrix Spike/Duplicate Matrix Spike Summary

North State Environmental, South San Francisco, CA

Lab Report No.: 01-1803 Date: 12/21/2001

QC Batch: 12181MGBXW
Matrix: Water
Lab Samp ID: 1797-01MS
Basis: Wet

Project Name: Lab Generated or Non COE Sample
Project No.: Lab Generated or Non COE Sample
Field ID: Lab Generated or Non COE Sample
Lab Ref ID: 01-1797-01

Analyte	Analysis Method	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Units		% Recoveries MS	% Recoveries DMS	% Recoveries RPD	Acceptance Criteria % Rec		Acceptance Criteria RPD
Benzene	SW8020F	100.0	100.0	ND	101.	103.	UG/L	ww	101	103	2.0	123-59	MSA	31MSP
Ethylbenzene	SW8020F	100.0	100.0	ND	101.	101.	UG/L	ww	101	101	0.00	130-76	MSA	15MSP
Gasoline Range Organics	SW8020F	1000.	1000.	ND	955.	962.	UG/L	ww	95.5	96.2	0.73	133-64	MSA	25MSP
Methyl-tert-butyl ether	SW8020F	100.	100.	0.5	107.	105.	UG/L	ww	107	105	1.9	121-59	MSA	28MSP
Toluene	SW8020F	100.	100.	0.9	102.	103.	UG/L	ww	101	102	0.99	119-75	MSA	11MSP
Xylenes	SW8020F	300.0	300.0	ND	303.	304.	UG/L	ww	101	101	0.00	129-78	MSA	11MSP

QA/QC Report
Method Blank Summary

North State Environmental, South San Francisco, CA

Lab Report No.: 01-1803 Date: 12/21/2001

QC Batch:	12181TPHDW	Analysis:	CA LUFT Method for Total Fuel
Matrix:	Water	Method:	CATFH
Lab Samp ID:	BLK	Prep Meth:	SW3510
Analysis Date:	12/18/2001	Prep Date:	12/18/2001
Basis:	Wet	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Diesel Fuel #2	0.02	0.05	PQL		ND	MG/L	1

QA/QC Report
Blank Spike/Duplicate Blank Spike Summary

North State Environmental, South San Francisco, CA

Lab Report No.: 01-1803 Date: 12/21/2001

QC Batch: 12181TPHDW
Matrix: Water
Lab Samp ID: LCS

Analyte	Analysis Method	Spike Level LCS	Spike Level LCD	Spike Result LCS	Spike Result LCD	Units	% Recoveries LCS	% Recoveries LCD	% Recoveries RPD	Acceptance Criteria %Rec	Acceptance Criteria RPD
Diesel Fuel #2	CATFH	2.5	2.5	2.42	2.47	MG/L ww	96.8	98.8	2.0	107-65 MSA	25MSP

Error Summary Log

12/21/01

EDF 1.2i All files present in deliverable.

Laboratory:	North State Environmental, South San Francisco, CA
Project Name:	800 SAN PABLO AVE.,ALBANY
Work Order Number:	01-1803
Global ID:	NA
Lab Report Number:	01-1803

Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run	Sub
01-1803	MW-1/GW	01-1803-01	W	CS	CATFH	SW3510	12/13/01	12/18/01	12/19/01	12181TPHDW	1	
01-1803	MW-1/GW	01-1803-01	W	CS	SW8020F	SW5030B	12/13/01	12/18/01	12/18/01	12181MGBXW	1	
01-1803	MW-2/GW	01-1803-02	W	CS	CATFH	SW3510	12/13/01	12/18/01	12/19/01	12181TPHDW	1	
01-1803	MW-2/GW	01-1803-02	W	CS	SW8020F	SW5030B	12/13/01	12/18/01	12/18/01	12181MGBXW	1	
01-1803	MW-3/GW	01-1803-03	W	CS	CATFH	SW3510	12/13/01	12/18/01	12/19/01	12181TPHDW	1	
01-1803	MW-3/GW	01-1803-03	W	CS	SW8020F	SW5030B	12/13/01	12/18/01	12/18/01	12181MGBXW	1	
01-1803	MW-3/GW	01-1803-03	W	CS	SW8260B	SW5030B	12/13/01	12/20/01	12/21/01	12181MGBXW	1	
		01-1797-01	W	NC	SW8020F	SW5030B	/ /	12/18/01	12/18/01	12181MGBXW	1	
		BLK	W	LB1	SW8020F	SW5030B	/ /	12/18/01	12/18/01	12181MGBXW	1	
		1797-01MS	W	MS1	SW8020F	SW5030B	/ /	12/18/01	12/18/01	12181MGBXW	1	
		1797-01MSD	W	SD1	SW8020F	SW5030B	/ /	12/18/01	12/18/01	12181MGBXW	1	
		LCSD	W	BD1	CATFH	SW3510	/ /	12/18/01	12/18/01	12181TPHDW	1	
		LCS	W	BS1	CATFH	SW3510	/ /	12/18/01	12/18/01	12181TPHDW	1	
		BLK	W	LB1	CATFH	SW3510	/ /	12/18/01	12/18/01	12181TPHDW	1	

EDFSAMP: Error Summary Log

12/21/01

Error type	Logcode	Projname	Npdlwo	Sampid	Matrix
There are no errors in this data file					

EDFTEST: Error Summary Log

12/21/01

Error type	Labsampid	Qccode	Anmcode	Exmcode	Anadate	Run number
There are no errors in this data file					/ /	0

