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Alameda County
NOV 15 2002
Environmental Health

**Groundwater Monitoring Report
Third Quarter 2002**

Mission Valley Rock Company
7999 Athenour Way
Sunol, California

Prepared by:
Tait Environmental Management, Inc.

November 5, 2002

November 5, 2002

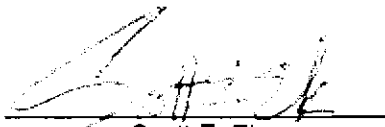
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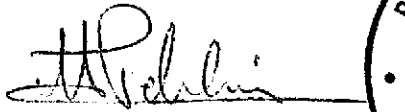
Prepared for:

Mr. Mort Calvert
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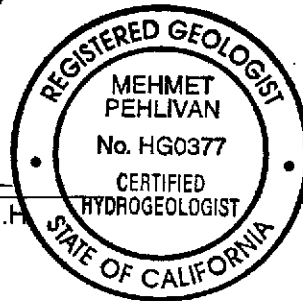
Prepared by:



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Project No. EM-5009

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Tait Environmental Management, Inc.
Engineering • Environmental • Compliance

GROUNDWATER MONITORING REPORT - THIRD QUARTER 2002
MISSION VALLEY ROCK COMPANY
SUNOL, CALIFORNIA

1.0 INTRODUCTION

Tait Environmental Management, Inc. (TEM) is pleased to submit this Third Quarter 2002 Groundwater Monitoring Report for environmental services conducted at Mission Valley Rock Company (MVR) located at 7999 Athenour Way in Sunol, California (Site, see Figure 1). This report has been prepared by or under the direct supervision of a California Registered Geologist. The groundwater monitoring activities were conducted by TEM in accordance with the Alameda County Health Care Services Agency (ACHCSA) guidelines.

2.0 WORK CONDUCTED DURING PRESENT QUARTER

Work conducted by TEM during the Third Quarter of 2002 included:

- Measured depth-to-groundwater in all monitoring wells (MW-1, MW-2, and MW-3) for evaluation of groundwater flow direction and presence of liquid phase hydrocarbons (LPH).
- Collected groundwater samples from each well for analysis of total petroleum hydrocarbons as diesel and gasoline (TPHd and TPHg, respectively); benzene, toluene, ethylbenzene, and total xylenes (BTEX); and methyl-tert-butyl ether (MTBE).
- Submitted to the client, *Groundwater Monitoring Report, Second Quarter 2002*.

3.0 GROUNDWATER MONITORING ACTIVITIES

3.1 Groundwater Elevation Monitoring

On September 27, 2002 TEM measured and recorded static groundwater levels in three (3) groundwater monitoring wells using a product/water interface meter. The meter was decontaminated prior to use at each well using a mild detergent solution and two (2) de-ionized water rinses.

Water levels were measured from the top of the well casings representing the wellhead survey points. Liquid phase hydrocarbon (LPH) was not observed in monitoring wells MW-1, MW-2, or MW-3. LPH has historically been observed in monitoring well MW-2. A historical summary LPH thickness in well MW-2 is presented in Table 3 and plotted over time in Chart 6 (Appendix A).

Based on the data, the depth to groundwater measured at the Site averaged 6.00 feet below ground surface (bgs). The apparent groundwater flow direction is to the East with a groundwater gradient of approximately 0.01 ft/ft. Groundwater elevation data is summarized in Table 1 and shown on Figure 2. A historical summary of groundwater elevation data is summarized in Table 3 and shown in Chart 1 (Appendix A).



3.2 Groundwater Sampling

Prior to collecting samples, groundwater was purged using a 12-volt DC submersible pump for each well. The polyethylene tubing for the pump discharge was discarded and replaced for each well. The pump was decontaminated prior to pumping each well, with a detergent bath followed by two (2) de-ionized water rinses.

A minimum of three (3) casing volumes of water were purged from each of the monitoring wells until measurements of temperature, pH, electrical conductivity, turbidity, dissolved oxygen, and oxygen reduction potential stabilized. Groundwater was allowed to recharge to at least 80 percent of the static level prior to collecting the groundwater samples. Copies of the well sampling field data sheets are presented in Appendix B.

Groundwater samples were collected using a new disposable bailer for each well. The groundwater samples were placed in chilled cooler and hand delivered to the laboratory using chain-of-custody procedures.

The purged groundwater and decontamination water was stored onsite in one (1) Department of Transportation (DOT) approved 55-gallon steel drum pending the results of the laboratory analysis.

4.0 LABORATORY ANALYSES

Groundwater samples collected from the groundwater monitoring wells were analyzed for:

- BTEX and MTBE using Method No. 8260B; and
- TPHd and TPHg using Method 8015B.

4.1 Groundwater Analytical Results

Laboratory analyses of the groundwater samples were conducted by Severn Trent Laboratories, Inc. (STL), a State-Certified laboratory located in Santa Ana, California. Third Quarter 2002 groundwater sample analytical results are summarized in Table 2 and contoured in Figures 3, 4, and 5 (TPHg, TPHd, and MTBE, respectively). Laboratory reports are presented in Appendix C. A historical summary of groundwater sample analytical results is summarized in Table 4. Charts 2 through 5 present historic measurements of TPHd, TPHg, MTBE, and benzene, respectively (Appendix A).

5.0 SUMMARY

Based upon the data presented in this report, previous investigations, current regulatory guidelines, and the judgment of TEM, the following summary of findings and conclusions are presented:

- Groundwater samples were collected from groundwater monitoring wells MW-1, MW-2, and MW-3. The samples were submitted to STL under chain of custody protocol;
- Based on the data, the depth to groundwater measured at the Site averaged 6.00 feet bgs. The groundwater flow direction is to the East with a groundwater gradient of approximately 0.01 ft/ft;
- Liquid phase hydrocarbons was not observed in monitoring well MW-2 this quarter. Due to the lack of LPH, removal was not performed this quarter. Should LPH be present next quarter tabulation of LPH removal will resume;



November 5, 2002

Groundwater Monitoring Report – Third Quarter 2002
Mission Valley Rock, Sunol, California

- The depth to static groundwater at the Site has steadily decreased. Static groundwater this quarter was measured below the top of the screened interval in each well.
- The only TPHd concentrations (1.4 milligrams per Liter [mg/L] and 480 mg/L) were detected in the groundwater samples collected from wells MW-1 and MW-2, respectively. The only TPHg concentrations (0.76 mg/L and 0.29 mg/L) were detected in the groundwater samples collected from wells MW-1 and MW-2, respectively;
- Benzene concentrations were not detected in any of the samples collected from the three wells;
- The only MTBE concentrations were reported in the groundwater samples collected from well MW-2 and MW-3 at 16 micrograms per Liter (ug/L) and 43 ug/L, respectively;
- Interpretation of Charts 2 through 5 indicate that well MW-1 has shown a slight increase in TPHd concentrations (from ND>1 mg/L in June 2002 to 1.4mg/L in September 2002), a decrease in TPHg concentrations (from 1.4 mg/L in June 2002 to 0.76 mg/L in September 2002) and a decrease benzene concentrations (from 4 ug/L in June 2002 to ND<1.0 ug/L in September 2002). Groundwater monitoring well MW-2 has shown a increase in TPHd concentrations (from 130 mg/L in June 2002 to 480 mg/L in September 2002), a decrease in TPHg concentrations (from 0.46 mg/L in June 2002 to 0.29mg/L in September 2002), and decreasing concentrations of MTBE (from 24 ug/L in June 2002 to 16 ug/L in September 2002). Concentrations of TPHd and TPHg were not detected in MW-3. While MTBE concentrations have shown an increase (from 36 ug/L in June 2002 to 43 ug/L in September 2002) .

6.0 RECOMMENDATIONS

Based on the data obtained, current regulatory guidelines, and the professional judgment of TEM, the following recommendations are presented for your consideration:

- Continue quarterly groundwater monitoring of all existing and future wells for dissolved hydrocarbons, BTEX/MTBE, and presence of LPH.

7.0 QUALITY ASSURANCE/QUALITY CONTROL

To increase the confidence levels in the data obtained and minimize the likelihood that judgments were made from potentially erroneous data, a quality assurance/quality control (QA/QC) program was implemented. QA refers to management of actions designed to maintain precision, accuracy, completeness, and representativeness of the data developed from the project. QC refers to accepted formal procedures and activities specifically designed for the purpose of collecting data that are intended to be reliable and consistent for the Site conditions.

The laboratory reported all of the sample results to be within acceptable percent recoveries with no results exceeding the laboratory-established quality control parameters. The percent recoveries on the laboratory control sample (LCS) were well within the laboratories published QA/QC criteria. The results of the matrix spike (MS) and matrix spike duplicate (MSD) were also with acceptable limits. The samples arrived at the laboratory within the normal acceptable temperature range (4°C +/- 2°C) and were extracted and analyzed within acceptable holding times for each method and each sample. The QA/QC objectives for this project have been met.



8.0 LIMITATIONS

No investigation is considered thorough enough to exclude the presence of hazardous materials at a given site. Any opinions and/or recommendations presented apply to site conditions existing at the time of the performance of services.

TEM is unable to report on or accurately predict events which may impact the site following conduct of the described services, whether occurring naturally or caused by external forces. TEM assumes no responsibility for conditions that we were not authorized to investigate or conditions not generally recognized as environmentally unacceptable at the time services were performed.

Services hereunder were performed in accordance with our agreement and understanding with, and solely for the use of, Mission Valley Rock Company. We are not responsible for the subsequent separation, detachment or partial use of this document. Any reliance on this report by a third party shall be at such party's sole risk.

MISSION VALLEY / ROCK COMPANY ASPHALT COMPANY READY MIX COMPANY

7999 ATHENOUR WAY SUNOL, CA 94586 (925) 862-2257

November 13, 2002

Mr. Scott Seery
Alameda County Health Care Services
1131 Harbor Bay Parkway Suite 250
Alameda, CA 94502-6577

Alameda County
NOV 15 2002
Environmental Health

Dear Mr. Seery:

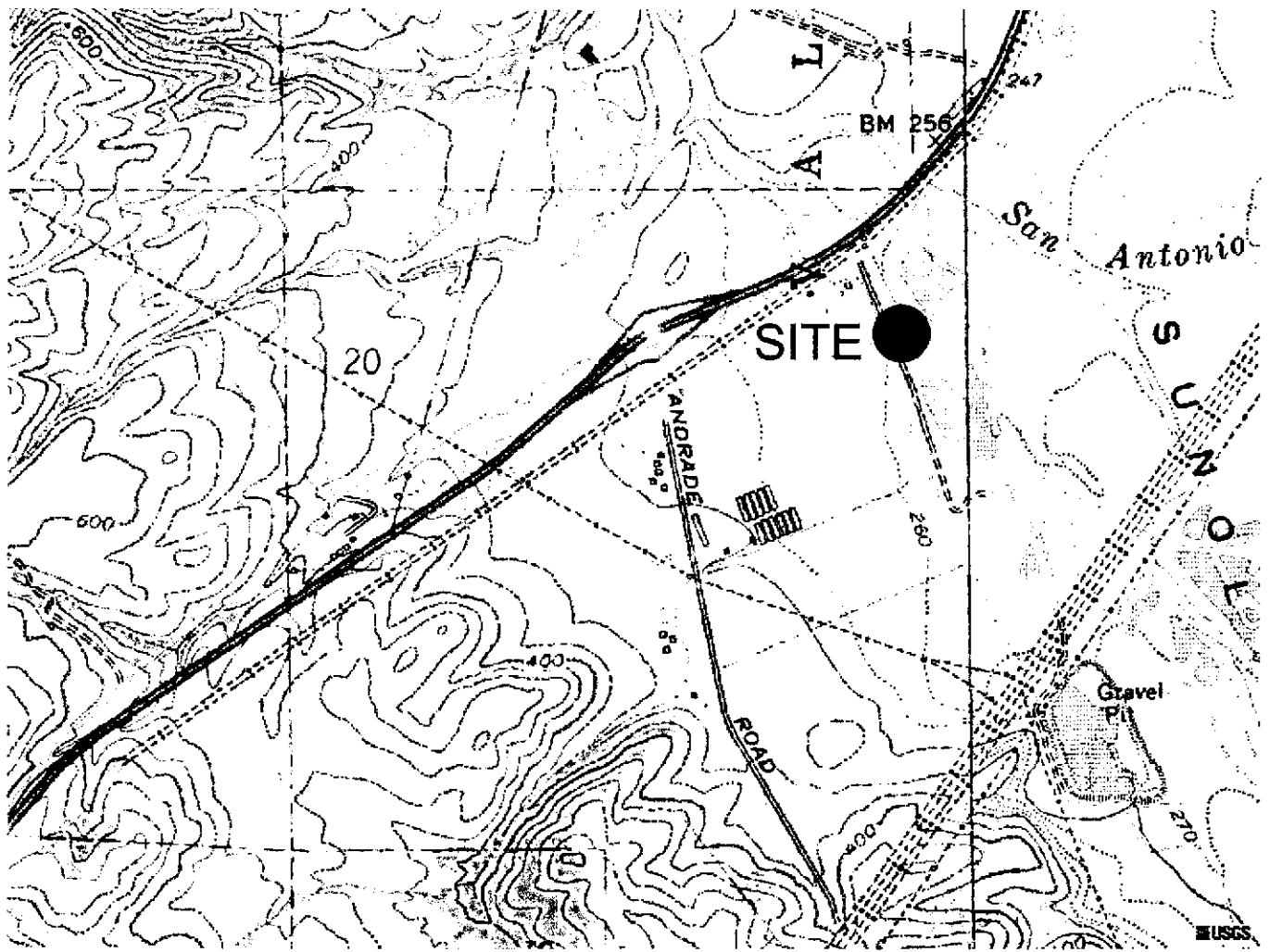
Submitted herewith is the third quarter Groundwater Monitoring Report prepared by Mission Valley Rock Company's consultant Tait Environmental Management Inc (T.E.M.). If you require further information or clarification please direct your correspondence to T.E.M with a copy to Mission Valley Rock Company at the above address.

Thank You,
MISSION VALLEY ROCK CO.

W.M. Calvert

W.M. Calvert L.H.

Alameda County
NOV 15 2002
Environmental Health



NORTH



1" = 2000'

NOTES:

BASE MAP TAKEN FROM TERRASERVER.COM, UNITED STATES GEOLOGICAL SURVEY (USGS), FREEMONT QUADRANGLE, ALAMEDA COUNTY, CALIFORNIA. PRINTED JULY 1, 1989.



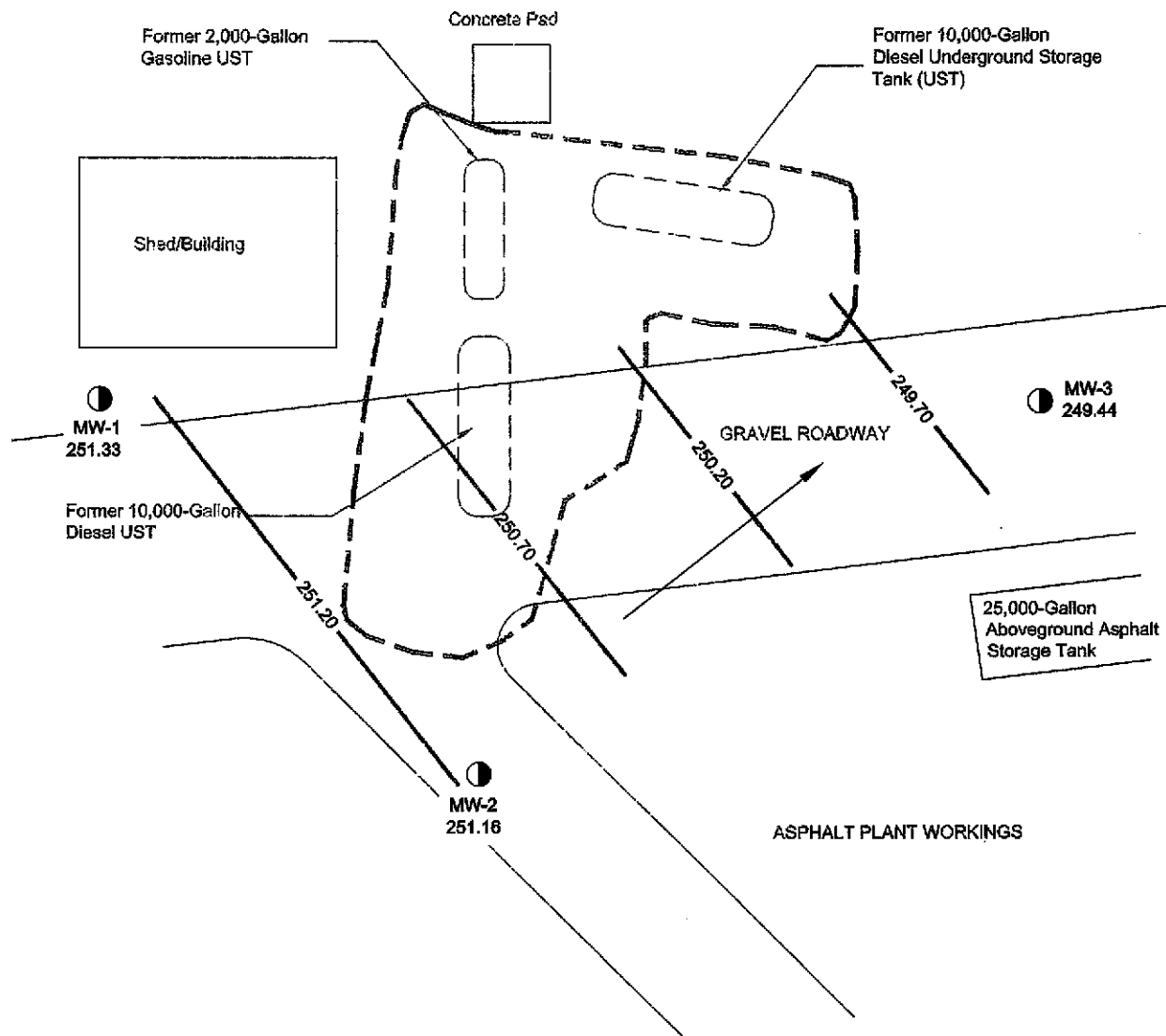
701 NORTH PARKCENTER DRIVE
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(714) 560-8200
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ENVIRONMENTAL MANAGEMENT, INC.

SITE VICINITY MAP
MISSION VALLEY ROCK CO.
7999 ATHENOUR WAY
SUNOL, CALIFORNIA

PROJECT NO. EM-5009


FIGURE 1



LEGEND

Base map referenced from Tank Protect Engineers

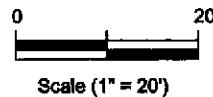
All locations and dimensions are approximate


MW-1
 251.33 Groundwater monitoring well location with groundwater elevation in feet above mean sea level (ft-msl)


 250.70 Groundwater elevation contour in feet-msl

 General direction of groundwater flow

 Approximate limits of former UST excavation



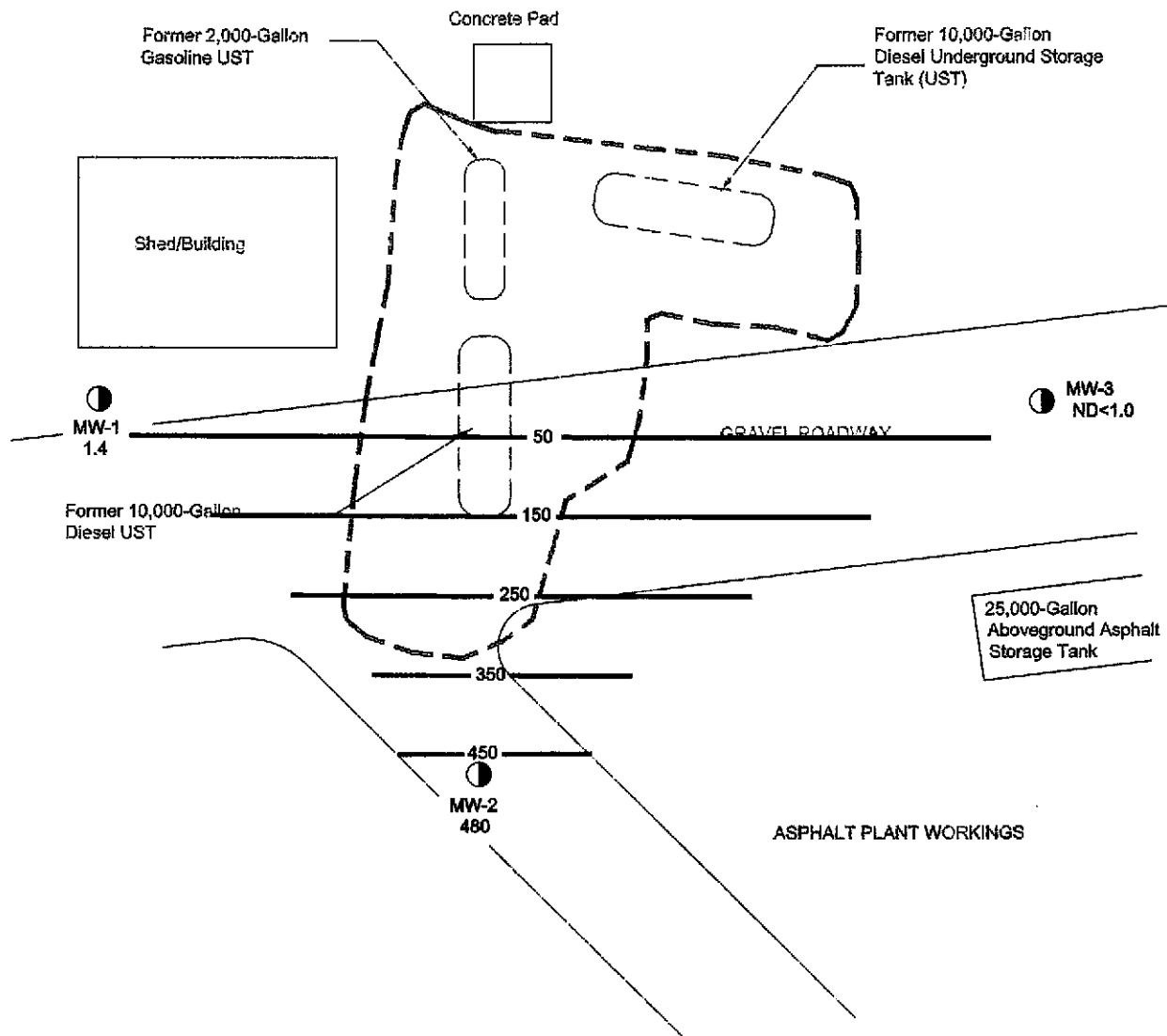

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ENVIRONMENTAL MANAGEMENT, INC.

SITE PLAN WITH GROUNDWATER ELEVATION CONTOURS
THIRD QUARTER (SEPTEMBER 27, 2002)

MISSION VALLEY ROCK CO.
7999 ATHENOUR WAY
SUNOL, CALIFORNIA

PROJECT NO. EM-5009

FIGURE 2



LEGEND

Base map referenced from Tank Protect Engineers.

All locations and dimensions are approximate.

Total petroleum hydrocarbons as gasoline (TPHd) concentrations reported in milligrams per Liter (mg/L).