EDFRES: Error Summary Log

12/21/01

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	01-1797-01	NC	W	SW8020F	PR	12/18/01	1	MTBE
Warning: extra parameter	01-1803-01	CS	W	CATFH	PR	12/19/01	1	DIESEL2
Warning: extra parameter	01-1803-01	CS	W	SW8020F	PR	12/18/01	1	MTBE
Warning: extra parameter	01-1803-02	CS	W	CATFH	PR	12/19/01	1	DIESEL2
Warning: extra parameter	01-1803-02	CS	W	SW8020F	PR	12/18/01	1	MTBE
Warning: extra parameter	01-1803-03	CS	W	CATFH	PR	12/19/01	1	DIESEL2
Warning: extra parameter	01-1803-03	CS	W	SW8020F	PR	12/18/01	1	MTBE
Warning: extra parameter	1797-01MS	MS1	W	SW8020F	PR	12/18/01	1	MTBE
Warning: extra parameter	1797-01MSD	SD1	W	SW8020F	PR	12/18/01	1	MTBE
Warning: extra parameter	BLK	LB1	W	CATFH	PR	12/18/01	1	DIESEL2
Warning: extra parameter	BLK	LB1	W	SW8020F	PR	12/18/01	1	MTBE
Warning: extra parameter	LCS	BS1	W	CATFH	PR	12/18/01	1	DIESEL2
Warning: extra parameter	LCSD	BD1	W	CATFH	PR	12/18/01	1	DIESEL2

EDFQC: Error Summary Log

12/21/01

Error type	Lablotctl	Anmcode	Parlabel	Qccode	Labqcid
There are no errors in this data files					

EDFCL: Error Summary Log

12/21/01

Error type	Clrevdate	Anmcode	Exmcode	Parlabel	Clcode
There are no errors in this data file	/ /				

01-1805

North State Environmental Analytical Laboratory

90 South Spruce Avenue, Suite W, South San Francisco, CA 94080
Phone: (650) 266-4563 Fax: (650) 266-4560

Chain of Custody / Request for Analysis
Lab Job No.: _____ Page 1 of 1

Client: ADVANCED ASSESSMENT & R.S.	Report to: TRIDIB GUHA	Phone: 925-363-1999	Turnaround Time
Mailing Address: 2380 SALVIO STREET, SUITE 202 CONCORD, CA 94520	Billing to:	Fax: 925. 363-1998	5 DAY
		PO# / Billing Reference:	Date: 12-13-01
			Sampler: T. GUHA

Project / Site Address: 800 SAN PABLO AVE. ALBANY, CA

Analysis Requested

Sample ID	Sample Type	Container No. / Type	Pres.	Sampling Date / Time	TPHg/BTEX/MTBE	TPHd						Comments / Hazards
MW-1/GW	WATER	3 VOAS 1 AMBER	HCL	12/13/01 12:35	X	X						PLEASE INCLUDE
MW-2/GW	"	3 VOAS 1 AMBER	HCL	12/13/01 12:05	X	X						CHROMATOGRAMS
MW-3/GW	"	3 VOAS 1 AMBER	HCL	12/13/01 12:20	X	X						

Relinquished by:	Date: 12/13/01	Time: 12:40	Received by:	Lab Comments: Samples Received in Good Condition
Relinquished by:	Date:	Time:	Received by:	
Relinquished by:	Date:	Time:	Received by:	