●
MW-1
1.4

Groundwater monitoring well location and designation with dissolved TPHd concentrations

— 50 — Dissolved TPHd concentration contours (contour interval 100 mg/L)

- - - - - Approximate limits of former UST excavations



Scale (1" = 20')



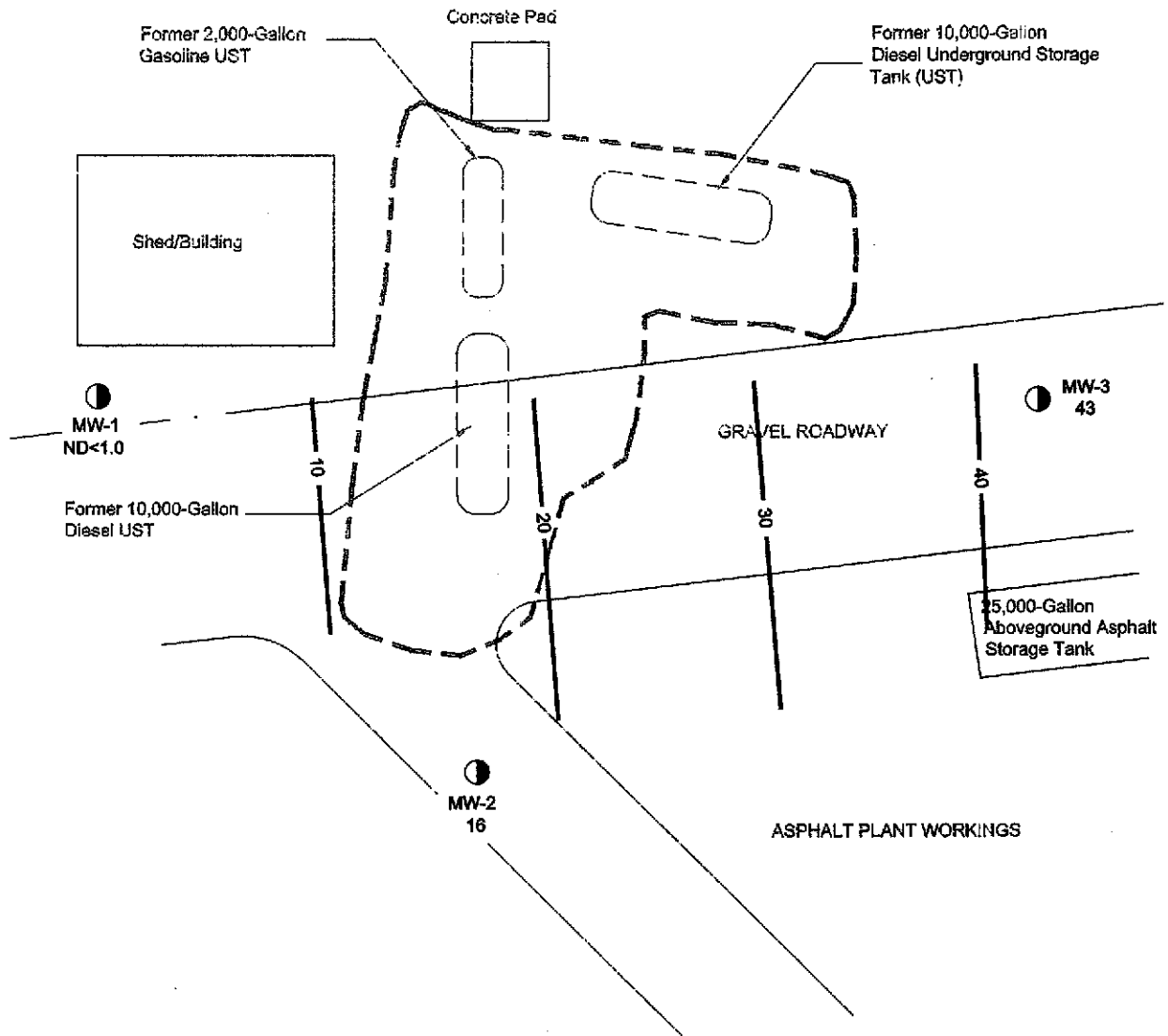
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ENVIRONMENTAL MANAGEMENT, INC.

SITE PLAN WITH DISSOLVED TPHd CONTOURS
THIRD QUARTER (SEPTEMBER 27, 2002)

MISSION VALLEY ROCK CO.
7999 ATHENOUR WAY
SUNOL, CALIFORNIA

PROJECT NO. EM-5009

FIGURE 4




LEGEND

Base map referenced from Tank Protect Engineers.

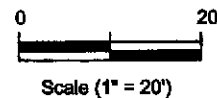
All locations and dimensions are approximate.

MTBE concentrations reported in micrograms per Liter (ug/L).


MW-2
 16
 Groundwater monitoring well location and designation with dissolved MTBE concentrations


 10
 Dissolved MTBE concentration contours (contour interval 10 ug/L)


 Approximate limits of former UST excavations




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SITE PLAN WITH DISSOLVED MTBE CONTOURS
 THIRD QUARTER (SEPTEMBER 27, 2002)

MISSION VALLEY ROCK CO.
 7999 ATHENOUR WAY
 SUNOL, CALIFORNIA

PROJECT NO. EM-5009

FIGURE 5

Table 1
Well Construction and Groundwater Elevation Data
Third Quarter 2002
 Mission Valley Rock Company
 Sunol, California

Well ID	Casing Diameter	Depth to LPH	Depth to Water	LPH Thickness	Total Depth	Screened Interval	Measuring Point Elevation	Groundwater Elevation	Comments
MW-1	2	ND	5.18	ND	18.95	5.0 - 20.0	256.51	251.33	Well in poor condition.
MW-2	2	ND	5.54	ND	18.95	5.0 - 20.0	256.70	251.16	Well cover damaged.
MW-3	2	ND	7.28	ND	16.98	5.0 - 20.0	256.72	249.44	Well cover damaged.

Screened intervals are approximated. Screened interval in wells is lower than the measured total depth due to silting in the bottom of wells.

The measurement point for the above three wells is the north side of the top of casing.

Depth to water and total depth measurements taken by Tait Environmental Management, Inc. personnel on September 27, 2002.

Casing diameter reported in inches (in); depth to LPH, depth to water, total depths, and screened interval reported in feet below measuring point (ft-bmp); LPH thickness reported in feet; measuring point elevation and groundwater elevations reported in feet above mean sea level.

Total depth and depth to water measurements taken by Tait Environmental Management from designated measurement point.

* Adjusted groundwater elevation = Measurement Point Elevation - Depth to Water + (LPH Thickness x 0.75).

LPH = Liquid Phase Hydrocarbons

ND = Not Detected

Table 2
Groundwater Sample Analytical Data
Third Quarter 2002
 Mission Valley Rock Company
 Sunol, California

Well	Date	TPHd (mg/L)	TPHg (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)
MW-1	09/27/2002	1.4	0.76	ND<1.0	ND<1.0	4.3	1.1*	ND<1.0
MW-2	09/27/2002	480	0.29	ND<1.0	ND<1.0	ND<1.0	ND<1.0	16
MW-3	09/27/2002	ND<1.0	ND<0.10	ND<1.0	ND<1.0	ND<1.0	ND<1.0	43

Notes:

Analyses for Total Petroleum Hydrocarbons as Gasoline and Diesel (TPHg and TPHd, respectively) were performed using EPA Method No. 8015B.

Analyses for benzene, toluene, ethylbenzene, total xylenes, and methyl-tert-butyl ether (MTBE) were performed using EPA Method No. 8260B.

Total xylene concentrations were determined by adding m,p-xylene and o-xylene from laboratory report.

* Only includes m,p-xylene, o-xylene was non-detect.

mg/L = Milligrams per Liter

ug/L = Micrograms per Liter

ND = Non-detect at or above corresponding laboratory reporting limit.

Table 3
Historical Groundwater Data
Third Quarter 2002
Mission Valley Rock Company
Sunol, California

Well	Date	Depth to Water	Groundwater Elevation	PH/Turbidity
MW-1	Jun-98	1.32	255.19	ND
	Jan-99	2.28	254.23	ND
	Mar-99	1.88	254.63	ND
	Jun-99	3.35	253.16	ND
	Sep-99	3.66	252.85	ND
	Dec-99	2.94	253.57	ND
	Mar-00	2.72	253.79	Odor
	Jun-00	4.01	252.50	Slight Odor
	Sep-00	5.11	251.40	Slight Odor
	Dec-00	4.95	251.56	ND
	Mar-01	2.28	254.23	ND
	Jun-01	3.60	252.91	ND
	Sep-01	6.50	250.01	ND
	Dec-01	1.29	255.22	ND
	Mar-02	2.91	253.60	ND
MW-2	Jun-02	3.95	252.56	ND
	Sep-02	5.18	251.33	ND
	Jun-98	1.72	254.98	0.005
	Jan-99	2.69	254.01	4.00
	Mar-99	2.50	254.20	ND
	Jun-99	4.00	252.70	Sheen
	Sep-99	4.54	252.16	0.50
	Dec-99	3.85	252.85	0.13
	Mar-00	3.20	253.50	0.03
	Jun-00	4.62	252.08	0.02
	Sep-00	5.95	250.75	>0.01
	Dec-00	5.65	251.05	0.07
	Mar-01	3.21	253.57*	0.10
	Jun-01	3.31	253.44*	0.06
	Sep-01	7.08	249.88*	0.34
Dec-01	2.18	254.72*	0.26	
Mar-02	3.40	253.98*	0.90	
Jun-02	4.35	252.33*	0.08	
Sep-02	5.54	251.16	ND	

Table 3
Historical Groundwater Data
Third Quarter 2002
 Mission Valley Rock Company
 Sunol, California

Well	Date	Depth to Water	Groundwater Elevation	LPH Thickness
MW-3	Jun-98	2.66	254.06	ND
	Jan-99	4.47	252.25	Slight Odor
	Mar-99	3.96	252.76	Sheen
	Jun-99	5.54	251.18	ND
	Sep-99	6.18	250.54	Sheen
	Dec-99	5.52	251.20	Odor
	Mar-00	4.61	252.11	Odor
	Jun-00	6.35	250.37	Very Slight Odor
	Sep-00	7.30	249.42	Very Slight Odor
	Dec-00	7.29	249.43	ND
	Mar-01	4.73	251.99	ND
	Jun-01	NM	NM	NM
	Sep-01	7.89	248.83	ND
	Dec-01	3.77	252.95	ND
	Mar-02	5.12	251.60	ND
Jun-02	6.52	250.20	ND	
Sep-02	7.28	249.44	ND	

Depth to water and liquid phase hydrocarbon (LPH) thickness reported in feet below measurement point.

Groundwater elevations reported in feet above mean sea level (msl).