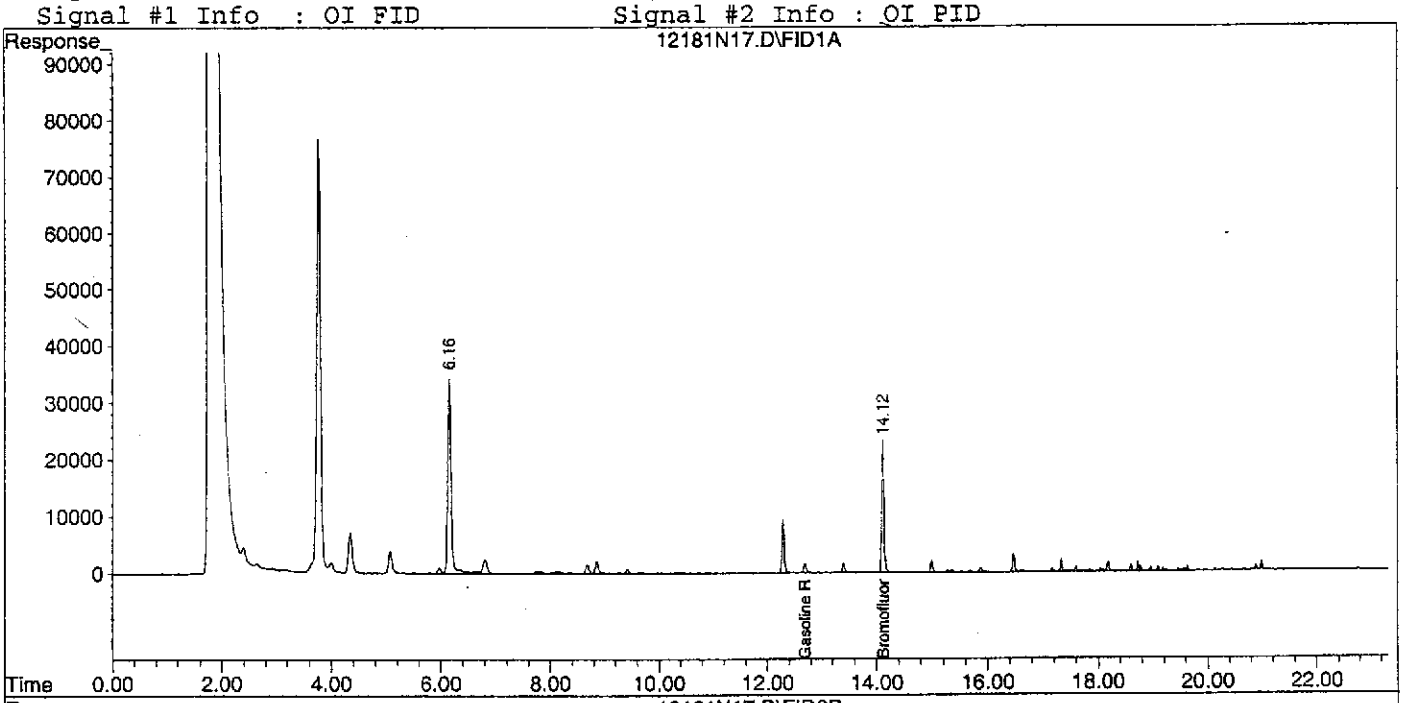
Quantitation Report

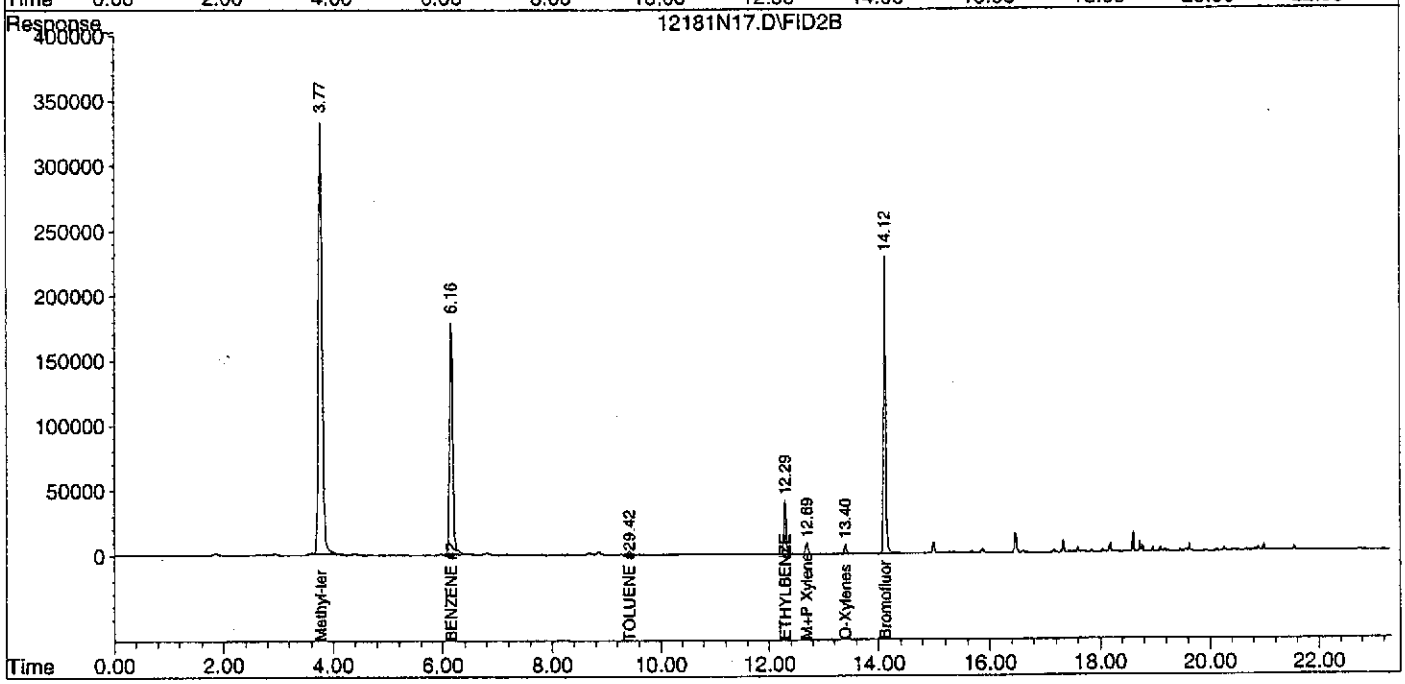
Data File : C:\HPCHEM\2\DATA\12181N17.D\FID1A.CH Vial: 1
Acq On : 18 Dec 20101 7:27 pm Operator: JN
Sample : 01-1803-01 Inst : GC/MS Ins
Misc : 1 DD:12/18/2001 Multiplr: 1.00
IntFile : TRY1.E

Data File : C:\HPCHEM\2\DATA\12181N17.D\FID2B.CH Vial: 1
Acq On : 18 Dec 101 7:27 pm Operator: JN
Sample : 01-1803-01 Inst : GC/MS Ins
Misc : 1 DD:12/18/2001 Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Dec 18 19:51 19101 Quant Results File: GBX.RES

Quant Method : C:\HPCHEM\2\METHODS\GBX.M (Chemstation Integrator)
Title : Gasoline Aromatics (BTEX-MTBE)
Last Update : Thu Dec 06 12:03:47 2001
Response via : Multiple Level Calibration
DataAcq Meth : GBX.M

Volume Inj. : 5 mL Purge volume
Signal #1 Phase : DB-624 30M x 0.53 Signal #2 Phase: DB-624 30M x 0.53mm
Signal #1 Info : OI FID Signal #2 Info : OI PID