* Adjusted groundwater elevation = Measurement Point Elevation - Depth to Water + (LPH Thickness x 0.75)

NM = Not Measured

ND = Not Detected

Table 4
Historical Groundwater Sample Analytical Results
Third Quarter 2002
Mission Valley Rock Company
Sunol, California

Well	Date	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
MW-1	Jun-98	0.1	3,100	19	2.3	91	48	110
	Oct-98	0.1	2,300	3.1	4.2	5.0	15	ND<0.50
	Dec-98	350	ND<50	12	7.5	20	6.2	ND<5.0
	Mar-99	190	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	Jun-99	210	1,800	1.2	0.9	1.5	4.6	ND<0.5
	Sep-99	62	180	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.5
	Dec-99	290	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	Mar-00	86	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	Jun-00	70	450	2.1	ND<0.5	2.1	1.4	7.6
	Sep-00	ND<50	850	5.4	ND<0.50	9.4	2.6	9.8
	Dec-00	ND<1.0*	0.37*	5.3	ND<1.0	2.7	ND<3.0	55
	Mar-01	ND<1.0*	0.7*	ND<1.0	ND<1.0	1.4	ND<1.0	ND<1.0
	Jun-01	ND<1.0*	0.17*	ND<1.0	ND<1.0	1.2	ND<1.0	ND<1.0
	Sep-01	ND<1.0*	0.73*	1.4	ND<1.0	7.6	1.2	ND<1.0
	Dec-01	1*	0.5*	15	ND<1.0	27	5.5	ND<1.0
Mar-02	12*	29*	50	ND<25	960	290	ND<25	
Jun-02	ND<1.0*	1.4*	4	ND<1.0	42	7.9	ND<1.0	
Sep-02	1.4*	0.76*	ND<1.0	ND<1.0	4.3	1.1	ND<1.0	
MW-2	Jun-98	12,000	2,500	0.68	ND<0.50	1.2	0.57	14
	Oct-98	4,300	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	Dec-98	38,000	ND<5,000	ND<50	ND<50	51	190	ND<500
	Mar-99	580	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	Jun-99	4,500	24,000	38	27	41	98	ND<0.5
	Sep-99	24,000	1,400	ND<0.50	ND<0.50	ND<0.50	ND<0.50	27
	Dec-99	2,300	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	Mar-00	620	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	Jun-00	1,700	270	ND<0.5	ND<0.5	ND<0.5	ND<0.5	17
	Sep-00	5,800	130	ND<0.50	ND<0.50	ND<0.50	0.94	12
	Dec-00	19*	7.1*	ND<50	ND<50	ND<50	ND<150	ND<250
	Mar-01	610*	3.3*	ND<1.0	ND<1.0	ND<1.0	ND<1.0	9.0
	Jun-01	8.8*	1.8*	ND<1.0	ND<1.0	ND<1.0	ND<1.0	6.7
	Sep-01	530*	7.0*	ND<50	ND<50	ND<50	ND<50	ND<50
	Dec-01	27*	0.31*	ND<1.0	ND<1.0	ND<1.0	ND<1.0	62
Mar-02	65*	0.13*	ND<1.0	ND<1.0	ND<1.0	ND<1.0	30	
Jun-02	130*	0.46*	ND<1.0	ND<1.0	ND<1.0	ND<1.0	24	
Sep-02	480*	0.29*	ND<1.0	ND<1.0	ND<1.0	ND<1.0	16	

Table 4
Historical Groundwater Sample Analytical Results
Third Quarter 2002
Mission Valley Rock Company
Sunol, California

Well	Date	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
MW-3	Jun-98	12,000	300	0.80	ND<0.50	ND<0.50	ND<0.50	150
	Oct-98	6400	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	Dec-98	5,600	ND<100	1.6	1.4	ND<1.0	ND<1.0	110
	Mar-99	150	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	Jun-99	620	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	Sep-99	1,500	230	ND<0.50	ND<0.50	ND<0.50	ND<0.50	89
	Dec-99	58	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	Mar-00	94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	Jun-00	240	170	ND<0.5	0.52	ND<0.5	ND<0.5	100
	Sep-00	850	170	0.81	ND<0.50	ND<0.50	ND<0.50	68
	Dec-00	1.6*	0.23*	ND<1.0	ND<1.0	ND<1.0	ND<3.0	80
	Mar-01	1.1*	0.14*	ND<1.0	ND<1.0	ND<1.0	ND<1.0	83
	Jun-01	NS	NS	NS	NS	NS	NS	NS
	Sep-01	3.8*	ND<0.10*	ND<1.0	ND<1.0	ND<1.0	ND<1.0	45
	Dec-01	3.1*	0.34*	1.4	1.1	10	3.8	45
	Mar-02	1.5*	ND<0.10*	ND<1.0	ND<1.0	ND<1.0	ND<1.0	50
Jun-02	ND<1.0*	0.16*	ND<1.0	ND<1.0	ND<1.0	ND<1.0	36	
Sep-02	ND<1.0*	ND<0.10*	ND<1.0	ND<1.0	ND<1.0	ND<1.0	43	

Concentrations reported in micrograms per Liter (ug/L).

*Concentrations reported in milligrams per Liter (mg/L).

MTBE = Methyl-tert-Butyl Ether

ND = Not Detected at or above corresponding reporting limit

NS = Not Sampled

TPHd = Total Petroleum Hydrocarbons as Diesel

TPHg = Total Petroleum Hydrocarbons as Gasoline

Chart 1
 Groundwater Hydrograph - Third Quarter 2002
 Mission Valley Rock Company
 Sunol, California

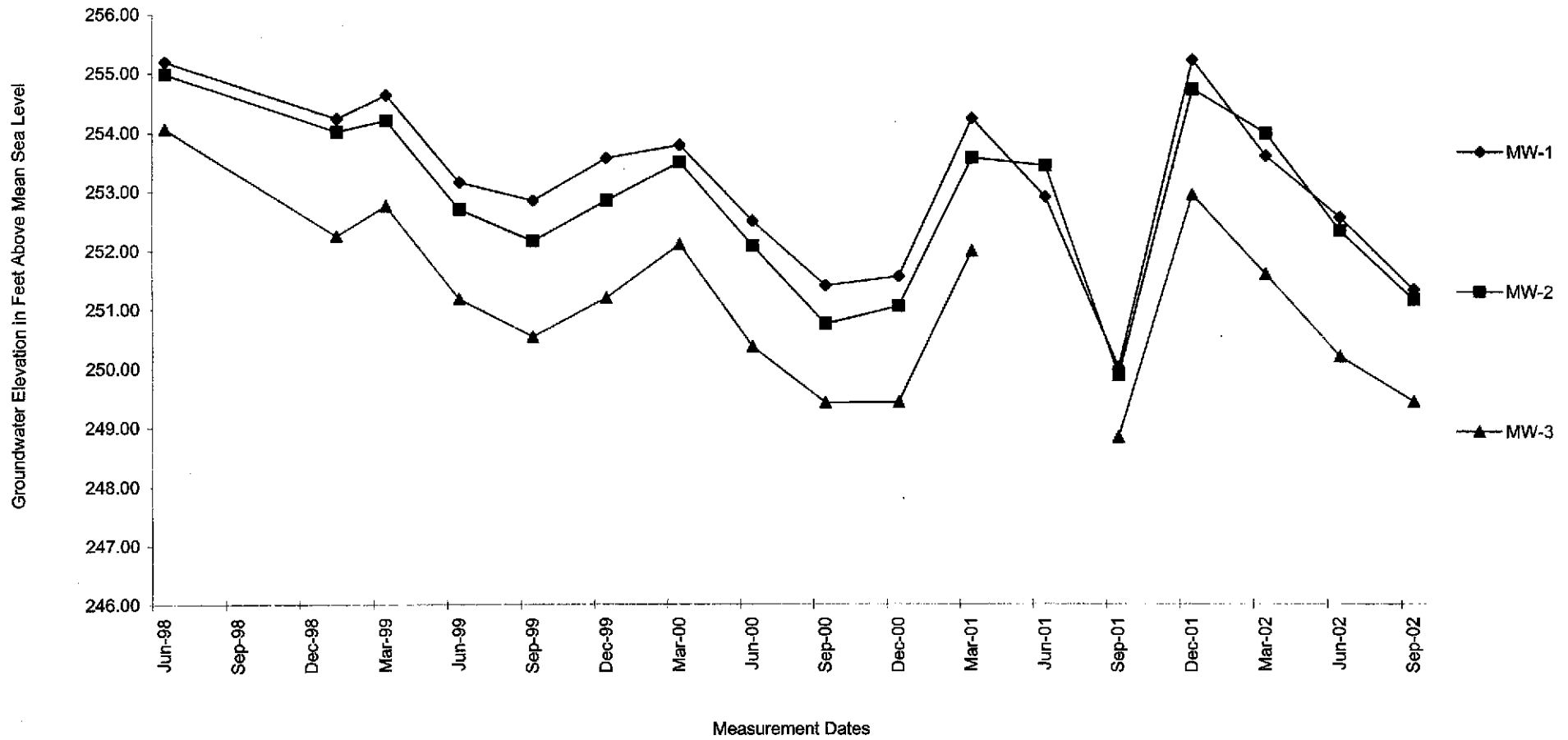


Chart 2
 Historical TPHd Concentrations - Third Quarter 2002
 Mission Valley Rock Company
 Sunol, California

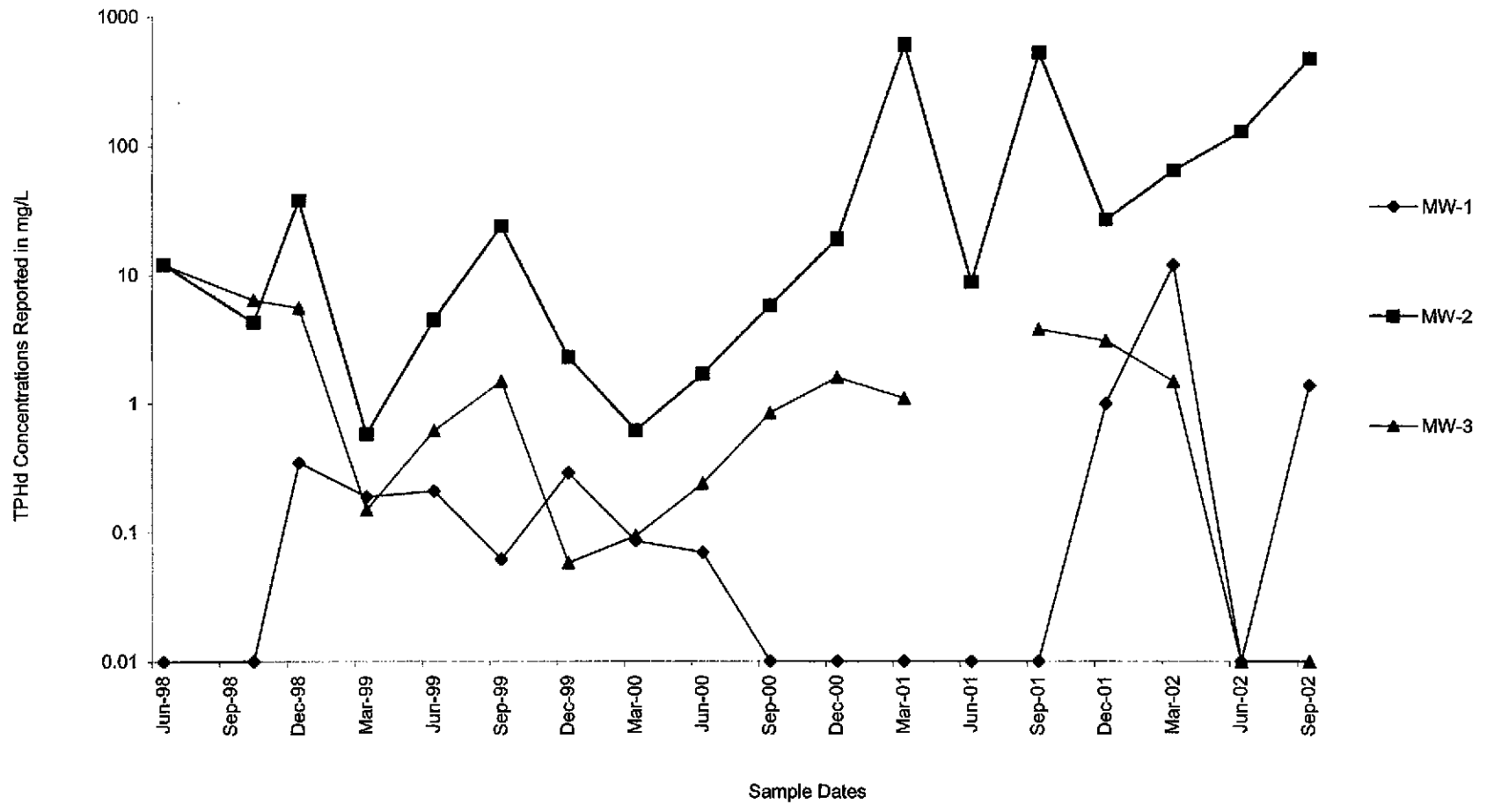


Chart 3
 Historical TPHg Concentrations - Third Quarter 2002
 Mission Valley Rock Company
 Sunol, California

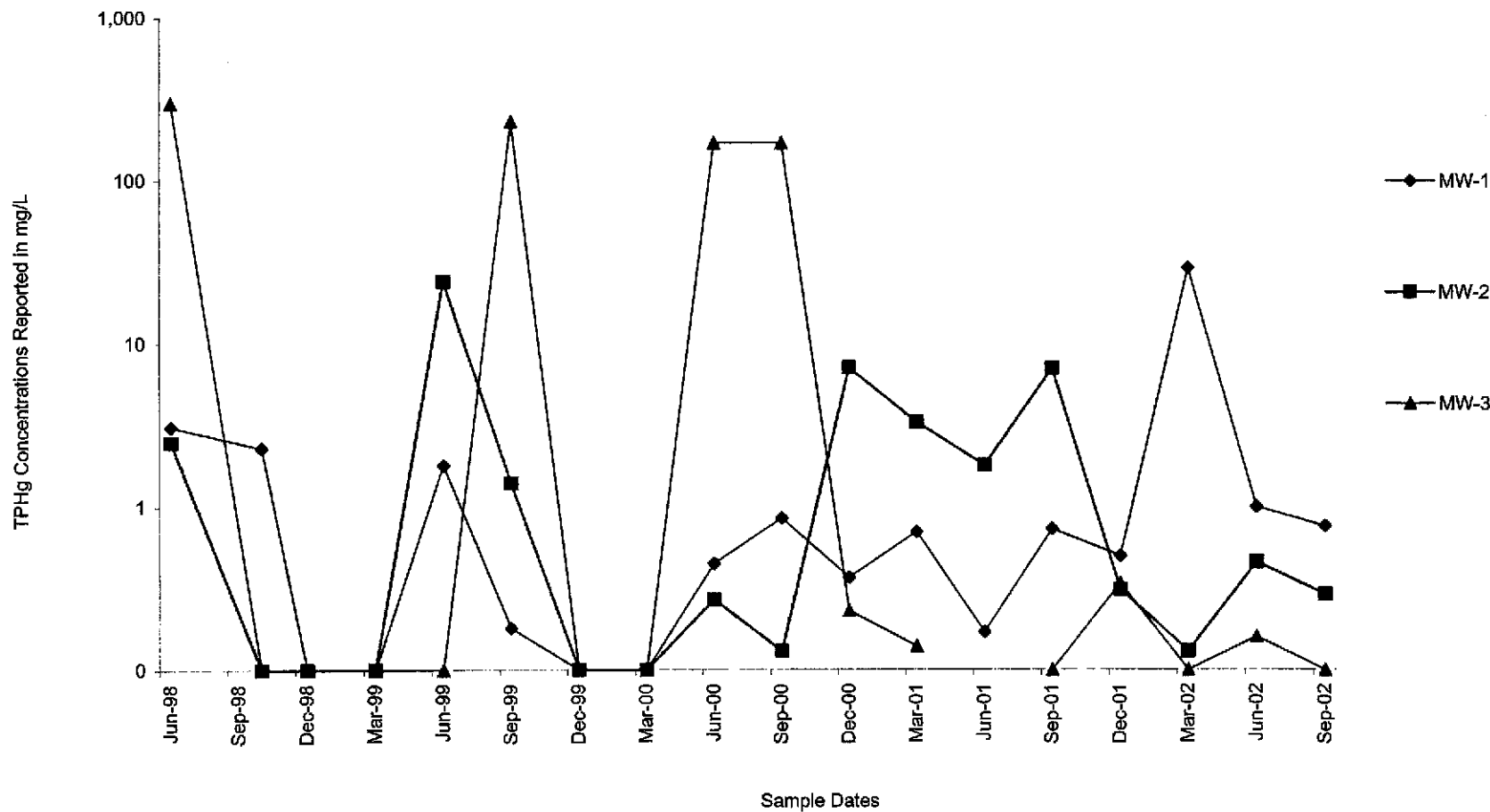


Chart 4
Historical MTBE Concentrations - Third Quarter 2002
Mission Valley Rock Company
Sunol, California

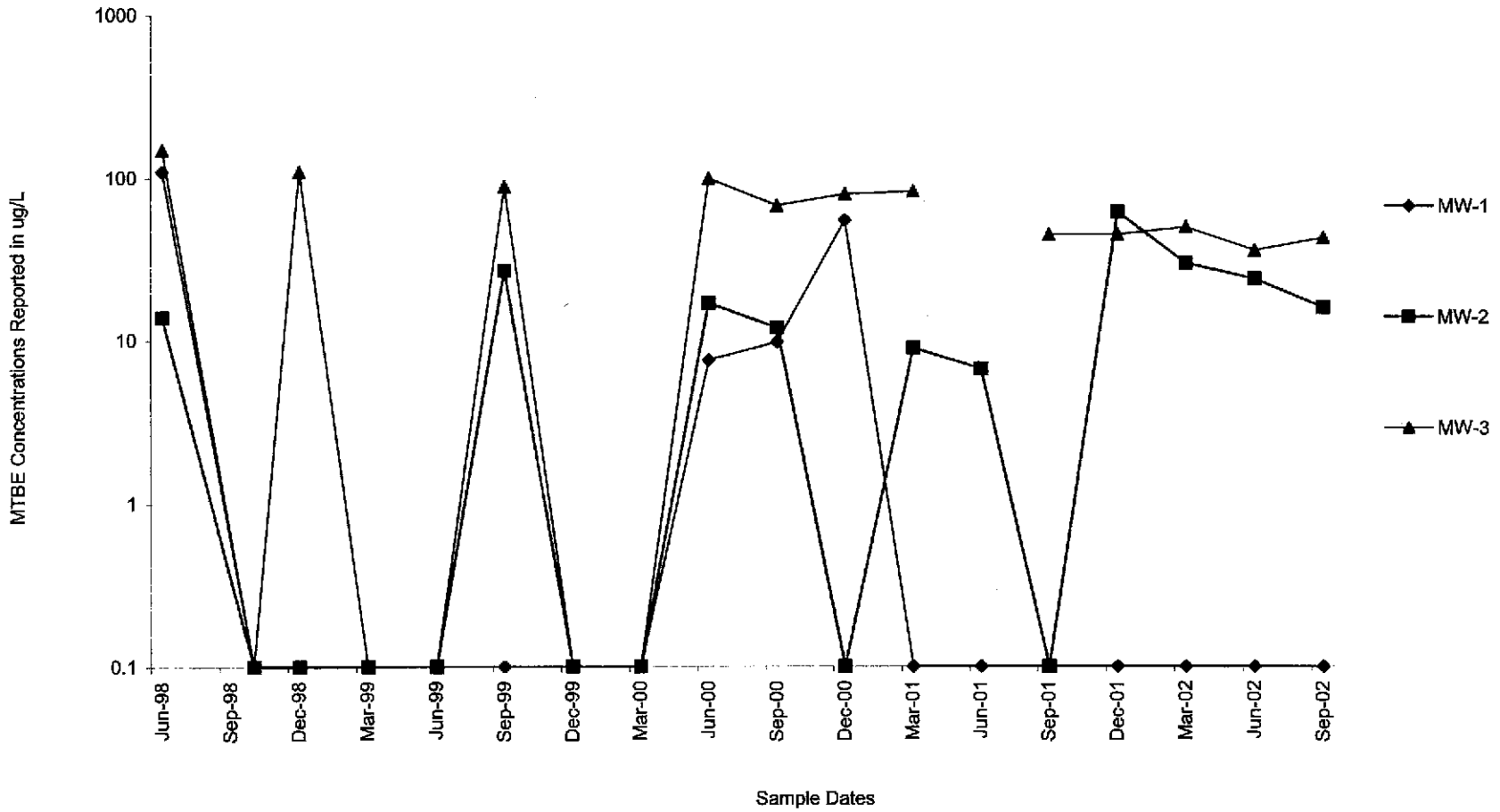


Chart 5
Historical Benzene Concentrations - Third Quarter 2002
Mission Valley Rock Company
Sunol, California

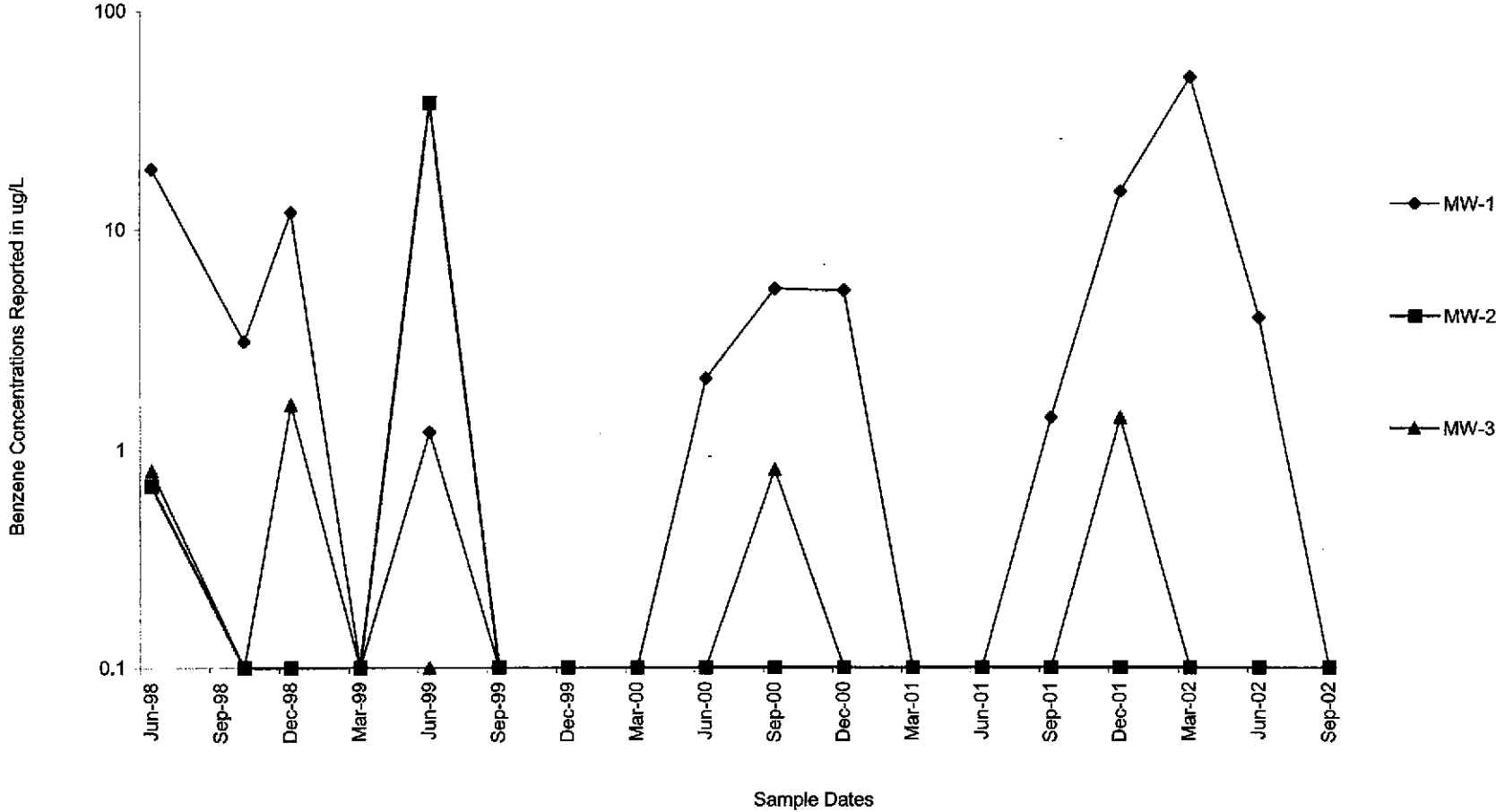
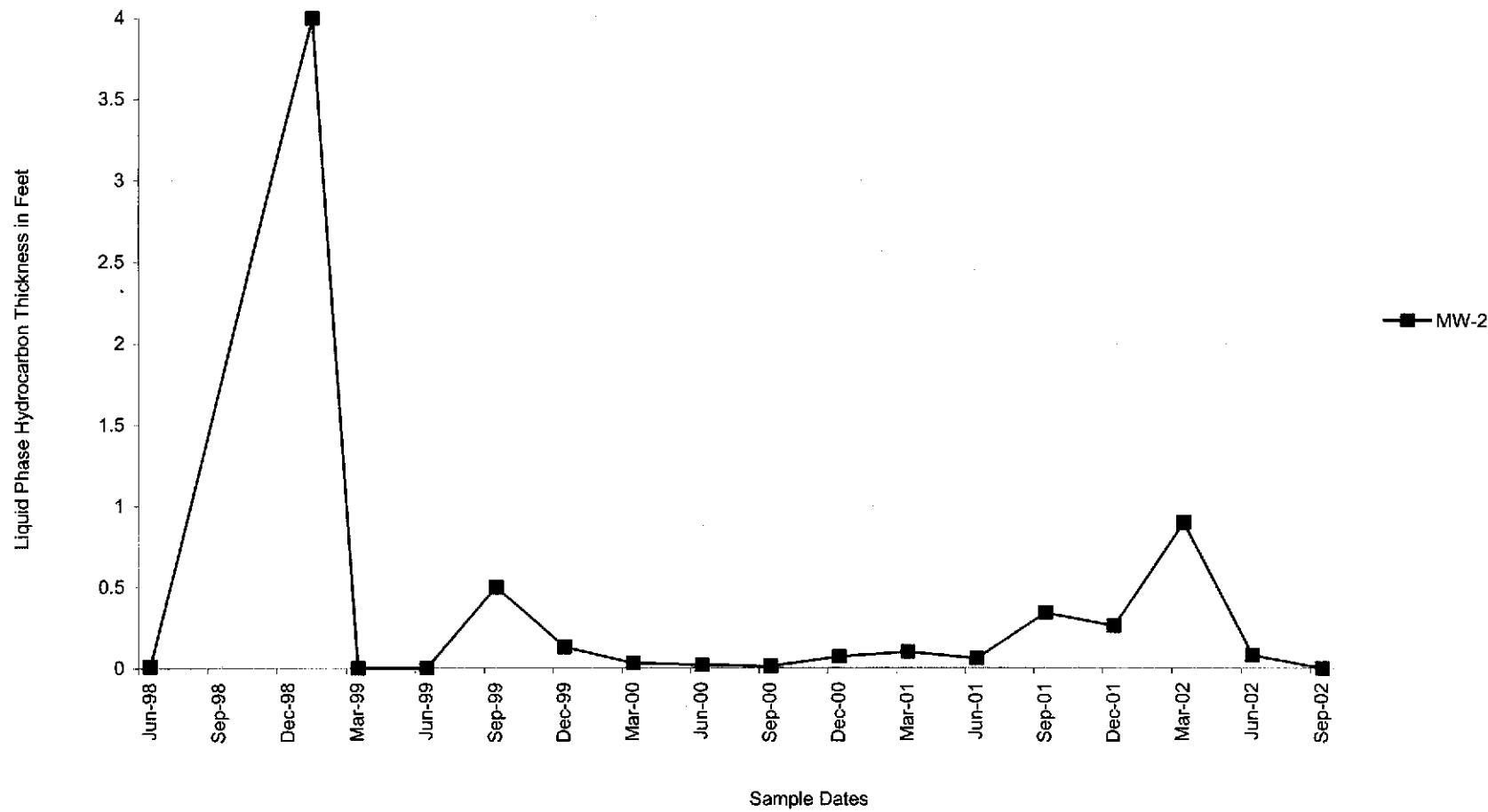