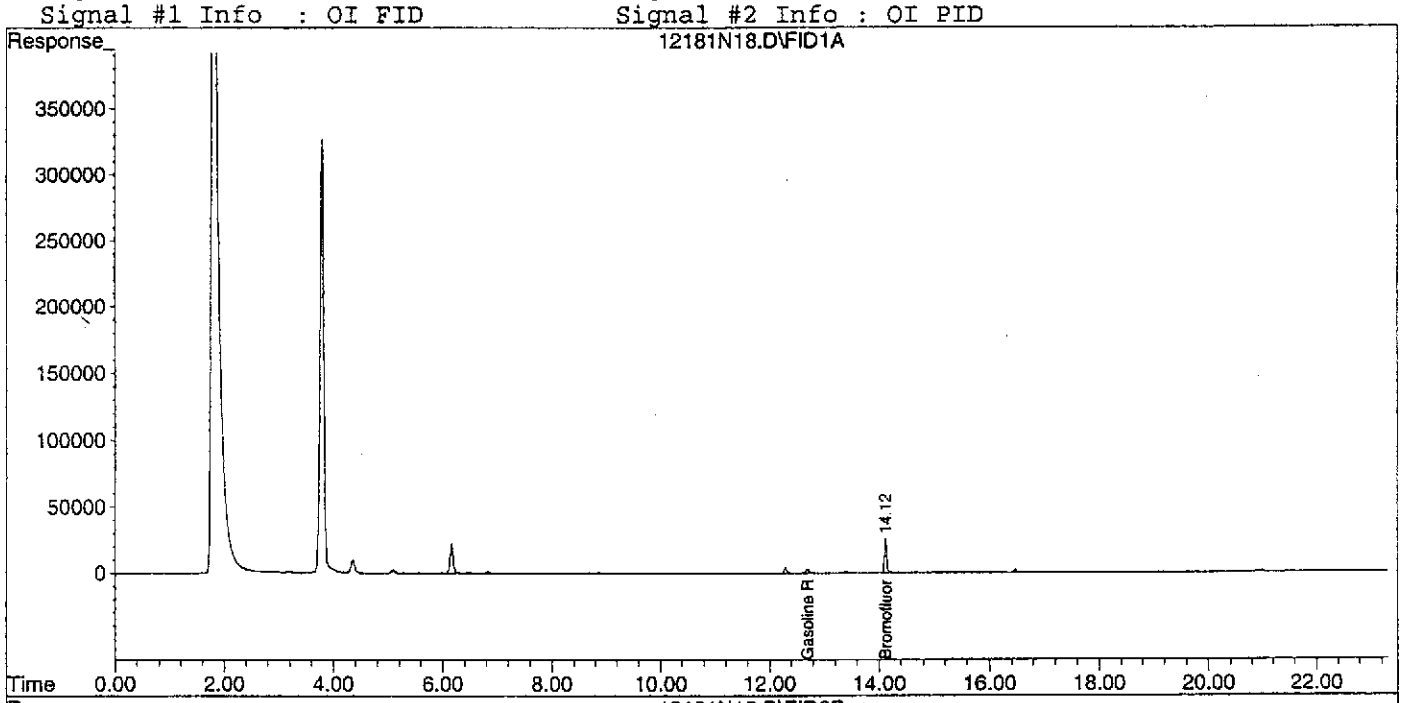
Quantitation Report

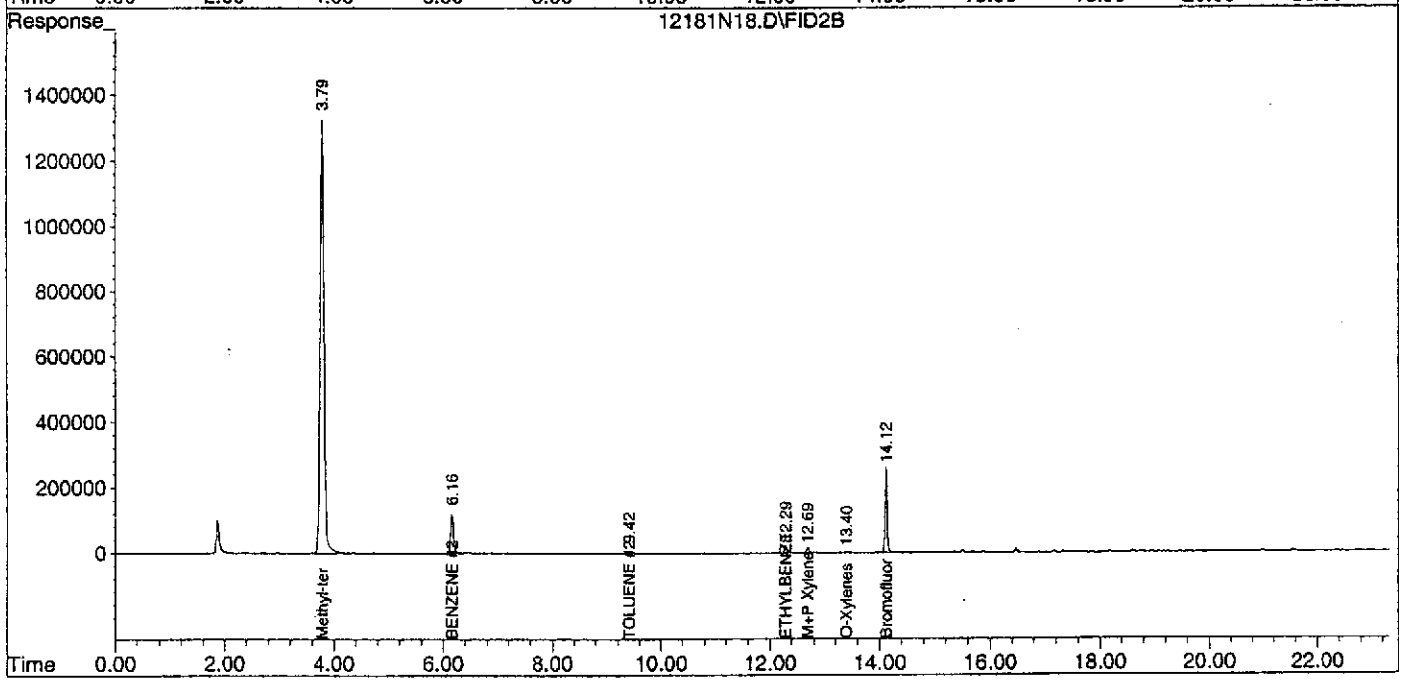
Data File : C:\HPCHEM\2\DATA\12181N18.D\FID1A.CH Vial: 2
Acq On : 18 Dec 20101 7:58 pm Operator: JN
Sample : 01-1803-02 Inst : GC/MS Ins
Misc : 1 DD:12/18/2001 Multiplr: 1.00
IntFile : TRY1.E

Data File : C:\HPCHEM\2\DATA\12181N18.D\FID2B.CH Vial: 2
Acq On : 18 Dec 101 7:58 pm Operator: JN
Sample : 01-1803-02 Inst : GC/MS Ins
Misc : 1 DD:12/18/2001 Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Dec 18 20:21 19101 Quant Results File: GBX.RES

Quant Method : C:\HPCHEM\2\METHODS\GBX.M (Chemstation Integrator)
Title : Gasoline Aromatics (BTEX-MTBE)
Last Update : Thu Dec 06 12:03:47 2001
Response via : Multiple Level Calibration
DataAcq Meth : GBX.M

Volume Inj. : 5 mL Purge volume
Signal #1 Phase : DB-624 30M x 0.53 Signal #2 Phase: DB-624 30M x 0.53mm
Signal #1 Info : OI FID Signal #2 Info : OI PID





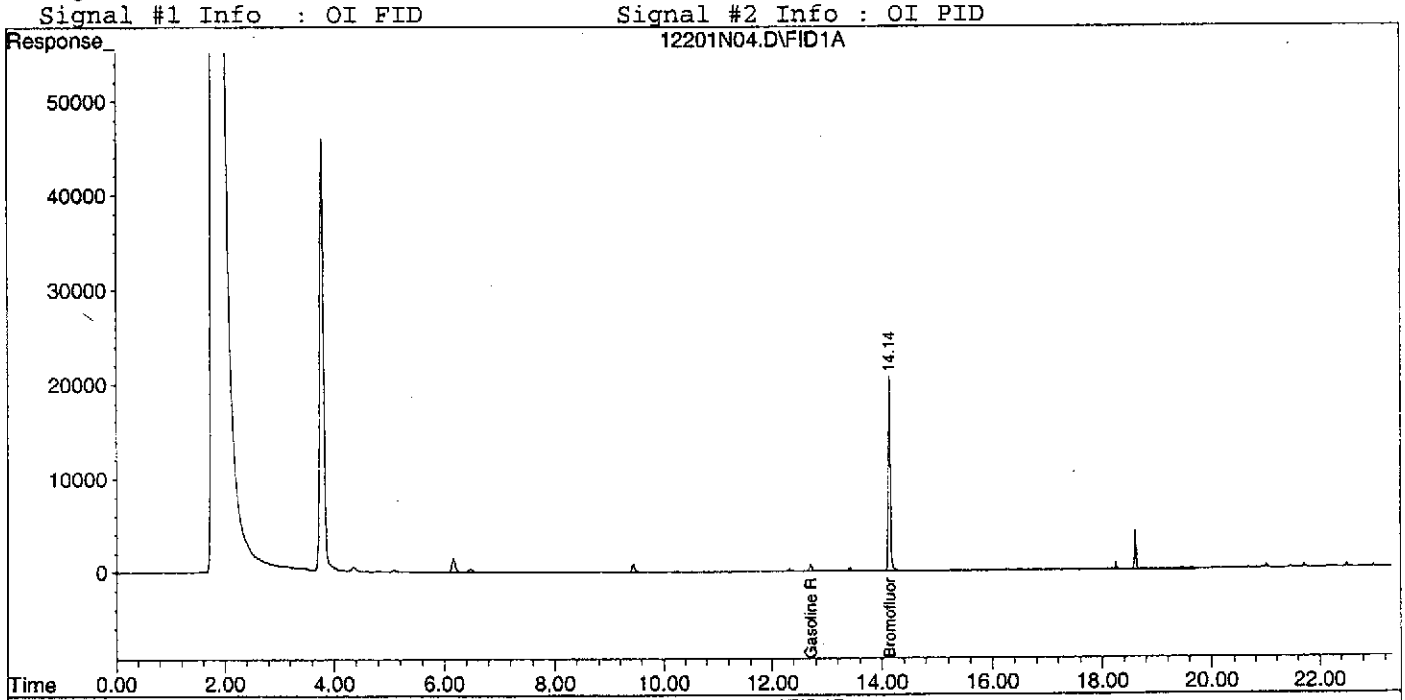
Quantitation Report

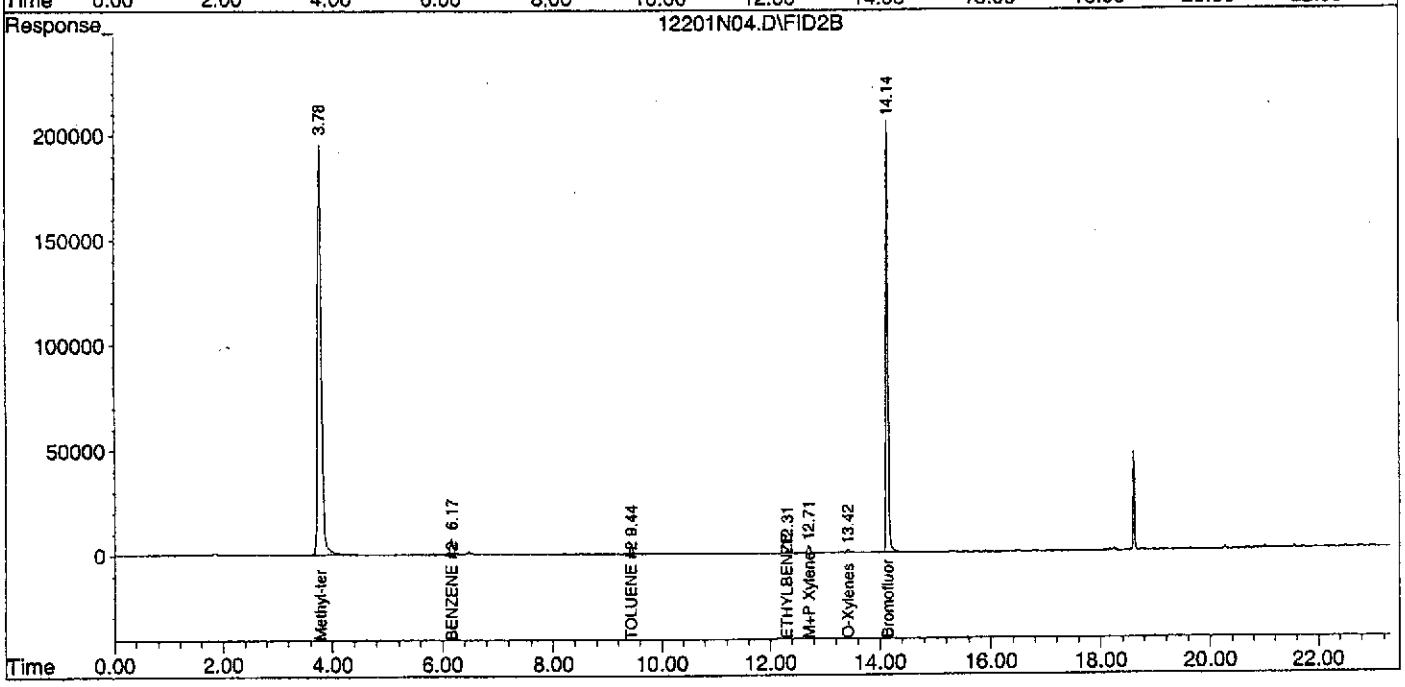
Data File : C:\HPCHEM\2\DATA\12201N04.D\FID1A.CH Vial: 4
Acq On : 20 Dec 20101 12:56 pm Operator: JN
Sample : 01-1803-03 Inst : GC/MS Ins
Misc : 20 DD:12/20/2001 Multiplr: 20.00
IntFile : TRY1.E

Data File : C:\HPCHEM\2\DATA\12201N04.D\FID2B.CH Vial: 4
Acq On : 20 Dec 101 12:56 pm Operator: JN
Sample : 01-1803-03 Inst : GC/MS Ins
Misc : 20 DD:12/20/2001 Multiplr: 20.00
IntFile : AUTOINT1.E
Quant Time: Dec 20 13:19 19101 Quant Results File: GBX.RES

Quant Method : C:\HPCHEM\2\METHODS\GBX.M (Chemstation Integrator)
Title : Gasoline Aromatics (BTEX-MTBE)
Last Update : Thu Dec 06 12:03:47 2001
Response via : Multiple Level Calibration
DataAcq Meth : GBX.M

Volume Inj. : 5 mL Purge volume
Signal #1 Phase : DB-624 30M x 0.53 Signal #2 Phase: DB-624 30M x 0.53mm
Signal #1 Info : OI FID Signal #2 Info : OI PID

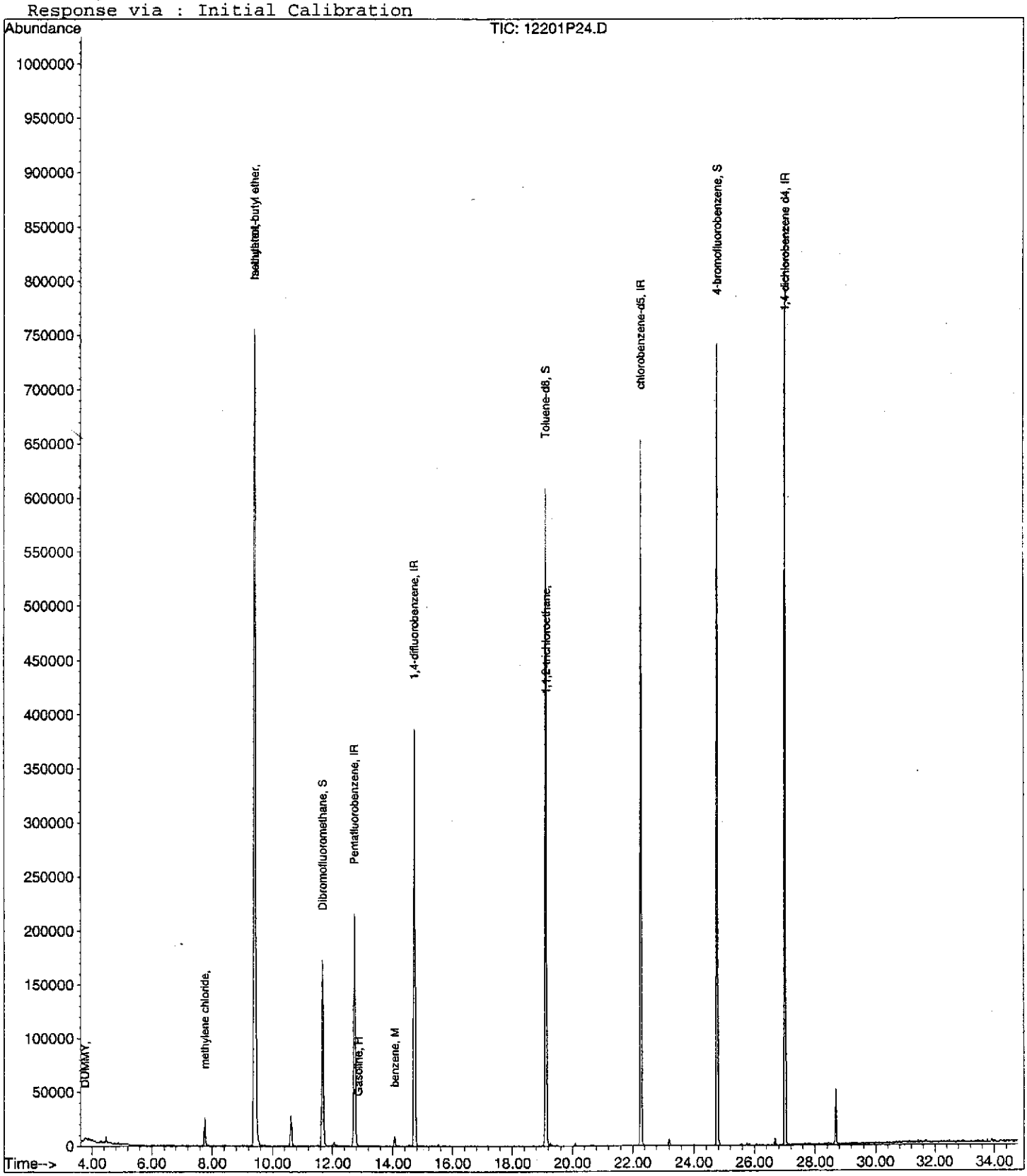




Quantitation Report

Data File : C:\HPCHEM\1\DATA\12201P24.D Vial: 4
Acq On : 21 Dec 2001 5:46 am Operator: jn
Sample : 01-1803-03 Inst : GC/MS Ins
Misc : 50 DD:12/20/2001 Multiplr: 50.00
MS Integration Params: RTEINT.P
Quant Time: Dec 21 6:21 19101 Quant Results File: 8260.RES

Method : C:\HPCHEM\1\METHODS\8260.M (RTE Integrator)
Title : gasoline
Last Update : Wed Dec 19 13:04:58 2001
Response via : Initial Calibration

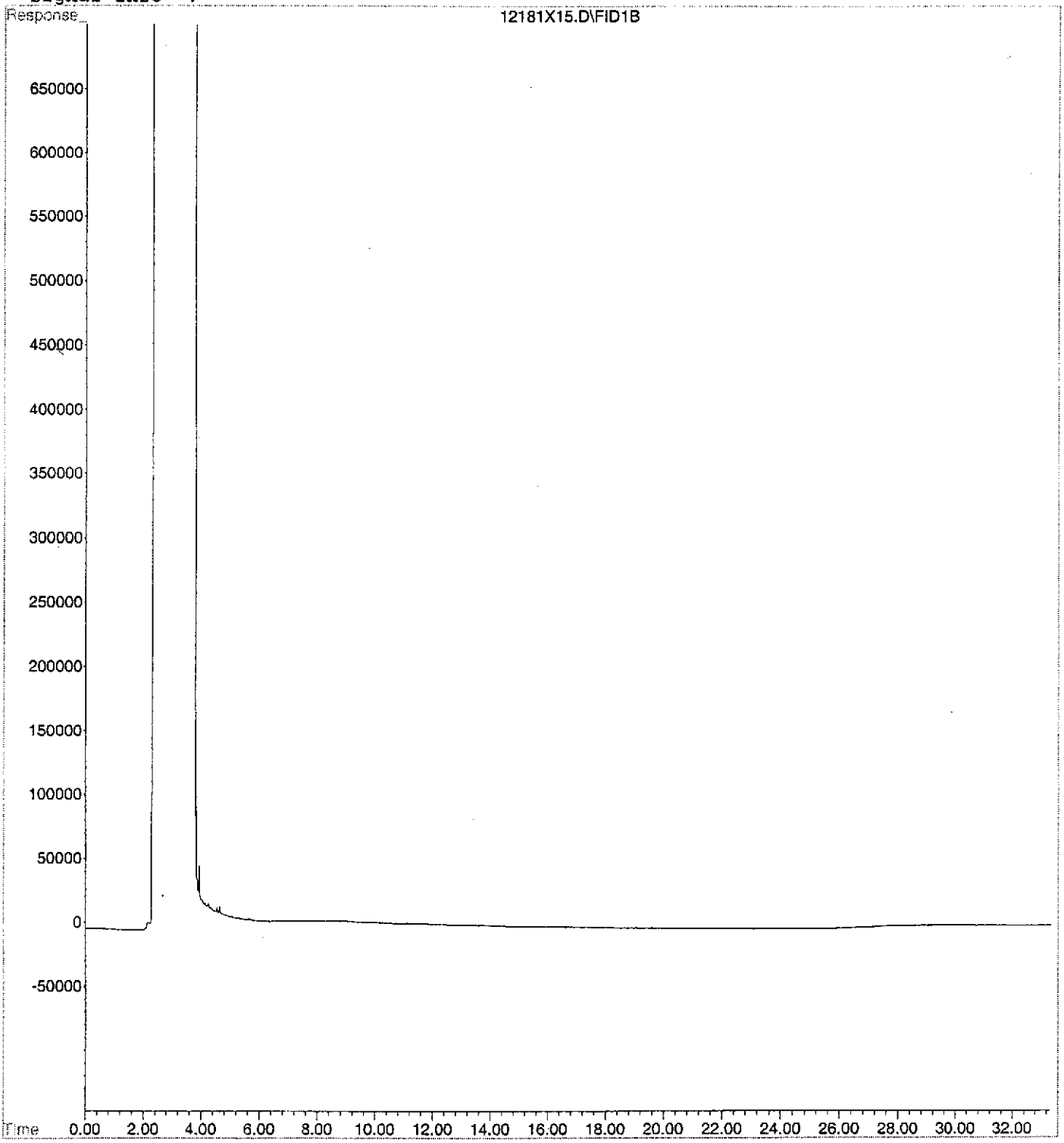


Quantitation Report

Data File : E:\HPCHEM\1\DATA\12181X15.D Vial: 15
Acq On : 19 Dec 2001 12:09 am Operator: SS
Sample : 01-1803-01 Inst : GC/MS Ins
Misc : 0.025 DD:12/18/2001 Multiplr: 0.03
IntFile : EVENTS.E
Quant Time: Dec 19 0:43 2001 Quant Results File: TPH.RES

Quant Method : E:\HPCHEM\1\METHODS\TPH.M (Chemstation Integrator)
Title :
Last Update : Thu Dec 06 11:23:18 2001
Response via : Multiple Level Calibration
DataAcq Meth : TPH.M

Volume Inj. :
Signal Phase :
Signal Info :

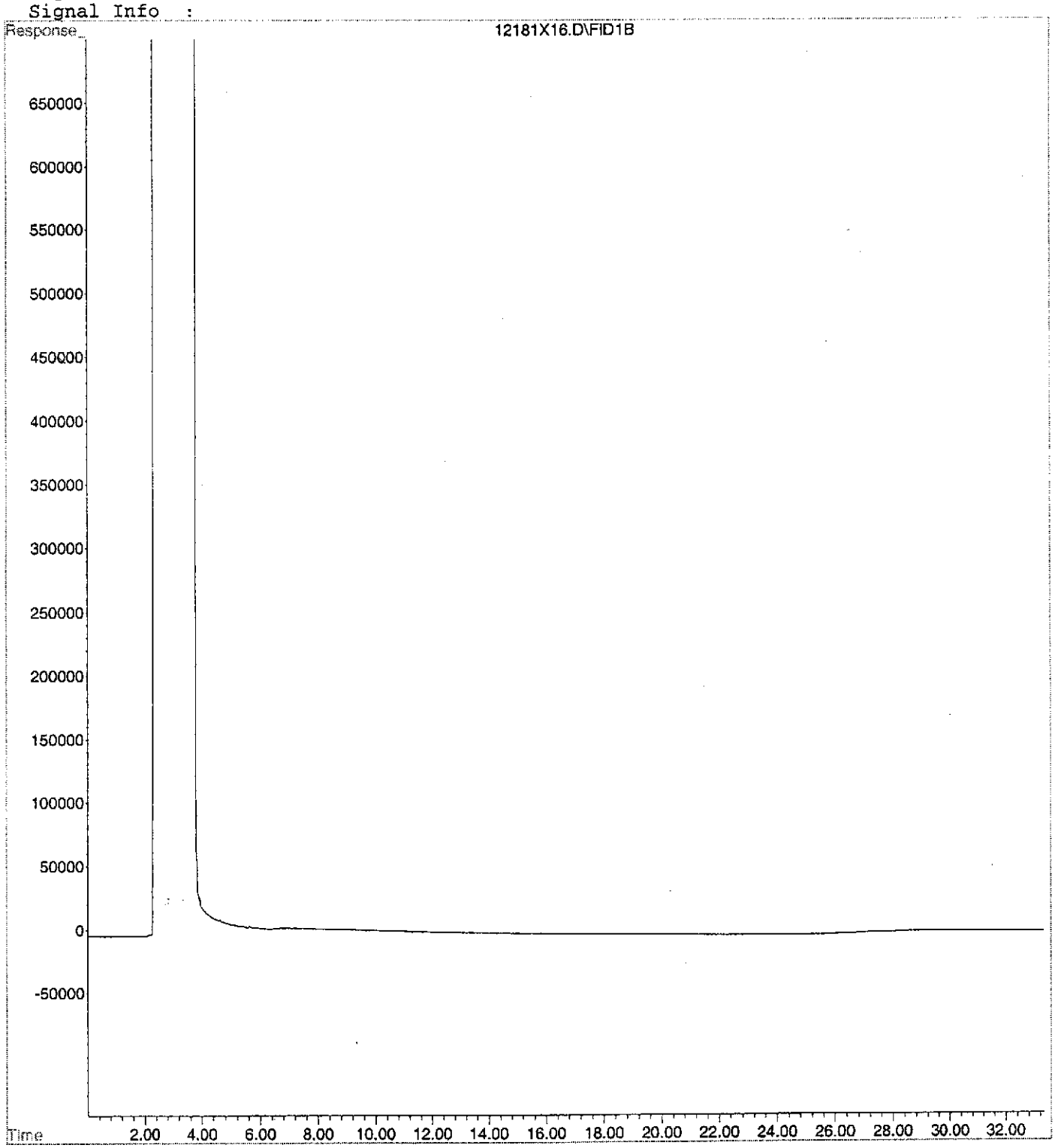


Quantitation Report

Data File : E:\HPCHEM\1\DATA\12181X16.D Vial: 16
Acq On : 19 Dec 2001 12:55 am Operator: SS
Sample : 01-1803-02 Inst : GC/MS Ins
Misc : 0.025 DD:12/18/2001 Multiplr: 0.03
IntFile : EVENTS.E
Quant Time: Dec 19 1:28 2001 Quant Results File: TPH.RES

Quant Method : E:\HPCHEM\1\METHODS\TPH.M (Chemstation Integrator)
Title :
Last Update : Thu Dec 06 11:23:18 2001
Response via : Multiple Level Calibration
DataAcq Meth : TPH.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report

Data File : E:\HPCHEM\1\DATA\12181X17.D Vial: 17
Acq On : 19 Dec 2001 1:40 am Operator: SS
Sample : 01-1803-03 Inst : GC/MS Ins
Misc : 0.025 DD:12/18/2001 Multiplr: 0.03
IntFile : EVENTS.E
Quant Time: Dec 19 2:14 2001 Quant Results File: TPH.RES

Quant Method : E:\HPCHEM\1\METHODS\TPH.M (Chemstation Integrator)
Title :
Last Update : Thu Dec 06 11:23:18 2001
Response via : Multiple Level Calibration
DataAcq Meth : TPH.M

Volume Inj. :
Signal Phase :
Signal Info :