Chart 6
Historical Liquid Phase Hydrocarbon Thickness in Well MW-2 - Third Quarter 2002
Mission Valley Rock Company
Sunol, California





Groundwater Sampling Data Sheet

Project Name: <i>Mission Valley Rock</i>	Date: <i>9/27/02</i>
Project No.: <i>EM 5009</i>	Prepared By: <i>STAN R.</i>
Well Identification: <i>MW-1</i>	Pump Intake Depth (ft-bmp): <i>17.95</i>
Measurement Point Description: <i>TOC NORTH</i>	

Depth to LNAPL (ft-bmp)	Depth to Static Water Level (ft-bmp)	Well Total Depth (ft-bmp)	Water Column Height (ft)	LNAPL Thickness (ft)	One (1) Casing Volume (gallons)	Three (3) Casing Volumes (gallons)
<i>N/D</i>	<i>5.18</i>	<i>18.95</i>	<i>13.77</i>	<i>N/D</i>	<i>2.24</i>	<i>6.7</i>

Well Diameter (in)	Gallons/Foot				Field Equipment: <i>Solonist, Horiba</i>			
	0.75	2	4	6	Purge Method: <i>12 VOLT DC WHALE Pump</i>			
0.75	<i>(2)</i>	4	6	0.02	<i>(0.16)</i>	0.65	1.47	Well Condition: <i>Poor</i>

Time	Casing Volumes Purged	Volume Purged (gallons)	Flow Rate (gpm)	Water Level (ft-bmp)	Ph	Temperature (°C)	Turbidity (NTU)	Conductivity (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Observations
<i>11:49</i>	<i>1</i>	<i>2.0</i>	<i>1.0</i>	<i>-</i>	<i>4.93</i>	<i>20.61</i>	<i>170</i>	<i>2.63</i>	<i>0.00</i>	<i>-30</i>	<i>Cloudy</i>
<i>11:51</i>	<i>2</i>	<i>4.0</i>	<i>1.0</i>	<i>-</i>	<i>4.94</i>	<i>20.45</i>	<i>280</i>	<i>2.72</i>	<i>0.00</i>	<i>-30</i>	<i>Cloudy</i>
<i>11:53</i>	<i>3</i>	<i>6.0</i>	<i>1.0</i>	<i>-</i>	<i>4.94</i>	<i>20.33</i>	<i>190</i>	<i>2.80</i>	<i>0.00</i>	<i>+30</i>	<i>Cloudy</i>

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery Water Level Depth	Water Level at Sampling Time (ft-bmp)	Sample Collection Time	Sample Identification
<i>11:47</i>	<i>11:53</i>	<i>1.0</i>	<i>6.0</i>	<i>3</i>	<i>7.95</i>	<i>7.30</i>	<i>12:15</i>	<i>MW-1</i>

Notes:

ft-bmp = feet below measuring point
 LNAPL = light non-aqueous phase liquid
 M:\TEM2\Field Forms\Well Sampling Field Data Sheet.DOC



Groundwater Sampling Data Sheet

Project Name: <i>Mission Rock</i>	Date: <i>9/27/02</i>
Project No.: <i>EM-5009</i>	Prepared By: <i>STAN R.</i>
Well Identification: <i>MW-2</i>	Pump Intake Depth (ft-bmp): <i>17.95</i>
Measurement Point Description: <i>TOC NORTH</i>	

Depth to LNAPL (ft-bmp)	Depth to Static Water Level (ft-bmp)	Well Total Depth (ft-bmp)	Water Column Height (ft)	LNAPL Thickness (ft)	One (1) Casing Volume (gallons)	Three (3) Casing Volumes (gallons)
<i>N/A</i>	<i>5.54</i>	<i>18.95</i>	<i>13.41</i>	<i>N/A</i>	<i>2.18</i>	<i>6.55</i>

Well Diameter (in)	Gallons/Foot				Field Equipment: <i>Solonist, Horiba</i>			
	0.75	2	4	6	Purge Method: <i>12V DC Whale Pump</i>			
0.75	<i>(2)</i>	4	6	0.02	<i>(0.16)</i>	0.65	1.47	Well Condition: <i>Well Box Damaged</i>

Time	Casing Volumes Purged	Volume Purged (gallons)	Flow Rate (gpm)	Water Level (ft-bmp)	Ph	Temperature (°C)	Turbidity (NTU)	Conductivity (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Observations
<i>10:50</i>	<i>1.0</i>	<i>2.0</i>	<i>1.0</i>	<i>-</i>	<i>4.75</i>	<i>23.36</i>	<i>990</i>	<i>.684</i>	<i>0.00</i>	<i>-31</i>	<i>GRAY</i>
<i>10:52</i>	<i>2.0</i>	<i>4.0</i>	<i>1.0</i>	<i>-</i>	<i>4.76</i>	<i>22.13</i>	<i>990</i>	<i>.007</i>	<i>6.00</i>	<i>-31</i>	<i>GRAY</i>
<i>10:54</i>	<i>3.0</i>	<i>6.0</i>	<i>1.0</i>	<i>-</i>	<i>4.78</i>	<i>21.50</i>	<i>990</i>	<i>.643</i>	<i>0.00</i>	<i>-31</i>	<i>GRAY</i>

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery Water Level Depth	Water Level at Sampling Time (ft-bmp)	Sample Collection Time	Sample Identification
<i>10:48</i>	<i>10:54</i>	<i>1.0</i>	<i>6.0</i>	<i>3</i>	<i>8.25</i>	<i>7.50</i>	<i>11:20</i>	<i>MW-2</i>

Notes:

ft-bmp = feet below measuring point
 LNAPL = light non-aqueous phase liquid
 M:\TEM2\Field Forms\Well Sampling Field Data Sheet.DOC



Groundwater Sampling Data Sheet

Project Name: Mission Valley Rock	Date: 9/27/02
Project No.: Em-5009	Prepared By: STAN R.
Well Identification: MW-3	Pump Intake Depth (ft-bmp): 15.98
Measurement Point Description: TOC NORTH	

Depth to LNAPL (ft-bmp)	Depth to Static Water Level (ft-bmp)	Well Total Depth (ft-bmp)	Water Column Height (ft)	LNAPL Thickness (ft)	One (1) Casing Volume (gallons)	Three (3) Casing Volumes (gallons)
N/D	7.28	16.98	9.7	N/D	1.58	4.74

Well Diameter (in)	Gallons/Foot				Field Equipment: Solonist Horiba	
	0.75	2	4	6	Purge Method: 12 VOLT DC Pump	
0.75	2	4	6	0.02	0.16	0.65
				Well Condition: Well Box DAMAGED		

Time	Casing Volumes Purged	Volume Purged (gallons)	Flow Rate (gpm)	Water Level (ft-bmp)	Ph	Temperature (°C)	Turbidity (NTU)	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Observations
12:40	1	1.5	.750	-	5.13	22.35	710	1.38	0.00	-29	GRAY
12:41	2	3.0	1.5	-	5.10	22.29	270	.721	0.00	-29	Cloudy
12:43	3	4.5	1.50	-	5.12	22.22	150	.711	0.00	-29	Cloudy

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery Water Level Depth	Water Level at Sampling Time (ft-bmp)	Sample Collection Time	Sample Identification
12:38	12:43	1.0	4.5	3	9.22	8.90	13:00	MW-3

Notes:

ft-bmp = feet below measuring point
 LNAPL = light non-aqueous phase liquid
 M:\TEM2\Field Forms\Well Sampling Field Data Sheet.DOC

**SEVERN
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STL Los Angeles
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Santa Ana, CA 92705-4808

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Fax: 714 258 0921
www.stl-inc.com

October 8, 2002

STL LOT NUMBER: E2I300132

Scott Ek
Tait Environmental
701 Park Center Dr
Santa Ana, CA 92705

Dear Mr. Ek,

This report contains the analytical results for the four samples received under chain of custody by STL Los Angeles on September 28, 2002. These samples are associated with your MISSION VALLEY ROCK project.

STL Los Angeles certifies that the test results provided in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of the report. NELAP Certification Number for STL Los Angeles is 01118CA.

Any matrix related anomaly is footnoted within the report. A cooler receipt temperature between 2-6 degrees Celsius is within EPA acceptance criteria. The temperature of the cooler received for this project can be found on the Project Receipt Checklist. All applicable quality control procedures met method-specified acceptance criteria except as noted on the following page.

Preliminary results were sent via facsimile on Monday, October 07, 2002.

This report shall not be reproduced except in full, without the written approval of the laboratory.

This report contains **000040** pages.

000001

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Santa Ana, CA 92705-4808

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Fax: 714 258 0921

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CASE NARRATIVE

There was insufficient sample volume provided to prepare a project-specific MS/MSD for the Extractable Petroleum Hydrocarbons method. A duplicate LCS has been prepared to provide accuracy and precision measurement for the samples in this project.

If you have any questions, please feel free to call me at (714) 258-8610.

Sincerely,



Marisol Tabirara
Project Manager

cc: Project File

000002

Analytical Report

ANALYTICAL REPORT

MISSION VALLEY ROCK

Lot #: E2I300132

Scott Ek

Tait Environmental

SEVERN TRENT LABORATORIES, INC.

Marisol Tabirara
Project Manager

October 8, 2002

000006

EXECUTIVE SUMMARY - Detection Highlights

E2I300132

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
MW-3 09/27/02 13:00 001				
Methyl tert-butyl ether	43	1.0	ug/L	SW846 8260B
MW-1 09/27/02 12:15 002				
TPH (as Diesel)	1.4	1.0	mg/L	SW846 8015B
TPH (as Gasoline)	0.76	0.10	mg/L	SW846 8015B
n-Butylbenzene	2.2	1.0	ug/L	SW846 8260B
sec-Butylbenzene	1.4	1.0	ug/L	SW846 8260B
Ethylbenzene	4.3	1.0	ug/L	SW846 8260B
Isopropylbenzene	2.5	1.0	ug/L	SW846 8260B
n-Propylbenzene	8.8	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	20	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	3.0	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	1.1	1.0	ug/L	SW846 8260B
MW-2 09/27/02 11:20 003				
TPH (as Diesel)	480	50	mg/L	SW846 8015B
TPH (as Gasoline)	0.29	0.10	mg/L	SW846 8015B
Acetone	26	10	ug/L	SW846 8260B
2-Butanone	6.6	5.0	ug/L	SW846 8260B
Methyl tert-butyl ether	16	1.0	ug/L	SW846 8260B

000007

METHODS SUMMARY

E2I300132

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Extractable Petroleum Hydrocarbons	SW846 8015B	SW846 3510
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B/826
Volatile Petroleum Hydrocarbons	SW846 8015B	SW846 5030

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

000008

SAMPLE SUMMARY

E2I300132

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
E84XV	001	MW-3	09/27/02	13:00
E84X2	002	MW-1	09/27/02	12:15
E84X3	003	MW-2	09/27/02	11:20
E84X6	004	TRIP BLANKs	09/27/02	

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

000009

TAIT ENVIRONMENTAL

Client Sample ID: MW-3

GC/MS Volatiles

Lot-Sample #...: E2I300132-001

Work Order #...: E84XV1AD

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Methyl tert-butyl ether	43	1.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,1,2-Trichlorotrifluoro- ethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
m-Xylene & p-Xylene	ND	1.0	ug/L
o-Xylene	ND	1.0	ug/L
Tert-amyl methyl ether	ND	2.0	ug/L
Tert-butyl ethyl ether	ND	2.0	ug/L
t-Butanol	ND	25	ug/L
Isopropyl ether	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Bromofluorobenzene	95	(75 - 130)
1,2-Dichloroethane-d4	103	(65 - 135)
Toluene-d8	94	(80 - 130)

000011

TAIT ENVIRONMENTAL

Client Sample ID: MW-3

GC Volatiles

Lot-Sample #....: E2I300132-001 Work Order #....: E84XV1AC Matrix.....: WATER
Date Sampled....: 09/27/02 13:00 Date Received...: 09/28/02 11:35 MS Run #.....: 2273283
Prep Date.....: 09/30/02 Analysis Date...: 09/30/02
Prep Batch #....: 2273508 Analysis Time...: 12:35
Dilution Factor: 1
Analyst ID.....: 001464 Instrument ID...: G13
Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	<u>LIMIT</u>	<u>UNITS</u>
TPH (as Gasoline)	ND		0.10	mg/L
<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>		
a,a,a-Trifluorotoluene (TFT)	<u>RECOVERY</u>	<u>LIMITS</u>		
	79	(60 - 130)		

000012

TAIT ENVIRONMENTAL

Client Sample ID: MW-3

GC Semivolatiles

Lot-Sample #....: E2I300132-001 Work Order #....: E84XV1AA Matrix.....: WATER
Date Sampled....: 09/27/02 13:00 Date Received...: 09/28/02 11:35 MS Run #.....:
Prep Date.....: 09/30/02 Analysis Date...: 10/03/02
Prep Batch #....: 2273403 Analysis Time...: 20:10
Dilution Factor: 1
Analyst ID.....: 356074 Instrument ID...: G03
Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	<u>LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	ND		1.0	mg/L
<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>LIMITS</u>	
Benzo(a)pyrene	86		(65 - 135)	

TAIT ENVIRONMENTAL

Client Sample ID: MW-1

GC/MS Volatiles

Lot-Sample #...: E2I300132-002 Work Order #...: E84X21AD Matrix.....: WATER
 Date Sampled...: 09/27/02 12:15 Date Received...: 09/28/02 11:35 MS Run #.....: 2274089
 Prep Date.....: 09/30/02 Analysis Date...: 09/30/02
 Prep Batch #...: 2274223 Analysis Time...: 21:26
 Dilution Factor: 1
 Analyst ID.....: 004648 Instrument ID...: MSC
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
n-Butylbenzene	2.2	1.0	ug/L
sec-Butylbenzene	1.4	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L

(Continued on next page)

000014

TAIT ENVIRONMENTAL

Client Sample ID: MW-1

GC/MS Volatiles

Lot-Sample #....: E2I300132-002 Work Order #....: E84X21AD Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	4.3	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Isopropylbenzene	2.5	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Methyl tert-butyl ether	ND	1.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	8.8	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,1,2-Trichlorotrifluoro- ethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	20	1.0	ug/L
1,3,5-Trimethylbenzene	3.0	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
m-Xylene & p-Xylene	1.1	1.0	ug/L
o-Xylene	ND	1.0	ug/L
Tert-amyl methyl ether	ND	2.0	ug/L
Tert-butyl ethyl ether	ND	2.0	ug/L
t-Butanol	ND	25	ug/L
Isopropyl ether	ND	2.0	ug/L
	PERCENT	RECOVERY	
<u>SURROGATE</u>	<u>RECOVERY</u>	<u>LIMITS</u>	
Bromofluorobenzene	88	(75 - 130)	
1,2-Dichloroethane-d4	88	(65 - 135)	
Toluene-d8	95	(80 - 130)	

000015

TAIT ENVIRONMENTAL

Client Sample ID: MW-1

GC Volatiles

Lot-Sample #....: E2I300132-002 Work Order #....: E84X21AC Matrix.....: WATER
Date Sampled....: 09/27/02 12:15 Date Received...: 09/28/02 11:35 MS Run #.....: 2273283
Prep Date.....: 09/30/02 Analysis Date...: 09/30/02
Prep Batch #....: 2273508 Analysis Time...: 13:03
Dilution Factor: 1
Analyst ID.....: 001464 Instrument ID...: G13
Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Gasoline)	0.76	0.10	mg/L
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
a,a,a-Trifluorotoluene (TFT)	110	(60 - 130)	

NOTE(S) :

The gasoline pattern appears degraded.

000016

TAIT ENVIRONMENTAL

Client Sample ID: MW-1

GC Semivolatiles

Lot-Sample #....: E2I300132-002 Work Order #....: E84X21AA Matrix.....: WATER
Date Sampled....: 09/27/02 12:15 Date Received...: 09/28/02 11:35 MS Run #.....:
Prep Date.....: 09/30/02 Analysis Date...: 10/03/02
Prep Batch #....: 2273403 Analysis Time...: 20:49
Dilution Factor: 1
Analyst ID.....: 356074 Instrument ID...: G03
Method.....: SW846 '8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	<u>LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	1.4	1.0	1.0	mg/L

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Benzo (a) pyrene	108	(65 - 135)

NOTE(S) :

Suspected weathered diesel. C range-C10 to C24.

000017

TAIT ENVIRONMENTAL

Client Sample ID: MW-2

GC/MS Volatiles

Lot-Sample #....: E2I300132-003 Work Order #....: E84X31AD Matrix.....: WATER
 Date Sampled....: 09/27/02 11:20 Date Received...: 09/28/02 11:35 MS Run #.....: 2274089
 Prep Date.....: 09/30/02 Analysis Date...: 09/30/02
 Prep Batch #....: 2274223 Analysis Time...: 21:56
 Dilution Factor: 1
 Analyst ID.....: 004648 Instrument ID...: MSC
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	26	10	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	6.6	5.0	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L

(Continued on next page)

000018

TAIT ENVIRONMENTAL

Client Sample ID: MW-2

GC/MS Volatiles

Lot-Sample #....: E2I300132-003 Work Order #....: E84X31AD Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Methyl tert-butyl ether	16	1.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,1,2-Trichlorotrifluoro- ethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
m-Xylene & p-Xylene	ND	1.0	ug/L
o-Xylene	ND	1.0	ug/L
Tert-amyl methyl ether	ND	2.0	ug/L
Tert-butyl ethyl ether	ND	2.0	ug/L
t-Butanol	ND	25	ug/L
Isopropyl ether	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Bromofluorobenzene	95	(75 - 130)
1,2-Dichloroethane-d4	104	(65 - 135)
Toluene-d8	95	(80 - 130)

000019

TAIT ENVIRONMENTAL

Client Sample ID: MW-2

GC Volatiles

Lot-Sample #....: E2I300132-003 Work Order #....: E84X31AC Matrix.....: WATER
Date Sampled....: 09/27/02 11:20 Date Received...: 09/28/02 11:35 MS Run #.....: 2273283
Prep Date.....: 09/30/02 Analysis Date...: 09/30/02
Prep Batch #....: 2273508 Analysis Time...: 13:31
Dilution Factor: 1
Analyst ID.....: 001464 Instrument ID...: G13
Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
TPH (as Gasoline)	0.29	0.10	mg/L
<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>	
a,a,a-Trifluorotoluene (TFT)	84	(60 - 130)	

NOTE(S) :

Unknown hydrocarbon pattern.

000020

TAIT ENVIRONMENTAL

Client Sample ID: MW-2

GC Semivolatiles

Lot-Sample #....: E2I300132-003 Work Order #....: E84X31AA Matrix.....: WATER
Date Sampled....: 09/27/02 11:20 Date Received...: 09/28/02 11:35 MS Run #.....:
Prep Date.....: 09/30/02 Analysis Date...: 10/03/02
Prep Batch #....: 2273403 Analysis Time...: 21:29
Dilution Factor: 50
Analyst ID.....: 356074 Instrument ID...: G03
Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
TPH (as Diesel)	480	50	mg/L
<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>	
Benzo (a) pyrene	91	(65 - 135)	

NOTE(S) :

Suspected weathered diesel. C range-C10 to beyond C24.

000021

TAIT ENVIRONMENTAL

Client Sample ID: TRIP BLANKS

GC/MS Volatiles

Lot-Sample #....: E2I300132-004 Work Order #....: E84X61AD Matrix.....: WATER
 Date Sampled....: 09/27/02 Date Received...: 09/28/02 11:35 MS Run #.....: 2274089
 Prep Date.....: 09/30/02 Analysis Date...: 09/30/02
 Prep Batch #....: 2274223 Analysis Time...: 20:27
 Dilution Factor: 1
 Analyst ID.....: 004648 Instrument ID...: MSC
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	5.0	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L

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000022

TAIT ENVIRONMENTAL

Client Sample ID: TRIP BLANKs

GC/MS Volatiles

Lot-Sample #...: E2I300132-004 Work Order #...: E84X61AD Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Methyl tert-butyl ether	ND	1.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,1,2-Trichlorotrifluoro- ethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl chloride	ND	2.0	ug/L
m-Xylene & p-Xylene	ND	1.0	ug/L
o-Xylene	ND	1.0	ug/L
Tert-amyl methyl ether	ND	2.0	ug/L
Tert-butyl ethyl ether	ND	2.0	ug/L
t-Butanol	ND	25	ug/L
Isopropyl ether	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Bromofluorobenzene	94	(75 - 130)
1,2-Dichloroethane-d4	88	(65 - 135)
Toluene-d8	98	(80 - 130)

000023

SEVERN

TRENT

SERVICES

QA/QC

000025

QC DATA ASSOCIATION SUMMARY

E2I300132

Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
001	WATER	SW846 8015B		2273403	
	WATER	SW846 8015B		2273508	2273283
	WATER	SW846 8260B		2274223	2274089
002	WATER	SW846 8015B		2273403	
	WATER	SW846 8015B		2273508	2273283
	WATER	SW846 8260B		2274223	2274089
003	WATER	SW846 8015B		2273403	
	WATER	SW846 8015B		2273508	2273283
	WATER	SW846 8260B		2274223	2274089
004	WATER	SW846 8015B		2273508	2273283
	WATER	SW846 8260B		2274223	2274089

000026

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E2I300132
 MB Lot-Sample #: E2J010000-223

Work Order #...: E86DR1AA

Matrix.....: WATER

Analysis Date...: 09/30/02
 Dilution Factor: 1

Prep Date.....: 09/30/02

Analysis Time...: 19:56

Prep Batch #...: 2274223

Instrument ID...: MSC

Analyst ID.....: 004648

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	2.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	2.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E2I300132

Work Order #...: E86DR1AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	1.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro- benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	2.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichlorotrifluoro- ethane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	2.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	1.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
Tert-amyl methyl ether	ND	2.0	ug/L	SW846 8260B
Tert-butyl ethyl ether	ND	2.0	ug/L	SW846 8260B
t-Butanol	ND	25	ug/L	SW846 8260B
Isopropyl ether	ND	2.0	ug/L	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Bromofluorobenzene	94	(75 - 130)
1,2-Dichloroethane-d4	97	(65 - 135)
Toluene-d8	94	(80 - 130)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: E2I300132
MB Lot-Sample #: E2I300000-508

Work Order #...: E85MM1AA

Matrix.....: WATER

Analysis Date...: 09/30/02
Dilution Factor: 1

Prep Date.....: 09/30/02
Prep Batch #...: 2273508

Analysis Time...: 11:11
Instrument ID...: G13

Analyst ID.....: 001464

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		<u>METHOD</u>
		<u>LIMIT</u>	<u>UNITS</u>	
TPH (as Gasoline)	ND	0.10	mg/L	SW846 8015B

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
a, a, a-Trifluorotoluene (TFT)	87	(60 - 130)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: E2I300132 Work Order #...: E84811AA Matrix.....: WATER
MB Lot-Sample #: E2I300000-403
Prep Date.....: 09/30/02 Analysis Time...: 18:13
Analysis Date...: 10/03/02 Prep Batch #...: 2273403 Instrument ID...: G03
Dilution Factor: 1
Analyst ID.....: 356074

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
TPH (as Diesel)	ND	1.0	mg/L	SW846 8015B
<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>		
Benzo (a) pyrene	116	(65 - 135)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: E2I300132 Work Order #....: E86DR1AC Matrix.....: WATER
 LCS Lot-Sample#: E2J010000-223
 Prep Date.....: 09/30/02 Analysis Date...: 09/30/02
 Prep Batch #....: 2274223 Analysis Time...: 18:57
 Dilution Factor: 1 Instrument ID...: MSC
 Analyst ID.....: 004648

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Benzene	95	(75 - 120)	SW846 8260B
Chlorobenzene	93	(75 - 120)	SW846 8260B
1,1-Dichloroethene	97	(70 - 140)	SW846 8260B
Toluene	94	(75 - 125)	SW846 8260B
Trichloroethene	100	(70 - 130)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Bromofluorobenzene	98	(75 - 130)
1,2-Dichloroethane-d4	90	(65 - 135)
Toluene-d8	100	(80 - 130)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: E2I300132 Work Order #...: E86DR1AC Matrix.....: WATER
 LCS Lot-Sample#: E2J010000-223
 Prep Date.....: 09/30/02 Analysis Date...: 09/30/02
 Prep Batch #...: 2274223 Analysis Time...: 18:57
 Dilution Factor: 1 Instrument ID...: MSC
 Analyst ID.....: 004648

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
Benzene	10.0	9.47	ug/L	95	SW846 8260B
Chlorobenzene	10.0	9.33	ug/L	93	SW846 8260B
1,1-Dichloroethene	10.0	9.74	ug/L	97	SW846 8260B
Toluene	10.0	9.38	ug/L	94	SW846 8260B
Trichloroethene	10.0	10.0	ug/L	100	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Bromofluorobenzene	98	(75 - 130)
1,2-Dichloroethane-d4	90	(65 - 135)
Toluene-d8	100	(80 - 130)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000032

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #....: E2I300132 Work Order #....: E85MM1AC Matrix.....: WATER
 LCS Lot-Sample#: E2I300000-508
 Prep Date.....: 09/30/02 Analysis Date...: 09/30/02
 Prep Batch #....: 2273508 Analysis Time...: 11:39
 Dilution Factor: 1 Instrument ID...: G13
 Analyst ID.....: 001464

<u>PARAMETER</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>	<u>METHOD</u>
TPH (as Gasoline)	105	(70 - 140)	SW846 8015B

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
a,a,a-Trifluorotoluene (TFT)	116	(60 - 130)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000033

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: E2I300132 Work Order #...: E85MM1AC Matrix.....: WATER
 LCS Lot-Sample#: E2I300000-508
 Prep Date.....: 09/30/02 Analysis Date...: 09/30/02
 Prep Batch #...: 2273508 Analysis Time...: 11:39
 Dilution Factor: 1 Instrument ID...: G13
 Analyst ID.....: 001464

<u>PARAMETER</u>	<u>SPIKE</u> <u>AMOUNT</u>	<u>MEASURED</u> <u>AMOUNT</u>	<u>UNITS</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>METHOD</u>
TPH (as Gasoline)	1.00	1.05	mg/L	105	SW846 8015B
<u>SURROGATE</u>		<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>		
a,a,a-Trifluorotoluene (TFT)		116	(60 - 130)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: E2I300132 Work Order #....: E84811AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: E2I300000-403 E84811AD-LCSD
 Prep Date.....: 09/30/02 Analysis Date...: 10/03/02
 Prep Batch #....: 2273403 Analysis Time...: 18:52
 Dilution Factor: 1 Instrument ID...: G03
 Analyst ID.....: 356074

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
TPH (as Diesel)	110	(65 - 140)			SW846 8015B
	90	(65 - 140)	20	(0-25)	SW846 8015B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Benzo (a) pyrene	113	(65 - 135)
	92	(65 - 135)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #....: E2I300132 Work Order #....: E84811AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: E2I300000-403 E84811AD-LCSD
 Prep Date.....: 09/30/02 Analysis Date...: 10/03/02
 Prep Batch #....: 2273403 Analysis Time...: 18:52
 Dilution Factor: 1 Instrument ID...: G03
 Analyst ID.....: 356074

<u>PARAMETER</u>	<u>SPIKE</u>	<u>MEASURED</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>RPD</u>	<u>METHOD</u>
	<u>AMOUNT</u>	<u>AMOUNT</u>	<u>UNITS</u>			
TPH (as Diesel)	5.00	5.51	mg/L	110		SW846 8015B
	5.00	4.51	mg/L	90	20	SW846 8015B

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Benzo(a)pyrene	113	(65 - 135)
	92	(65 - 135)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: E2I300132 Work Order #....: E84XV1AG-MS Matrix.....: WATER
 MS Lot-Sample #: E2I300132-001 E84XV1AH-MSD
 Date Sampled....: 09/27/02 13:00 Date Received...: 09/28/02 11:35 MS Run #.....: 2274089
 Prep Date.....: 10/01/02 Analysis Date...: 10/01/02
 Prep Batch #....: 2274223 Analysis Time...: 01:53
 Dilution Factor: 1 Analyst ID.....: 004648 Instrument ID...: MSC

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	96	(75 - 120)			SW846 8260B
	94	(75 - 120)	2.3	(0-25)	SW846 8260B
Chlorobenzene	93	(75 - 120)			SW846 8260B
	92	(75 - 120)	0.32	(0-25)	SW846 8260B
1,1-Dichloroethene	97	(70 - 140)			SW846 8260B
	96	(70 - 140)	0.93	(0-25)	SW846 8260B
Toluene	93	(75 - 125)			SW846 8260B
	94	(75 - 125)	0.42	(0-25)	SW846 8260B
Trichloroethene	98	(70 - 130)			SW846 8260B
	97	(70 - 130)	1.6	(0-25)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Bromofluorobenzene	99	(75 - 130)
	98	(75 - 130)
1,2-Dichloroethane-d4	103	(65 - 135)
	103	(65 - 135)
Toluene-d8	102	(80 - 130)
	101	(80 - 130)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: E2I300132 Work Order #...: E84XV1AG-MS Matrix.....: WATER
 MS Lot-Sample #: E2I300132-001 E84XV1AH-MSD
 Date Sampled...: 09/27/02 13:00 Date Received...: 09/28/02 11:35 MS Run #.....: 2274089
 Prep Date.....: 10/01/02 Analysis Date...: 10/01/02
 Prep Batch #...: 2274223 Analysis Time...: 01:53
 Dilution Factor: 1 Analyst ID.....: 004648 Instrument ID...: MSC

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	10.0	9.62	ug/L	96		SW846 8260B
	ND	10.0	9.40	ug/L	94	2.3	SW846 8260B
Chlorobenzene	ND	10.0	9.27	ug/L	93		SW846 8260B
	ND	10.0	9.24	ug/L	92	0.32	SW846 8260B
1,1-Dichloroethene	ND	10.0	9.68	ug/L	97		SW846 8260B
	ND	10.0	9.59	ug/L	96	0.93	SW846 8260B
Toluene	ND	10.0	9.31	ug/L	93		SW846 8260B
	ND	10.0	9.35	ug/L	94	0.42	SW846 8260B
Trichloroethene	ND	10.0	9.83	ug/L	98		SW846 8260B
	ND	10.0	9.67	ug/L	97	1.6	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Bromofluorobenzene	99	(75 - 130)
	98	(75 - 130)
1,2-Dichloroethane-d4	103	(65 - 135)
	103	(65 - 135)
Toluene-d8	102	(80 - 130)
	101	(80 - 130)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #....: E2I300132 Work Order #....: E84XV1AE-MS Matrix.....: WATER
 MS Lot-Sample #: E2I300132-001 E84XV1AF-MSD
 Date Sampled....: 09/27/02 13:00 Date Received...: 09/28/02 11:35 MS Run #.....: 2273283
 Prep Date.....: 09/30/02 Analysis Date...: 09/30/02
 Prep Batch #....: 2273508 Analysis Time...: 13:59
 Dilution Factor: 1 Analyst ID.....: 001464 Instrument ID...: G13

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
TPH (as Gasoline)	90	(70 - 140)			SW846 8015B
	91	(70 - 140)	1.1	(0-25)	SW846 8015B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
a, a, a-Trifluorotoluene (TFT)	108	(60 - 130)
	109	(60 - 130)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: E2I300132 Work Order #...: E84XV1AE-MS Matrix.....: WATER
 MS Lot-Sample #: E2I300132-001 E84XV1AF-MSD
 Date Sampled...: 09/27/02 13:00 Date Received...: 09/28/02 11:35 MS Run #.....: 2273283
 Prep Date.....: 09/30/02 Analysis Date...: 09/30/02
 Prep Batch #...: 2273508 Analysis Time...: 13:59
 Dilution Factor: 1 Analyst ID.....: 001464 Instrument ID...: G13

PARAMETER	SAMPLE	SPIKE	MEASRD	UNITS	PERCNT		METHOD
	AMOUNT	AMT	AMOUNT		RECVRY	RPD	
TPH (as Gasoline)	ND	1.00	0.899	mg/L	90		SW846 8015B
	ND	1.00	0.909	mg/L	91	1.1	SW846 8015B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
a, a, a-Trifluorotoluene (TFT)	108	(60 - 130)
	109	(60 - 130)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters