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Site Assessment and Fourth Quarter 2002 Groundwater Monitoring Report

Mission Valley Rock Company
7999 Athenour Way
Sunol, California

Prepared by:
Tait Environmental Management, Inc.

March 26, 2003

MISSION VALLEY ROCK COMPANY
ASPHALT COMPANY
READY MIX COMPANY

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

April 3, 2003

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

Dear Mr. Seery:

Submitted herewith is the Site Assessment and Fourth Quarter 2002 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

March 26, 2003

Site Assessment and Fourth Quarter 2002 Groundwater Monitoring Report

Mission Valley Rock Company
7999 Athenour Way
Sunol, California

Prepared for:

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Mission Valley Rock Company
7999 Athenour Way
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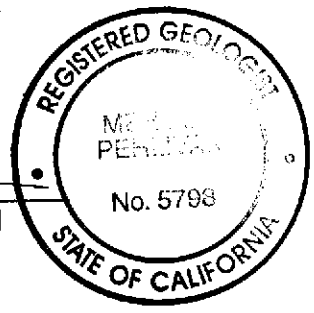

Tait Environmental Management
701 North Parkcenter Drive
Santa Ana, California 92705

Project No. EM-5010

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Groundwater Monitoring Report
Mission Valley Rock Company
Sunol, California

1.0 INTRODUCTION

This report summarizes the additional site assessment and fourth quarter groundwater monitoring conducted at the Mission Valley Rock Company (Site) located at 7999 Athenour Way, Sunol, California (Figure 1). The additional site assessment included the advancement of eight (8) soil borings and collection of groundwater samples, including samples from the three (3) existing groundwater monitoring wells (MW-1, MW-2, and MW-3).

The investigation was conducted by Tait Environmental Management, Inc. (TEM), at the request of the Alameda County Health Care Services Agency (ACHCSA) in a letter dated June 3, 2002. The investigation was performed according the TEM workplan and the adended workplan dated June 19, 2002 and August 19, 2002, respectively. The workplans were approved by the ACHCSA in a letter dated September 10, 2002.

2.0 OBJECTIVE

The objective of the proposed scope of work was to:

- Further assess the vertical and lateral extent of petroleum fuel hydrocarbon contamination in the subsurface soil and groundwater;

3.0 SCOPE OF WORK

The scope of work that TEM developed to meet the objectives included the following tasks:

- Workplan Preparation
- Health and Safety Plan Preparation
- Permitting, Utility Clearance, and Agency Notification
- Drilling and Soil Sampling
- Disposal of Solid/Liquid Waste
- Groundwater Monitoring & Sampling
- Laboratory Analyses
- Report Preparation

4.0 DRILLING AND SOIL SAMPLING

A drilling permit for the advancement of eight (8) soil borings was obtained from the Alameda County Food Control and Water Conservation District, Water Resources Management, Zone 7 prior to the initiation of drilling. Underground Service Alert (Ticket# 485733) was notified a minimum of 48 hours prior to initiating fieldwork for the demarcation of underground utilities. The ACHCSA and the California Regional Water Quality Control Board (CRWQCB) were also notified a minimum of 48 hours prior to the start of fieldwork (Appendix A).

On December 3 and 4, 2002, eight (8) soil borings (TB-1 through TB-8) were advanced throughout the Site using GeoProbe® technology. The soil boring locations are shown on Figure 2. The eight (8) soil borings were advanced to a depth of approximately 25 to 35 feet below ground surface (bgs). A TEM geologist, trained and supervised by a California Registered Geologist, described the soil lithology using the Unified Soil Classification System (USCS). The field geologist used a Photoionization Detector (PID) to screen the soil samples in the field for the presence of volatile organic compounds (VOC's) and to select soil samples for laboratory analyses. Soil boring logs for the eight borings are presented in Appendix B and a cross-section of borings TB-2, TB-4, and TB-7 is shown in Figure 6.

Soil samples were collected at five-foot depth intervals and/or where changes in lithology were observed. Soil samples were collected in a 1.5-inch diameter by 2-foot long bore sampler housing acetate sampling sleeves. The ends of the selected acetate sleeves were capped with Teflon lined rubber caps. The samples were labeled and placed into an ice-chilled cooler (4°C). The collected samples were transported to Severn Trent Laboratories (STL), a State-Certified laboratory for analyses under chain-of-custody protocol.

Due to the methodology used during this assessment, no liquid or solid waste was generated.

4.1 Site Geology

Drilling and sampling activities indicate that the subsurface soil at the Site consists primarily of grave/sand mixture from the surface to approximately 5 feet bgs. Borings TB-3, TB-5, TB-6, and TB-7 have a clay or sandy clay layer from approximately 5 to 10 feet bgs. The material encountered from 10 to 25 feet bgs generally consisted of a sand or sandy/gravel mixture. Boring logs are presented in Appendix B.

5.0 GROUNDWATER MONITORING & SAMPLING

Groundwater samples were collected from each of the eight (8) borings upon completion of soil sampling. The groundwater samples were extracted using "mini-bailers" which were inserted down the center of the GeoProbe® rods into the stainless steel screen sampler.

In addition, the existing three (3) groundwater monitoring wells (MW-1, MW-2, and MW-3) were sampled during the site assessment as part of the fourth quarter 2002 groundwater monitoring event. Prior to sampling, TEM measured and recorded static groundwater levels in the three (3) groundwater monitoring wells using a product/water interface meter. Water levels were measured from the top of the well casings representing the wellhead survey points. The meter was decontaminated prior to use at each well using a mild detergent solution and two (2) de-ionized water rinses. Groundwater samples were collected from discharge end of the pump at low flow levels into laboratory-supplied containers. Care was taken to insure no headspace is allowed in the containers.

The samples collected from all eleven (11) locations were labeled and placed into an ice-chilled cooler (4°C). The samples were transported to STL, a State-Certified laboratory for analyses under chain-of-custody protocol.

Based on the data (monitoring wells only), the depth to groundwater measured at the Site averaged 4.90 feet bgs. The apparent groundwater flow direction is to the East with a groundwater gradient of approximately 0.02 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 C).

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 C).

6.0 LABORATORY ANALYSES

The soil and groundwater samples collected during the field activities were analyzed for:

- The Diesel and Gasoline fraction of Total Petroleum Hydrocarbons (TPHd and TPHg, respectively) using EPA Method No. 8015B.
- Volatile Organic Compounds (VOC's) including benzene, toluene, ethylbenzene, and total xylenes (BTEX); methyl-tert-butyl ether (MTBE) including the oxygenates using EPA Method No. 8260A.
- Semi-Volatile Organic Compounds (SVOC's) using EPA Method No. 8270C.

Laboratory analyses of the soil and groundwater samples were conducted by STL, a State-Certified laboratory located in Santa Ana, California.

Fourth 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 D. A historical summary of groundwater sample analytical results for the three (3) groundwater monitoring wells is summarized in Table 4 and Charts 2 through 5 present historic measurements of TPHd, TPHg, MTBE, and benzene, respectively (Appendix C).

Soil sampling analytical results for the eight (8) soil borings are summarized in Table 5. Groundwater sample analytical results from the eight (8) borings and the three (3) existing monitoring wells are summarized in Table 6.

7.0 SUMMARY OF ACTIVITIES AND FINDINGS

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

- On December 3 and 4, 2002, eight (8) soil borings (TB-1 through TB-8) were advanced to a depth of approximately 25 to 35 feet bgs. Soil samples were collected from each boring at approximately 5-foot depth intervals. In addition, a groundwater sample was collected from each boring and from the three (3) existing monitoring wells;

- A total of eleven (11) groundwater samples and 38 soil samples were collected and submitted to a State-Certified laboratory for analysis;

- Based on the depth to water measurements (monitoring wells only) obtained by TEM, groundwater levels averaged 4.90 feet bgs. The groundwater gradient is approximately 0.02 ft/ft flowing to the east. LPH was not detected in any of the wells this quarter;

- Concentrations of TPHg in the soil samples ranged from 4,600 milligrams per kilogram (mg/kg) to 10 mg/kg. Concentrations of TPHd in the soil samples ranged from 280 mg/kg to 9.2 mg/kg. Benzene was only reported at or above the laboratory reporting limit in two (2) samples (TB8-5 at 74 micrograms per kilogram [ug/kg] and TB4-4 at 14 ug/kg). MTBE was reported at or above the laboratory reporting limit in four (4) samples, the greatest being sample TB4-1 at 73 ug/kg. A number of soil samples were reported to contain concentrations of various other compounds traditionally associated with old or "weathered" hydrocarbons. In general, the laboratory reported concentrations from all soil samples collected are well below the *Environmental Protection Agency (EPA), Preliminary Remediation Goals (PRG's) for Region 9 (Residential Soils "Direct Contact Exposure Pathways), October 2002.*

- Concentrations of TPHd were detected in five (5) of the eight (8) groundwater samples collected from the soil borings. The concentrations ranged from 1.6 mg/L (TB-2) to 32 mg/L (TB-6). Six (6) of the eight (8) groundwater samples collected from the soil borings contained concentrations of TPHg ranging from 0.83 mg/L (TB-2) to 44 mg/L (TB-8).

- Benzene concentrations were only detected in two of the soil boring groundwater samples, TB-4 at 49 ug/L and TB-8 at 190 ug/L. Concentrations of MTBE were detected in five (5) of the eight (8) soil boring groundwater samples with concentrations ranging from 1.2 ug/L (TB-1) to 180 ug/L (TB-4).

- 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;

- The only TPHd concentration (61 mg/L) was detected in the groundwater sample collected from monitoring well MW-2. Concentrations of TPHg (1.6 mg/L and 1.8 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 (3) monitoring wells;

- Concentrations of MTBE were detected in the groundwater samples collected from wells MW-2 and MW-3 at 10 ug/L and 41 ug/L, respectively;

- Interpretation of Chart 2 indicate that wells MW-1 and MW-2 show significant decreases in TPHd (ND), while TPHd concentrations in MW-2 are slowly decreasing. Concentrations of TPHg are noted to be slightly increasing in wells MW-1 and MW-2. Concentrations TPHg in all three wells have been sporadic since initial sampling according to Chart 3. The laboratory has also determined that the detected hydrocarbons in the groundwater samples to be old or "weathered" and may be residuals, as the constituents (BTEX) are reported to be non-detect in the groundwater samples collected from the wells;

- Interpretation of Chart 4 indicates that concentrations of MTBE have been slowly declining or remaining stable in wells MW-2 and MW-3, respectively. MTBE concentrations have not been reported at or above the laboratory reporting limit from well MW-1 for eight (8) consecutive quarters.

8.0 RECOMMENDATION

Based on the work conducted to date, the data obtained during field activities, current regulatory guidelines, and the professional judgment of TEM, the following recommendation is presented for your consideration:

- Based on the additional assessment performed TEM recommends additional assessment to further delineate the lateral and vertical extent of groundwater contamination. The southern extent of the TPHg groundwater plume has not been fully identified. Historical groundwater samples collected from existing wells MW-1 and MW-2 indicate an increase in TPHg concentrations in the groundwater. The higher concentrations of TPHg in the groundwater samples collected from soil borings TB-5 through TB-8 (cross-gradient) indicate the possibility of an unidentified source that is cross-gradient to the currently depicted groundwater flow (Figure 2). The installation of additional groundwater monitoring wells to the south of the area of concern would allow for a more accurate depiction of groundwater flow and contaminant concentrations.

- Continue the quarterly groundwater monitoring program and LPH recovery, if necessary.

9.0 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 program includes formal procedures for drilling, sampling, well installation, decontamination, instrument calibration, documentation of activities and calculations, and peer review. Routine QC procedures were performed by the laboratory and included daily calibration of instruments, percent surrogate recoveries and analysis of matrix spikes and matrix spike duplicates (Appendix D). The laboratory reported the results to be within acceptable percent recoveries with no results exceeding the laboratory-established control limits.

10.0 LIMITATIONS

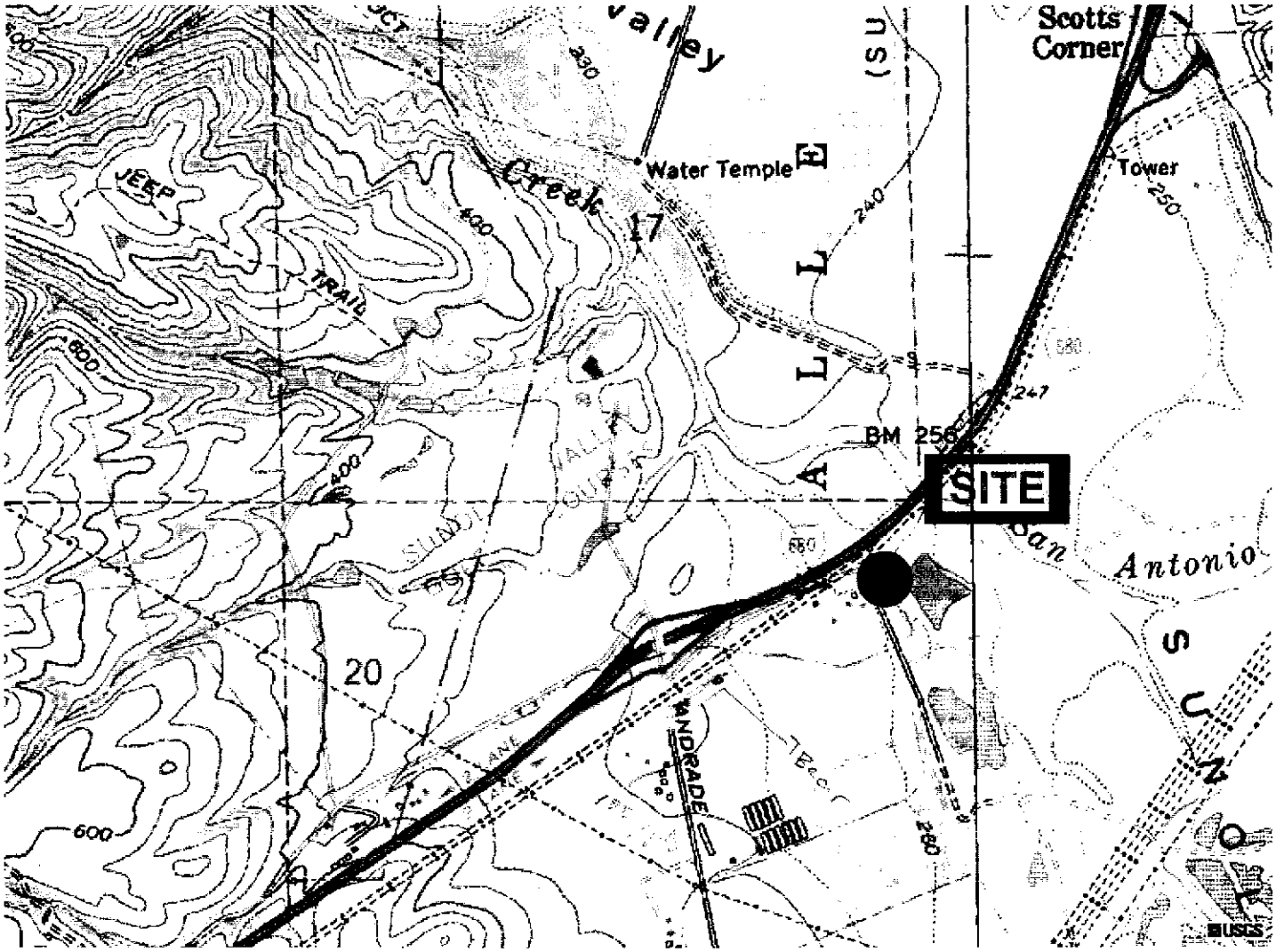
No investigation is considered thorough enough to exclude the presence of hazardous materials at a given site. Opinions and/or recommendations presented apply to Site conditions existing at the time of the performance of services and TEM is unable to report on or accurately predict events which may impact the Site following conduct of the described services, whether occurring naturally or caused by external forces. No responsibility is assumed by TEM for conditions 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, MVR. 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.

11.0 REFERENCES

Groundwater Monitoring Report – Third Quarter 2002, Mission Valley Rock Company, 7999 Athenour Way, Sunol, California, prepared by TEM, November 5, 2002.

Drinking Water Standards, California Department of Health Services, January 31, 2001.

Environmental Protection Agency (EPA), Preliminary Remediation Goals (PRG's) for Region 9 (Residential Soils "Direct Contact Exposure Pathways), October 2002.



SOURCE:
U.S.G.S. 7.5 Minute Series Topographic Maps
Freemont Quadrangle
California - Alameda County, July 1, 1998

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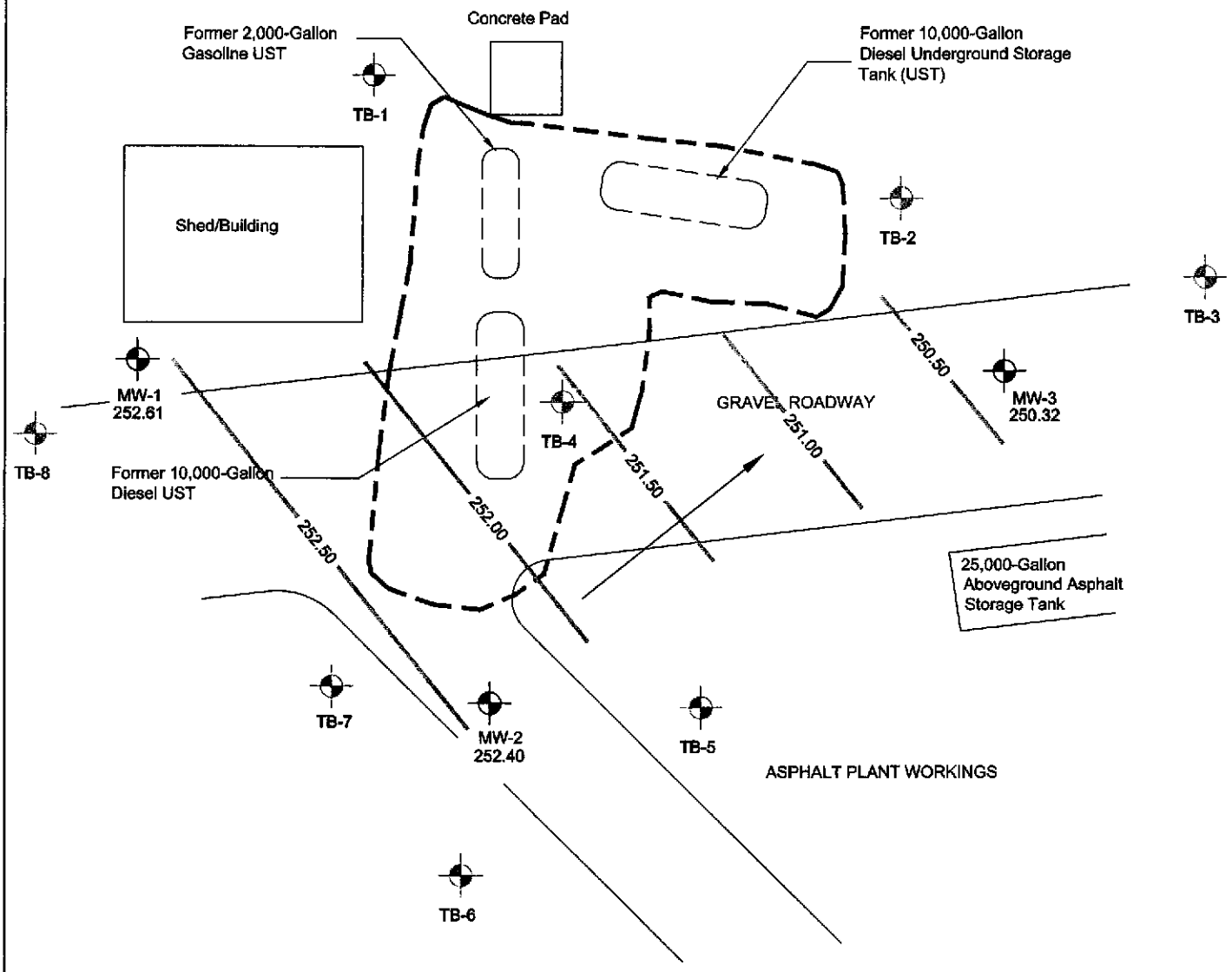
SITE VICINITY MAP

Mission Valley Rock Company
7999 Athenour Way
Sunol, California

PROJECT NO. EM-5010	FIGURE 1



LEGEND

Base map referenced from Tank Protect Engineers

All locations and dimensions are approximate

0 20

Scale (1" = 20')

North

TB-1 Location of soil borings

MW-1 252.61 Existing groundwater monitoring well location with groundwater elevation in feet above mean sea level (msl).

250.00 Groundwater contours in feet above msl (0.5 foot contour intervals)

General direction of groundwater flow

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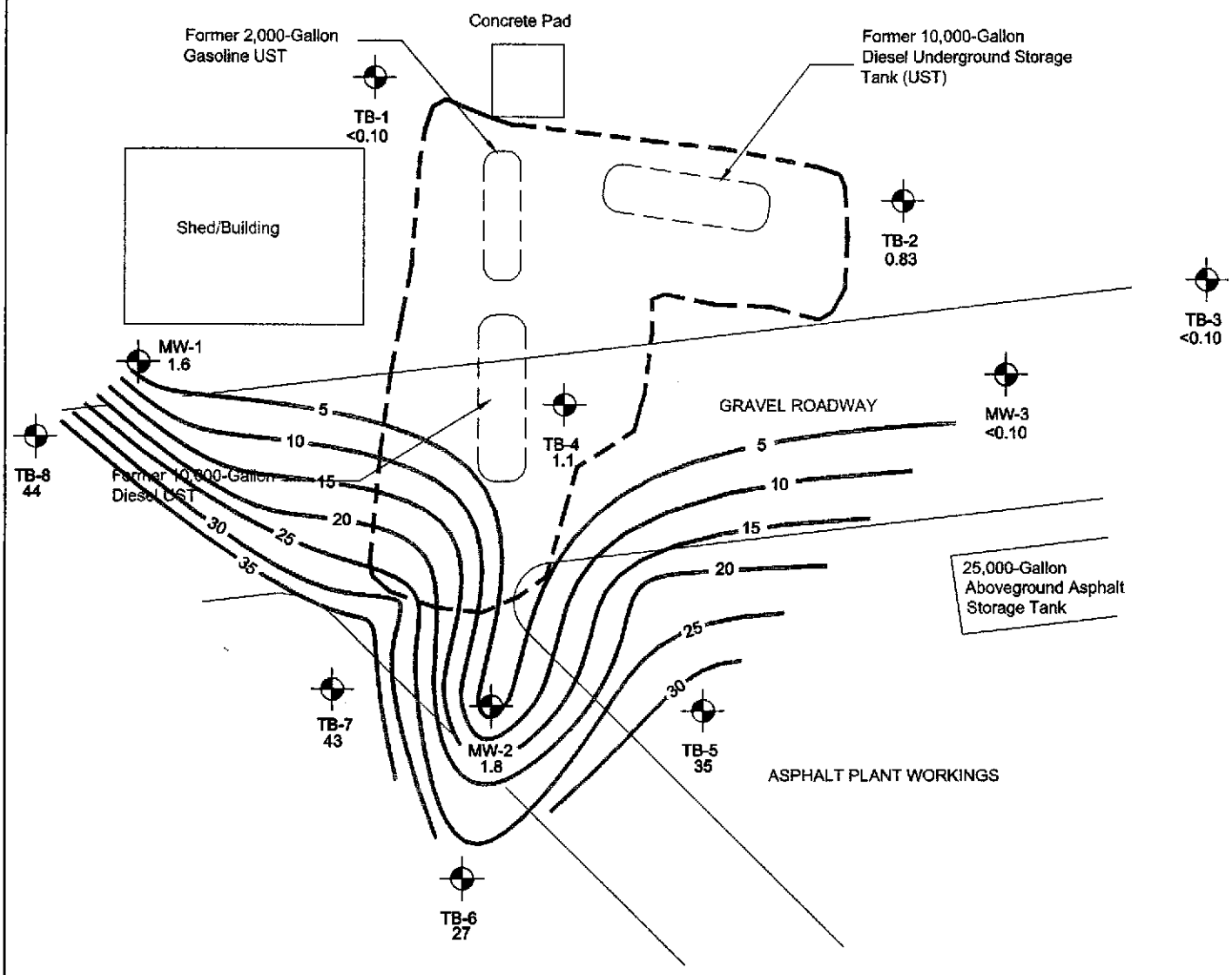
SITE PLAN WITH SOIL BORING LOCATIONS & GROUNDWATER CONTOURS (December 2002)

MISSION VALLEY ROCK CO.
7999 ATHENOUR WAY
SUNOL, CALIFORNIA

PROJECT NO. EM-5010	FIGURE 2



LEGEND

Base map referenced from Tank Protect Engineers

All locations and dimensions are approximate

0 20

Scale (1" = 20')

North

TB-1 <0.10 — Location of soil boring and groundwater samples (December 2002) with dissolved Total Petroleum Hydrocarbon as Gasoline (TPHg) concentration in milligrams per Liter (mg/L)

MW-1 1.6 — Existing groundwater monitoring well location with dissolved TPHg concentration in mg/L

5 — Dissolved TPHg contours in mg/L (5 mg/L contour intervals)

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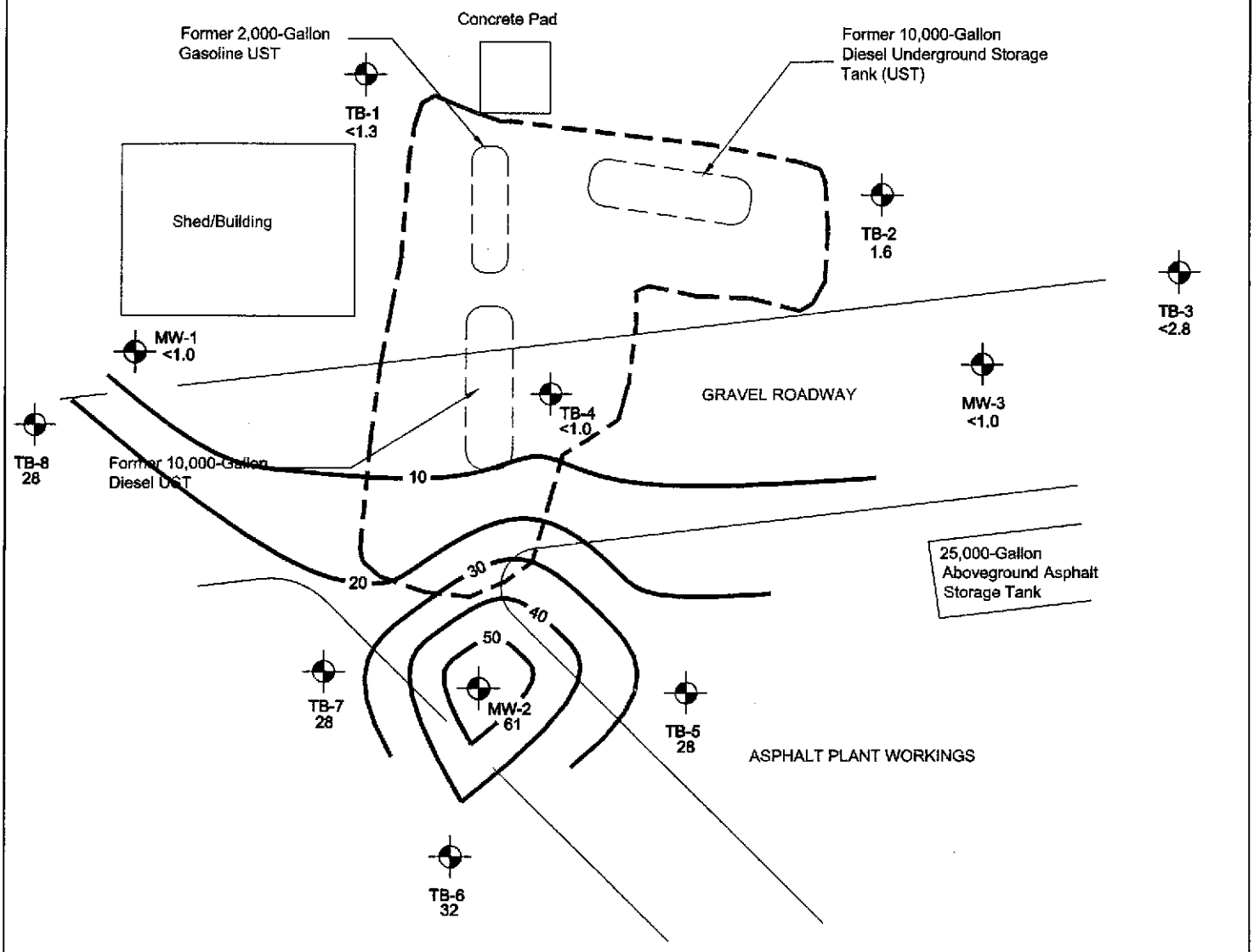
SITE PLAN WITH DISSOLVED THPg CONTOURS (December 2002)

MISSION VALLEY ROCK CO.
7999 ATHENOUR WAY
SUNOL, CALIFORNIA

PROJECT NO. EM-5010 | FIGURE 3



LEGEND

Base map referenced from Tank Protect Engineers

All locations and dimensions are approximate

0 20

Scale (1" = 20')

North

TB-1
<1.3

Location of soil boring and groundwater samples (December 2002) with dissolved Total Petroleum Hydrocarbon as Diesel (TPHd) concentration in milligrams per Liter (mg/L)

MW-1
<1.0

Existing groundwater monitoring well location with dissolved TPHd concentration in mg/L

10

Dissolved TPHd contours in mg/L (10 mg/L contour intervals)

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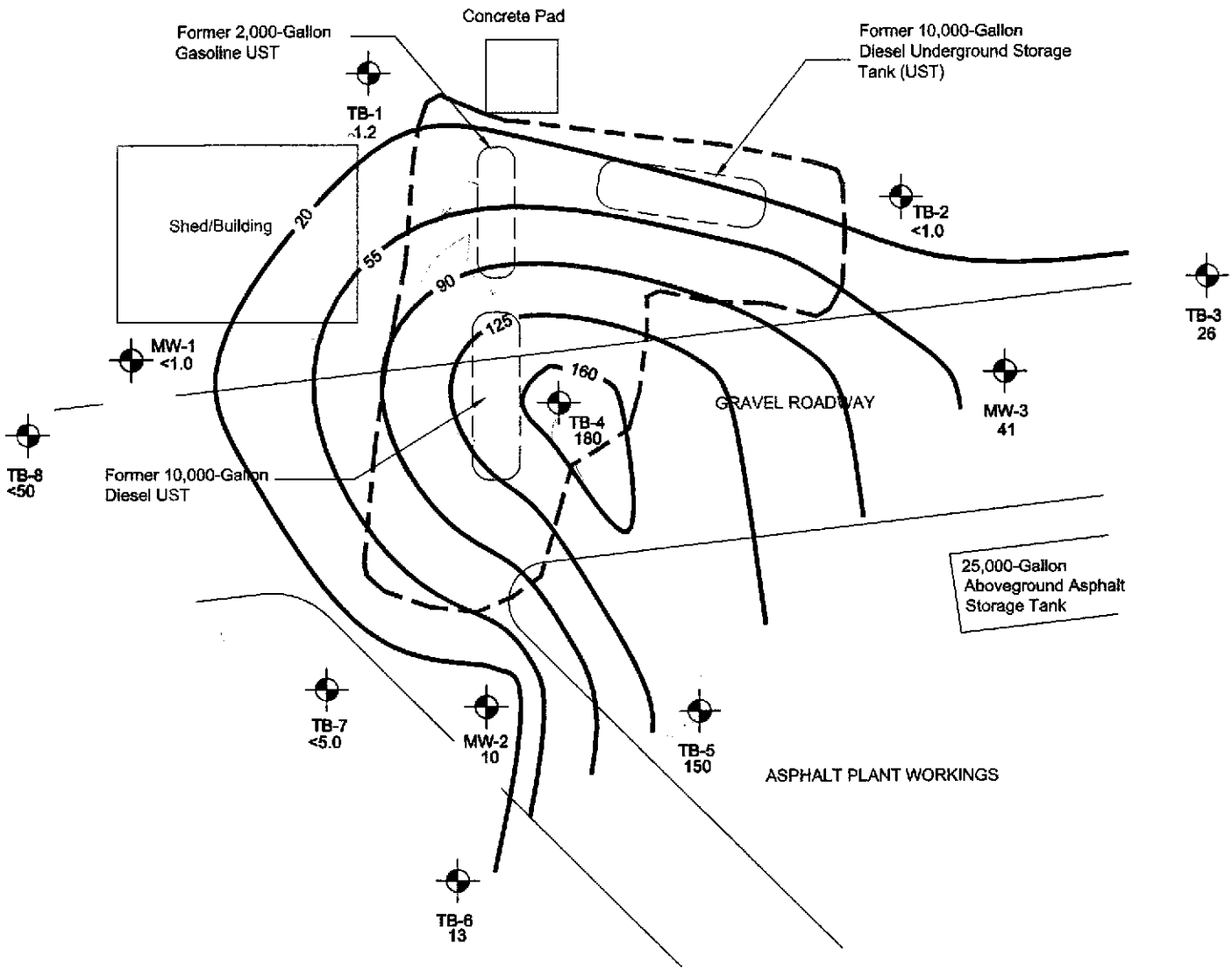
SITE PLAN WITH DISSOLVED THPd CONTOURS (December 2002)

MISSION VALLEY ROCK CO.
7999 ATHENOUR WAY
SUNOL, CALIFORNIA

PROJECT NO. EM-5010

FIGURE 4



LEGEND

Base map referenced from Tank Protect Engineers

All locations and dimensions are approximate

0 20

Scale (1" = 20')

North

TB-1 1.2 — Location of soil boring and groundwater samples (December 2002) with dissolved Methyl-tert-Butyl Ether (MTBE) concentration in micrograms per Liter (ug/L)

MW-1 <1.0 — Existing groundwater monitoring well location with dissolved MTBE concentration in ug/L

20 — Dissolved MTBE contours in ug/L (35 ug/L contour intervals)

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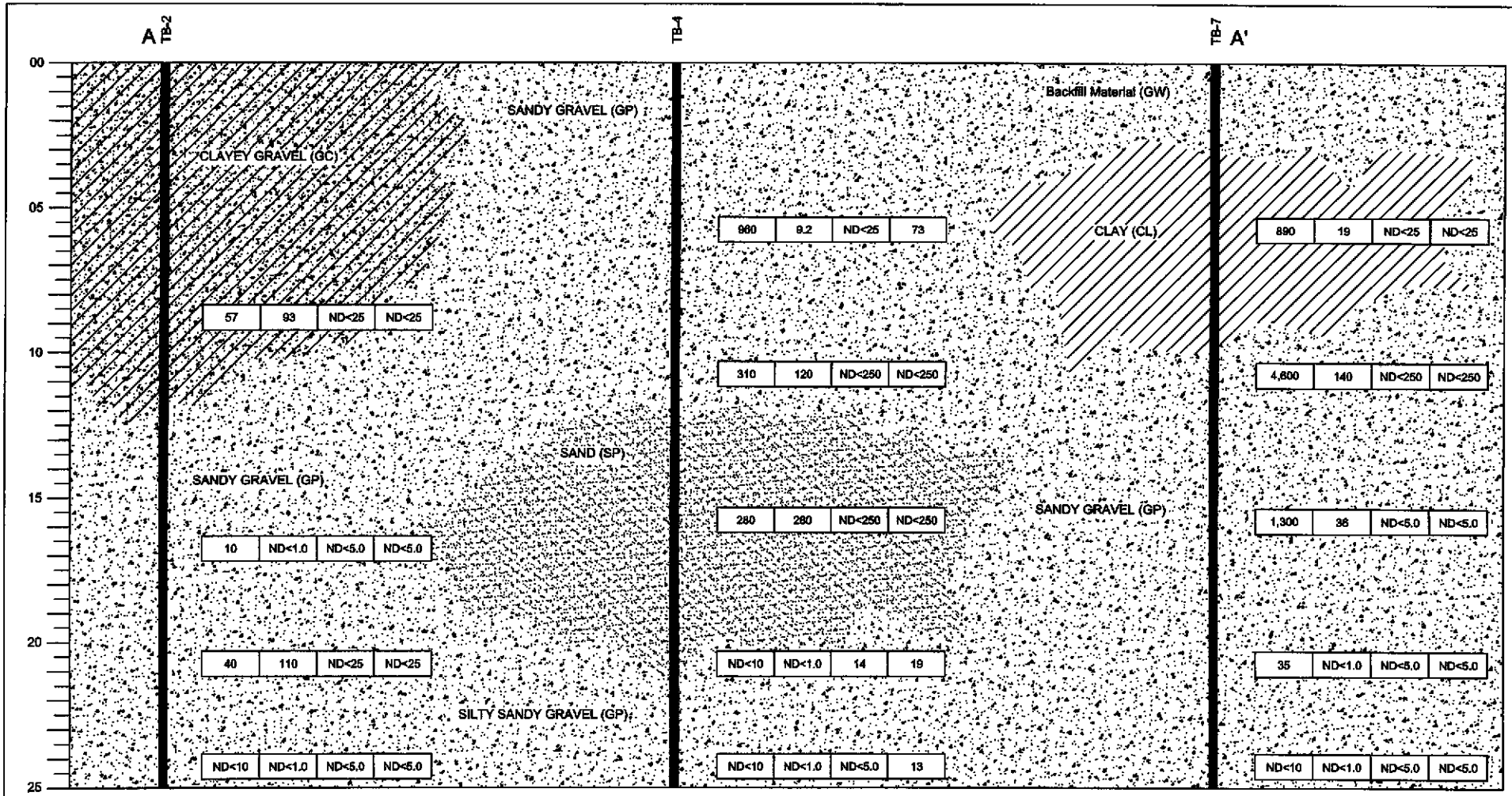
SITE PLAN WITH DISSOLVED MTBE CONTOURS (December 2002)

MISSION VALLEY ROCK CO.
7999 ATHENOUR WAY
SUNOL, CALIFORNIA

PROJECT NO. EM-5010 | FIGURE 5



LEGEND

All Locations and Dimensions are Approximate
TPHg = Total Petroleum Hydrocarbons as Gasoline
TPHd = Total Petroleum Hydrocarbons as Diesel
MTBE = Methyl-tert-Butyl Ether
mg/kg = Milligrams per Kilogram
ug/kg = Micrograms per Kilogram
ND = Not Detected at or Above Laboratory Reporting Limit

TPHd (mg/kg)	TPHg (mg/kg)	Benzene (ug/kg)	MTBE (ug/kg)

Soil Sample Analytical Results

Vertical: 0 5
Horizontal: 0 Scale 12

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SOIL CROSS-SECTION (TB-2, TB-4, TB-7)
(DECEMBER 2002)

MISSION VALLEY ROCK COMPANY
7999 ATHENOUR WAY
SUNOL, CALIFORNIA

PROJECT NO. EM-5010 | FIGURE 6

Table 1
Well Construction and Groundwater Elevation Data
Fourth 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	3.90	ND	18.89	5.0 - 20.0	256.51	252.61	Well cover to be replaced during 1st Quarter 2003
MW-2	2	ND	4.30	ND	18.94	5.0 - 20.0	256.70	252.40	Well cover to be replaced during 1st Quarter 2003
MW-3	2	ND	6.40	ND	16.91	5.0 - 20.0	256.72	250.32	Well cover to be replaced during 1st Quarter 2003

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 December 4, 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
Fourth 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	12/04/2002	ND<1.0	**1.6**	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
MW-2	12/04/2002	**61**	**1.8**	ND<1.0	ND<1.0	ND<1.0	ND<1.0	**10**
MW-3	12/04/2002	ND<1.0	ND<0.10	ND<1.0	ND<1.0	ND<1.0	ND<1.0	**41**

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.
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	LPH Thickness
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
	Jun-02	3.95	252.56	ND
	Sep-02	5.18	251.33	ND
	Dec-02	3.90	252.61	ND
MW-2	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
	Dec-02	4.30	252.40	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
	Dec-02	6.40	250.32	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
Fourth 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
	Dec-02	ND<1.0*	1.6*	ND<1.0	ND<1.0	ND<1.0	ND<1.0	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
	Dec-02	61*	1.8*	ND<1.0	ND<1.0	ND<1.0	ND<1.0	10

Table 4
Historical Groundwater Sample Analytical Results
Fourth 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
	Dec-02	ND<1.0*	ND<0.10*	ND<1.0	ND<1.0	ND<1.0	ND<1.0	41

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
TPHd = Total Petroleum Hydrocarbons as Gasoline

Sample ID	Date Sampled	Sample Depth (ft-bgs)	Total Petroleum Hydroca Gasoline (TPHg) and (TPHd) in mg/kg						Semi-Volatile Organic Compounds (SVOC's) in ug/kg		
			TPHd		1,3,5-Trimethylbenzene	m-Xylene & p-Xylene	o-Xylene	2-Methylnapthalene	Napthalene	Phenathrene
TB1-1	12/03/2002	15	**45**		<5.0	<5.0	<5.0	<330	<330	<330
TB1-2	12/03/2002	20	**92**		<5.0	<5.0	<5.0	<820	<820	<820
TB1-3	12/03/2002	25	**130**		<5.0	<5.0	<5.0	<330	<330	<330
TB1-4	12/03/2002	30.5	**10**		<5.0	<5.0	<5.0	<330	<330	<330
TB2-1	12/03/2002	8	**57**		<25	<25	<25	**670**	<330	<330
TB2-2	12/03/2002	16	**10**		<5.0	<5.0	<5.0	<330	<330	<330
TB2-3	12/03/2002	20	**40**		<25	<25	<25	<330	<330	<330
TB2-4	12/03/2002	24	<10		<5.0	<5.0	<5.0	<330	<330	<330
TB3-1	12/04/2002	4.5	<10		<5.0	<5.0	<5.0	<330	<330	<330
TB3-2	12/04/2002	10	**12**		<5.0	<5.0	<5.0	<330	<330	<330
TB3-3	12/04/2002	16	<10		<5.0	<5.0	<5.0	<330	<330	<330
TB3-4	12/04/2002	20	<10		<5.0	<5.0	<5.0	<330	<330	<330
TB3-5	12/04/2002	25	<10		<5.0	<5.0	<5.0	<330	<330	<330
TB4-1	12/03/2002	5	**960**		<5.0	<5.0	<5.0	<330	<330	<330
TB4-2	12/03/2002	10	**310**		<25	<25	<25	<330	<330	**330**
TB4-3	12/03/2002	15	**280**		<250	<250	<250	**1,600**	<330	**590**
TB4-4	12/03/2002	20	<10		**1,400**	**1,700**	**450**	**390**	<330	<330
TB4-5	12/03/2002	25	<10		<5.0	**10**	<5.0	<330	<330	<330
TB5-1	12/04/2002	5	**26**		**22**	**27**	**5.1**	<330	<330	<330
TB5-2	12/04/2002	10	**760**		<5.0	<5.0	<5.0	<330	<330	<330
TB5-3	12/04/2002	17	**1,100**		<25	<25	<25	**2,000**	**330**	**500**
TB5-4	12/04/2002	20	**140**		**30**	<20	<20	**590**	<330	**360**
TB5-5	12/04/2002	25	**210**		<5.0	<5.0	<5.0	<330	<330	<330
TB6-1	12/04/2002	5	**1,400**		<20	<20	<20	<330	<330	<330
TB6-2	12/04/2002	10	**740**		<20	<20	<20	**410**	<330	<330
TB6-3	12/04/2002	15	**90**		<25	<25	<25	<330	<330	<330
TB6-4	12/04/2002	20	<10		<5.0	<5.0	<5.0	<330	<330	<330
TB6-5	12/04/2002	25	**14**		<5.0	<5.0	<5.0	<330	<330	<330
TB7-1	12/04/2002	5	**890**		<5.0	<5.0	<5.0	<330	<330	<330
TB7-2	12/04/2002	10	**4,600**		<25	<25	<25	<330	<330	<330
TB7-3	12/04/2002	15	**1,300**		<250	<250	<250	**3,300**	<1,600	<1,600
TB7-4	12/04/2002	20	**35**		<5.0	**5.2**	<5.0	<330	<330	<330
TB7-5	12/04/2002	25	<10		<5.0	<5.0	<5.0	<330	<330	<330
TB8-1	12/03/2002	5	<10		<5.0	<5.0	<5.0	<330	<330	<330
TB8-2	12/03/2002	10	<10		<5.0	<5.0	<5.0	<330	<330	<330
TB8-3	12/03/2002	16	<10		<5.0	<5.0	<5.0	<330	<330	<330
TB8-4	12/03/2002	20	**14**		<5.0	<5.0	<5.0	<330	<330	<330
TB8-5	12/03/2002	24	<10		**390**	**480**	**47**	<300	<330	<330
					52	**64**	**9.5**	<300	<330	<330

Notes:
EPA Region 9 PRG's are for residential soils "Direct Contact Exposure Pathwa
Only the compounds detected at or above the labortatory reporting limit are sh
ft-bgs = feet below ground surface
mg/kg = milligrams per kilogram (parts per million)
ug/kg = micrograms per kilogram (parts per billion)

TABLE 5
SOIL SAMPLE ANALYTICAL SUMMARY
(DECEMBER 2002)

MISSION VALLEY ROCK COMPANY
7999 ATHENOUR WAY
SUNOL, CALIFORNIA

Sample ID	Date Sampled	Sample Depth (ft-bgs)	Total Petroleum Hydrocarbons as Gasoline (TPHg) and Diesel (TPHd) in mg/kg		Volatile Organic Compounds (VOC's) in ug/kg																Semi-Volatile Organic Compounds (SVOC's) in ug/kg		
			TPHd	TPHg	Acetone	Benzene	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Ethylbenzene	Isopropylbenzene (Cumene)	p-Isopropyltoluene (Cymene)	Methylene chloride	Methyl tert-butyl ether	Napthalene	n-Propylbenzene	Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m-Xylene & p-Xylene	o-Xylene	2-Methylnapthalene	Napthalene	Phenathrene
TB1-1	12/03/2002	15	**45**	<1.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<330	<330	<330
TB1-2	12/03/2002	20	**92**	<1.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<820	<820	<820
TB1-3	12/03/2002	25	**130**	<1.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<330	<330	<330
TB1-4	12/03/2002	30.5	**10**	<1.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<330	<330	<330
TB2-1	12/03/2002	8	**57**	**93**	<120	<25	**640**	**430**	<25	**44**	**280**	<25	<25	<25	**85**	**1,500**	<25	<25	<25	<25	<25	**670**	<330	<330
TB2-2	12/03/2002	16	**10**	<1.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<330	<330	<330
TB2-3	12/03/2002	20	**40**	**110**	<120	<25	**190**	**72**	**48**	<25	<25	**27**	<25	<25	<25	**110**	<25	<25	<25	<25	<25	<330	<330	<330
TB2-4	12/03/2002	24	<10	<1.0	<25	<5.0	**5.8**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**8.9**	<5.0	<5.0	<5.0	<5.0	<5.0	<330	<330	<330
TB3-1	12/04/2002	4.5	<10	<1.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<330	<330	<330
TB3-2	12/04/2002	10	**12**	<1.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<330	<330	<330
TB3-3	12/04/2002	16	<10	<1.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<330	<330	<330
TB3-4	12/04/2002	20	<10	<1.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<330	<330	<330
TB3-5	12/04/2002	25	<10	<1.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<330	<330	<330
TB4-1	12/03/2002	5	**960**	**9.2**	<120	<25	**130**	**120**	<25	<25	**140**	<25	<25	**73**	**570**	**610**	<25	<25	<25	<25	<25	<330	<330	<330
TB4-2	12/03/2002	10	**310**	**120**	<1,200	<250	**8,300**	**3,600**	<250	**1,300**	**3,600**	<250	<250	<250	**8,500**	**15,000**	<250	<250	<250	<250	<250	**1,600**	<330	**590**
TB4-3	12/03/2002	15	**280**	**280**	<1200	<250	**1,100**	**320**	<250	**1,300**	**350**	<250	<250	<250	**1,200**	**1,400**	<250	**4,400**	**1,400**	**1,700**	**450**	**390**	<330	<330
TB4-4	12/03/2002	20	<10	<1.0	**30**	**14**	<5.0	<5.0	<5.0	**5.8**	<5.0	<5.0	<5.0	**19**	<5.0	<5.0	<5.0	**7.6**	<5.0	**10**	<5.0	<330	<330	<330
TB4-5	12/03/2002	25	<10	<1.0	<25	<5.0	**6.7**	<5.0	<5.0	**22**	<5.0	<5.0	<5.0	**13**	**9**	**18**	<5.0	**61**	**22**	**27**	**5.1**	<330	<330	<330
TB5-1	12/04/2002	5	**26**	<1.0	**33**	<5.0	**29**	**24**	<5.0	<5.0	**23**	<5.0	<5.0	**11**	<5.0	**92**	<5.0	<5.0	<5.0	<5.0	<5.0	<330	<330	<330
TB5-2	12/04/2002	10	**760**	**49**	<120	<25	**470**	**250**	<25	<25	**190**	<25	<25	<25	**550**	**780**	<25	<25	<25	<25	<25	**2,000**	**330**	**500**
TB5-3	12/04/2002	17	**1,100**	**71**	<100	<20	**120**	**57**	<20	**59**	**51**	<20	<20	<20	**230**	**190**	<20	**280**	**30**	<20	<20	**590**	<330	**360**
TB5-4	12/04/2002	20	**140**	**17**	<25	<5.0	**11**	**5.5**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**14**	<5.0	<5.0	<5.0	<5.0	<5.0	<330	<330	<330
TB5-5	12/04/2002	25	**210**	**52**	<100	<20	**240**	**120**	<20	**36**	**65**	<20	<20	<20	**50**	**290**	<20	<20	<20	<20	<20	<330	<330	<330
TB6-1	12/04/2002	5	**1,400**	**22**	<100	<20	**200**	**150**	<20	<20	**77**	<20	<20	<20	**390**	**300**	<20	<20	<20	<20	<20	**410**	<330	<330
TB6-2	12/04/2002	10	**740**	**86**	<120	<25	**190**	**130**	<25	<25	**29**	<25	<25	<25	**43**	**76**	<25	<25	<25	<25	<25	<330	<330	<330
TB6-3	12/04/2002	15	**90**	<1.0	<25	<5.0	**14**	**8.6**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**9.0**	**7.8**	<5.0	<5.0	<5.0	<5.0	<5.0	<330	<330	<330
TB6-4	12/04/2002	20	<10	<1.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<330	<330	<330
TB6-5	12/04/2002	25	**14**	<1.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<330	<330	<330
TB7-1	12/04/2002	5	**890**	**19**	<120	<25	<25	**45**	<25	<25	<25	<25	<25	<25	<25	**31**	<25	<25	<25	<25	<25	<330	<330	<330
TB7-2	12/04/2002	10	**4,600**	**140**	<1,200	<250	**550**	**420**	<250	<250	<250	<250	<250	<250	**880**	**360**	<250	<250	<250	<250	<250	**3,300**	<1,600	<1,600
TB7-3	12/04/2002	15	**1,300**	**36**	<25	<5.0	**9.1**	**8.4**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**15**	**9.3**	**5.8**	<5.0	<5.0	**5.2**	<5.0	<330	<330	<330
TB7-4	12/04/2002	20	**35**	<1.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<330	<330	<330
TB7-5	12/04/2002	25	<10	<1.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<330	<330	<330
TB8-1	12/03/2002	5	<10	<1.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<330	<330	<330
TB8-2	12/03/2002	10	<10	<1.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<330	<330	<330
TB8-3	12/03/2002	16	<10	<1.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<330	<330	<330
TB8-4	12/03/2002	20	**14**	**27**	<120	<25	**160**	**49**	<25	**410**	**78**	**33**	<25	<25	**250**	**350**	<25	**1,300**	**390**	**480**	**47**	<300	<330	<330
TB8-5	12/03/2002	24	<10	**25**	<25	**74**	**79**	**28**	**6.9**	**320**	**55**	**27**	<5.0	<5.0	**100**	**190**	**10**	**180**	**52**	**64**	**9.5**	<300	<330	<330

Notes:
EPA Region 9 PRG's are for residential soils "Direct Contact Exposure Pathways" - October 2002.
Only the compounds detected at or above the labortatory reporting limit are shown.
ft-bgs = feet below ground surface
mg/kg = milligrams per kilogram (parts per million)
ug/kg = micrograms per kilogram (parts per billion)

ZONE 7 WATER AGENCY MANAGEMENT
5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588-5127 VOICE (925) 484-2600 X235 FAX (925) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT Mission Valley Rock Company
7999 Athenaeur Way, Sunol, CA

California Coordinates Source ~~GPS~~ USGS Map Accuracy± NA ft.
CCN NA ft. CCE NA ft.
APN NA

CLIENT
Name Mission Valley Rock Co.
Address 7999 Athenaeur Way Phone (925) 862-2257
City Sunol Zip 94586

APPLICANT
Name Tait Environmental Management, Inc.
Fax (714) 560-8235
Address 701 N. Parkcenter Dr. Phone (714) 560-8200
City Santa Ana Zip 92705

TYPE OF PROJECT:
Well Construction — Geotechnical Investigation
Well Destruction — (Contamination Investigation)
Cathodic Protection — Other

PROPOSED WELL USE:
Domestic — Irrigation
Municipal — Remediation
Industrial — Groundwater Monitoring
Dewatering — Other

DRILLING METHOD:
Mud Rotary — Air Rotary — Hollow Stem Auger
Cable Tool — (Direct Push) — Other

DRILLING COMPANY Vironex, Inc.
DRILLER'S LICENSE NO. 705927

WELL SPECIFICATIONS:
Drill Hole Diameter in. Maximum
Casing Diameter in. Depth ft.
Surface Seal Depth ft. Number

SOIL BORINGS:
Number of Borings 8 Maximum
Hole Diameter 0.5 in. Depth 25 ft.

ESTIMATED STARTING DATE 12/3/02
ESTIMATED COMPLETION DATE 12/6/02

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.
APPLICANT'S SIGNATURE Scott E. Tait Date 11/15/02

ATTACH SITE PLAN OR SKETCH

FOR OFFICE USE

PERMIT NUMBER 22169
WELL NUMBER
APN

PERMIT CONDITIONS

Circled Permit Requirements Apply

A. GENERAL
(1.) A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
(2.) Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
(3.) Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal diameter is four inches greater than the well casing diameter.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.
3. Grout placed by tremie.
4. An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements.
5. A sample port is required on the discharge pipe near the wellhead.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal diameter is four inches greater than the well or piezometer casing diameter.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
3. Grout placed by tremie.

(D.) GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION. See attached.

(G.) SPECIAL CONDITIONS:, Submit to Zone 7 within 60 days after completion of permitted work the well installation report **including all soil and water laboratory analysis results.**

Approved Wyman Hong Date 11/18/02
Wyman Hong

P:\WRE\WYMAN\drilling permit.wpd

Revised: March 26, 2002

Call Toll Fr ~~800-227-2600~~ 800-642-2444
2 working days before you dig

DigAlert No. 485733

DIG ALERT

LOCATION REQUEST FORM

For faster service, prior to calling fill out non-italicized fields

Date 11/25/02 Time 8:41 *Oper* _____

Company TAIT Environmental Caller Scott Ek

Address 701 N. Parkcenter Dr.

City Santa Ana State CA Zip 92705

Phone (714) 560-8694 Call Back _____

Alt Phone (714) 719-6895 Fax (714) 560-8235

Foreman Saeed Haider

County Alameda City Sunol

Delineated ☒ Yes ☐ No

Street Address 7999 Dir _____

Street Athenour Way Suf Way

Closest X/St Andrade Road Suf _____

If more than 1 address or descriptive location _____

Thomas Guide Page & Grid _____

Permit No. _____ Type of work Drilling

Work being done for Mission Valley Rock Company

Instructions Mark site

Work to begin: Date 12/3/02 Time 7:00 AM

Update on/or before date: 12/9/02

Members notified by USA _____

Underground Service Alert of Southern California

REV. 7-97

PROJECT: Mission Valley Rock Company	PROJECT NUMBER: EM-5010
LOGGED BY: Saeed Haider	START DATE: 12/03/2002
CHECKED BY: MP	COMPLETION DATE: 12/03/2002
GROUND SURFACE ELEVATION (FT-MSL): NA	DRILLING COMPANY: Vironex
DRILLING EQUIPMENT: Truck Mounted Geoprobe Unit	
BORING DEPTH (FT): 35 / WELL DEPTH (FT): NA	INITIAL WATER DEPTH (FT): NA
WELL MATERIALS: NA	WELL SCREEN INTERVAL (FT): NA
WELL CASING ELEVATION (FT-MSL): NA	FID/PID: NA
BACKFILL MATERIAL: Hydrated Bentonite Chips	

DEPTH (FT)	LITHOLOGY DESCRIPTION	GRAPHIC	BLOW COUNT	FID/PID (PPM)	SAMPLE RECOVERY	SAMPLE TIME	SAMPLE TYPE	SAMPLE NUMBER	ANALYTICAL TPHd (mg/kg)	ANALYTICAL TPHg (mg/kg)	ANALYTICAL Benzene (ug/kg)	ANALYTICAL MTBE (ug/kg)
00	Backfill Material (FILL): Gravel and Sand Fill											
05												
10	Backfill Material (SP): Gravel (~20%) and Sand (~80%) Fill						X					
15	CLAY (CL): Greenish Black (Gley 1 2.5/1), Moist, Stiff, Medium Plasticity, Well Indurated		NA	NA	100%	14:00	X	TB1-1	45	ND<1.0	ND<5.0	ND<5.0
	SAND (SP): Dark Red (10R 3/6), Wet, Dense, 80% Medium Grained Sand, 20% Coarse Grained Sand, Poorly Graded											
20	Clay Lens (~1.5')		NA	NA	40%	14:10	X	TB1-2	92	ND<1.0	ND<5.0	ND<5.0
	SANDY/GRAVEL (GP): Dark Red (10YR 3/6), Moist, Dense, Gravel (~60%), Medium Grained Sand (~40%), Poorly Graded, Sub-Angular to Angular											
25												

BORING DESIGNATION		PAGE NUMBER	FIGURE NUMBER
TB-1	Tait Environmental Management, Inc. Engineering - Environmental - Compliance	1 of 2	

PROJECT: Mission Valley Rock Company

PROJECT NUMBER: EM-5010

DEPTH (FT)	LITHOLOGIC DESCRIPTION	GRAPHIC	BLOW COUNT	OVM/OVA (PPM)	SAMPLE RECOVERY	SAMPLE TIME	SAMPLE TYPE	SAMPLE NUMBER	ANALYTICAL TPHd (mg/kg)	ANALYTICAL TPHg (mg/kg)	ANALYTICAL Benzene (ug/kg)	ANALYTICAL MTBE (ug/kg)
25	SANDY/GRAVEL (GP): Dark Red (10YR 3/6), Moist, Dense, Gravel (~60%), Medium Grained Sand (~40%), Poorly Graded, Sub-Angular to Angular		NA	NA	100%	14:20	X	TB1-3	130	ND<1.0	ND<5.0	ND<5.0
30	CLAY (CL): Greenish Black (Gley1 2.5/1), Wet, Stiff, Medium Plasticity, Well Indurated		NA	NA	100%	14:30	X	TB1-4	10	ND<1.0	ND<5.0	ND<5.0
35												
40												
45												
50												
55												

BORING DESIGNATION

TB-1

Tait Environmental Management, Inc.
Engineering-Environmental-Compliance

PROJECT: Mission Valley Rock Company	PROJECT NUMBER: EM-5010
LOGGED BY: Saeed Haider	START DATE: 12/03/2002
CHECKED BY: MP	COMPLETION DATE: 12/03/2002
GROUND SURFACE ELEVATION (FT-MSL): NA	DRILLING COMPANY: Vironex
DRILLING EQUIPMENT: Truck Mounted Geoprobe Unit	
BORING DEPTH (FT): 25 / WELL DEPTH (FT): NA	INITIAL WATER DEPTH (FT): ~8
WELL MATERIALS: NA	WELL SCREEN INTERVAL (FT): NA
WELL CASING ELEVATION (FT-MSL): NA	FID/PID: NA
BACKFILL MATERIAL: Hydrated Bentonite Chips	

DEPTH (FT)	LITHOLOGY DESCRIPTION	GRAPHIC	BLOW COUNT	FID/PID (PPM)	SAMPLE RECOVERY	SAMPLE TIME	SAMPLE TYPE	SAMPLE NUMBER	ANALYTICAL TPHd (mg/kg)	ANALYTICAL TPHg (mg/kg)	ANALYTICAL Benzene (ug/kg)	ANALYTICAL MTBE (ug/kg)
00												
	CLAYEY GRAVEL (GC): Black (5Y 2.5/2), Moist, Dense, 60% Gravel, 40% Clay/Silt											
05												
			NA	NA	100%	9:50	X	TB2-1	57	93	ND<25	ND<25
10												
	SANDY GRAVEL (GP): Black (5Y 2.5/2), Moist, Dense, 70% Gravel, 20% Medium Grained Sand, 10% Clay, Graded Sorted											
15			NA	NA	100%	10:00	X	TB2-2	10	ND<1.0	ND<5.0	ND<5.0
20	Medium Grained Sand Content Increases		NA	NA	100%	10:10	X	TB2-3	40	110	ND<25	ND<25
25			NA	NA	100%	10:20	X	TB2-4	ND<10	ND<1.0	ND<5.0	ND<5.0

BORING DESIGNATION		PAGE NUMBER	FIGURE NUMBER
TB-2	Tait Environmental Management, Inc. Engineering • Environmental • Compliance	1 of 1	

PROJECT: Mission Valley Rock Company	PROJECT NUMBER: EM-5010
LOGGED BY: Saeed Haider	START DATE: 12/04/2002
CHECKED BY: MP	COMPLETION DATE: 12/04/2002
GROUND SURFACE ELEVATION (FT-MSL): NA	DRILLING COMPANY: Vironex
DRILLING EQUIPMENT: Truck Mounted Geoprobe Unit	
BORING DEPTH (FT): 25 / WELL DEPTH (FT): NA	INITIAL WATER DEPTH (FT): ~8
WELL MATERIALS: NA	WELL SCREEN INTERVAL (FT): NA
WELL CASING ELEVATION (FT-MSL): NA	FID/PID: NA
BACKFILL MATERIAL: Hydrated Bentonite Chips	

DEPTH (FT)	LITHOLOGY: DESCRIPTION	GRAPHIC	BLOW COUNT	FID/PID (PPM)	SAMPLE: RECOVERY	TIME	TYPE	NUMBER	ANALYTICAL: TPHd (mg/kg)	TPHg (mg/kg)	Benzene (ug/kg)	MTBE (ug/kg)
00												
05	Backfill Material (FILL): Gravel and Sand Fill		NA	NA	100%	9:00	X	TB3-1	ND<10	ND<1.0	ND<5.0	ND<5.0
10	CLAY (CL): Black (Gley1 2.5), Moist, Stiff, Medium Plasticity, Well Indurated		NA	NA	100%	9:10	X	TB3-2	12	ND<1.0	ND<5.0	ND<5.0
15	SANDY GRAVEL (GP): Dark Brown (7.5YR 3/3), Moist, Dense, 60% Coarse Gravel, 30% Medium Grained Sand, 10% Clay, Poorly Graded, Moderately Indurated Change in Color @ 16' from Dark Brown to Greenish Black		NA	NA	100%	9:20	X	TB3-3	ND<10	ND<1.0	ND<5.0	ND<5.0
20			NA	NA	100%	9:30	X	TB3-4	ND<10	ND<1.0	ND<5.0	ND<5.0
25			NA	NA	100%	9:40	X	TB3-5	ND<10	ND<1.0	ND<5.0	ND<5.0

BORING DESIGNATION		PAGE NUMBER	FIGURE NUMBER
TB-3	Tait Environmental Management, Inc. Engineering • Environmental • Compliance	1 of 1	

PROJECT: Mission Valley Rock Company	PROJECT NUMBER: EM-5010
LOGGED BY: Saeed Haider	START DATE: 12/03/2002
CHECKED BY: MP	COMPLETION DATE: 12/03/2002
GROUND SURFACE ELEVATION (FT-MSL): NA	DRILLING COMPANY: Vironex
DRILLING EQUIPMENT: Truck Mounted Geoprobe Unit	
BORING DEPTH (FT): 25 / WELL DEPTH (FT): NA	INITIAL WATER DEPTH (FT): ~19
WELL MATERIALS: NA	WELL SCREEN INTERVAL (FT): NA
WELL CASING ELEVATION (FT-MSL): NA	FID/PID: NA
BACKFILL MATERIAL: Hydrated Bentonite Chips	

DEPTH (FT)	LITHOLOGY DESCRIPTION	GRAPHIC	BLOW COUNT	FID/PID (PPM)	SAMPLE RECOVERY	SAMPLE TIME	SAMPLE TYPE	SAMPLE NUMBER	ANALYTICAL TPHd (mg/kg)	ANALYTICAL TPHg (mg/kg)	ANALYTICAL Benzene (ug/kg)	ANALYTICAL MTBE (ug/kg)
00	SANDY GRAVEL (GP): Brown (7.5YR), Moist, Dense, 75% Gravel, 25% Medium Grained Sand, Poorly Graded, Sub-Angular											
05			NA	NA	100%		X	TB4-1	960	9.2	ND<25	73
10			NA	NA	100%		X	TB4-2	310	120	ND<250	ND<250
15	SAND (SP): Olive (5Y 4/4), Moist, Dense, 75% Coarse Grained Sand, 25% Gravel, Poorly Graded, Well Indurated		NA	NA	100%		X	TB4-3	280	280	ND<250	ND<250
20			NA	NA	100%		X	TB4-4	ND<10	ND<1.0	14	19
25	SILTY SANDY GRAVEL (GP): Olive (5Y 4/4), Wet, Dense, 70% Medium Gravel, 20% Medium Grained Sand, 10% Silt, Poorly Graded, Well Indurated		NA	NA	100%		X	TB4-5	ND<10	ND<1.0	ND<5.0	13

BORING DESIGNATION		PAGE NUMBER	FIGURE NUMBER
TB-4	Tait Environmental Management, Inc. Engineering - Environmental - Compliance	1 of 1	

PROJECT: Mission Valley Rock Company	PROJECT NUMBER: EM-5010
LOGGED BY: Saeed Halder	START DATE: 12/04/2002
CHECKED BY: MP	COMPLETION DATE: 12/04/2002
GROUND SURFACE ELEVATION (FT-MSL): NA	DRILLING COMPANY: Vironex
DRILLING EQUIPMENT: Truck Mounted Geoprobe Unit	
BORING DEPTH (FT): 25 / WELL DEPTH (FT): NA	INITIAL WATER DEPTH (FT): ~19
WELL MATERIALS: NA	WELL SCREEN INTERVAL (FT): NA
WELL CASING ELEVATION (FT-MSL): NA	FID/PID: NA
BACKFILL MATERIAL: Hydrated Bentonite Chips	

DEPTH (FT)	LITHOLOGY DESCRIPTION	GRAPHIC	BLOW COUNT	FID/PID (PPM)	SAMPLE RECOVERY	SAMPLE TIME	SAMPLE TYPE	SAMPLE NUMBER	ANALYTICAL TPHd (mg/kg)	TPHg (mg/kg)	Benzene (ug/kg)	MTBE (ug/kg)
00	Backfill Material (GW): Gravel and Sand Fill											
05	CLAY (CL): Black (5Y 2.5/1), Moist, Stiff, Medium Plasticity, Well Indurated		NA	NA	100%	10:00	X	TB5-1	26	ND<1.0	ND<5.0	11
10	CLAYEY SAND (SC): Black (5Y 2.5/1), Moist, Dense, 80% Medium Grained Sand, 20% Clay, Low Plasticity, Well Indurated		NA	NA	100%	10:10	X	TB5-2	760	49	ND<25	ND<25
15												
20	SANDY GRAVEL (GP): Dark Greenish Gray (Gley 1 3/1), Wet, Dense, 70% Coarse Gravel, 20% Medium Grained Sand, 10% Clay, Poorly Graded, Poorly Indurated		NA	NA	100%	10:20	X	TB5-3	1,100	71	ND<20	ND<20
			NA	NA	100%	10:30	X	TB5-4	140	17	ND<5.0	ND<5.0
25			NA	NA	100%	10:40	X	TB5-5	210	52	ND<20	ND<20

BORING DESIGNATION		PAGE NUMBER	FIGURE NUMBER
TB-5	Tait Environmental Management, Inc. Engineering•Environmental•Compliance	1 of 1	

PROJECT: Mission Valley Rock Company	PROJECT NUMBER: EM-5010
LOGGED BY: Saeed Haider	START DATE: 12/04/2002
CHECKED BY: MP	COMPLETION DATE: 12/04/2002
GROUND SURFACE ELEVATION (FT-MSL): NA	DRILLING COMPANY: Vironex
DRILLING EQUIPMENT: Truck Mounted Geoprobe Unit	
BORING DEPTH (FT): 25 / WELL DEPTH (FT): NA	INITIAL WATER DEPTH (FT): ~14
WELL MATERIALS: NA	WELL SCREEN INTERVAL (FT): NA
WELL CASING ELEVATION (FT-MSL): NA	FID/PID: NA
BACKFILL MATERIAL: Hydrated Bentonite Chips	

DEPTH (FT)	LITHOLOGY: DESCRIPTION	GRAPHIC	BLOW COUNT	FID/PID (PPM)	SAMPLE: RECOVERY	TIME	TYPE	NUMBER	ANALYTICAL: TPHd (mg/kg)	TPHg (mg/kg)	Benzene (ug/kg)	MTBE (ug/kg)
00	Backfill Material (GW): Gravel and Sand Fill											
05	CLAY (CL): Black (5Y 2.5/1), Moist, Stiff, Medium Plasticity, Well Indurated		NA	NA	100%	11:30	X	TB6-1	1,400	22	ND<20	ND<20
10			NA	NA	100%	11:40	X	TB6-2	740	86	ND<25	ND<25
15	SANDY GRAVEL (GP): Dark Greenish Gray (Gley 1 3/1), Wet, Dense, 70% Coarse Gravel, 20% Medium Grained Sand, 10% Clay, Poorly Graded, Poorly Indurated		NA	NA	100%	11:50	X	TB6-3	90	ND<1.0	ND<5.0	ND<5.0
20	CLAY (CL): Black (5Y 2.5/1), Moist, Stiff, Medium Plasticity, Well Indurated		NA	NA	100%	12:00	X	TB6-4	ND<10	ND<1.0	ND<5.0	ND<5.0
25	SANDY GRAVEL (GP): Dark Greenish Gray (Gley 1 3/1), Wet, Dense, 70% Coarse Gravel, 20% Medium Grained Sand, 10% Clay, Poorly Graded, Poorly Indurated		NA	NA	100%	12:10	X	TB6-5	14	ND<1.0	ND<5.0	ND<5.0

BORING DESIGNATION		PAGE NUMBER	FIGURE NUMBER
TB-6	Tait Environmental Management, Inc. Engineering-Environmental-Compliance	1 of 1	

PROJECT: Mission Valley Rock Company	PROJECT NUMBER: EM-5010
LOGGED BY: Saeed Haider	START DATE: 12/04/2002
CHECKED BY: MP	COMPLETION DATE: 12/04/2002
GROUND SURFACE ELEVATION (FT-MSL): NA	DRILLING COMPANY: Vironex
DRILLING EQUIPMENT: Truck Mounted Geoprobe Unit	
BORING DEPTH (FT): 25 / WELL DEPTH (FT): NA	INITIAL WATER DEPTH (FT): ~10-11
WELL MATERIALS: NA	WELL SCREEN INTERVAL (FT): NA
WELL CASING ELEVATION (FT-MSL): NA	FID/PID: NA
BACKFILL MATERIAL: Hydrated Bentonite Chips	

DEPTH (FT)	LITHOLOGY: DESCRIPTION	GRAPHIC	BLOW COUNT	FID/PID (PPM)	SAMPLE: RECOVERY	TIME	TYPE	NUMBER	ANALYTICAL: TPHd (mg/kg)	TPHg (mg/kg)	Benzene (ug/kg)	MTBE (ug/kg)
00	Backfill Material (GW): Gravel and Sand Fill											
05	CLAY (CL): Black (5Y 2.5/1), Moist, Stiff, Medium Plasticity, Well Indurated		NA	NA	100%	13:00	X	TB7-1	890	19	ND<25	ND<25
10			NA	NA	100%	13:10	X	TB7-2	4,600	140	ND<250	ND<250
15	SANDY GRAVEL (GP): Dark Greenish Gray (Gley 1 3/1), Wet, Dense, 70% Coarse Gravel, 20% Medium Grained Sand, 10% Clay, Poorly Graded, Poorly Indurated		NA	NA	100%	13:20	X	TB7-3	1,300	36	ND<5.0	ND<5.0
20			NA	NA	100%	13:30	X	TB7-4	35	ND<1.0	ND<5.0	ND<5.0
25			NA	NA	100%	13:40	X	TB7-5	ND<10	ND<1.0	ND<5.0	ND<5.0

BORING DESIGNATION		PAGE NUMBER	FIGURE NUMBER
TB-7	Tait Environmental Management, Inc. Engineering - Environmental - Compliance	1 of 1	

PROJECT: Mission Valley Rock Company	PROJECT NUMBER: EM-5010
LOGGED BY: Saeed Haider	START DATE: 12/03/2002
CHECKED BY: MP	COMPLETION DATE: 12/03/2002
GROUND SURFACE ELEVATION (FT-MSL): NA	DRILLING COMPANY: Vironex
DRILLING EQUIPMENT: Truck Mounted Geoprobe Unit	
BORING DEPTH (FT): 25 / WELL DEPTH (FT): NA	INITIAL WATER DEPTH (FT): ~12
WELL MATERIALS: NA	WELL SCREEN INTERVAL (FT): NA
WELL CASING ELEVATION (FT-MSL): NA	FID/PID: NA
BACKFILL MATERIAL: Hydrated Bentonite Chips	

DEPTH (FT)	LITHOLOGY: DESCRIPTION	GRAPHIC	BLOW COUNT	FID/PID (PPM)	SAMPLE: RECOVERY	TIME	TYPE	NUMBER	ANALYTICAL: TPHd (mg/kg)	TPHg (mg/kg)	Benzene (ug/kg)	MTBE (ug/kg)
00												
05	SAND (SP): Dark Brown (7.5YR 3/2), Wet, Dense, 75% Medium Grained Sand, 25% Gravel, Poorly Graded, Poorly Indurated, Angular to Sub-Angular		NA	NA	100%	12:30	X	TB8-1	ND<10	ND<1.0	ND<5.0	ND<5.0
10			NA	NA	100%	12:40	X	TB8-2	ND<10	ND<1.0	ND<5.0	ND<5.0
15	SANDY GRAVEL (GP): Olive (5Y 4/4), Wet, Dense, 70% Coarse Gravel, 20% Medium Grained Sand, 10% Silt, Poorly Graded, Moderately Indurated		NA	NA	80%	12:50	X	TB8-3	ND<10	ND<1.0	ND<5.0	ND<5.0
20			NA	NA	100%	13:00	X	TB8-4	14	27	ND<25	ND<25
25			NA	NA	100%	13:10	X	TB8-5	ND<10	25	74	ND<5.0

BORING DESIGNATION		PAGE NUMBER	FIGURE NUMBER
TB-8	Tait Environmental Management, Inc. Engineering-Environmental-Compliance	1 of 1	

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

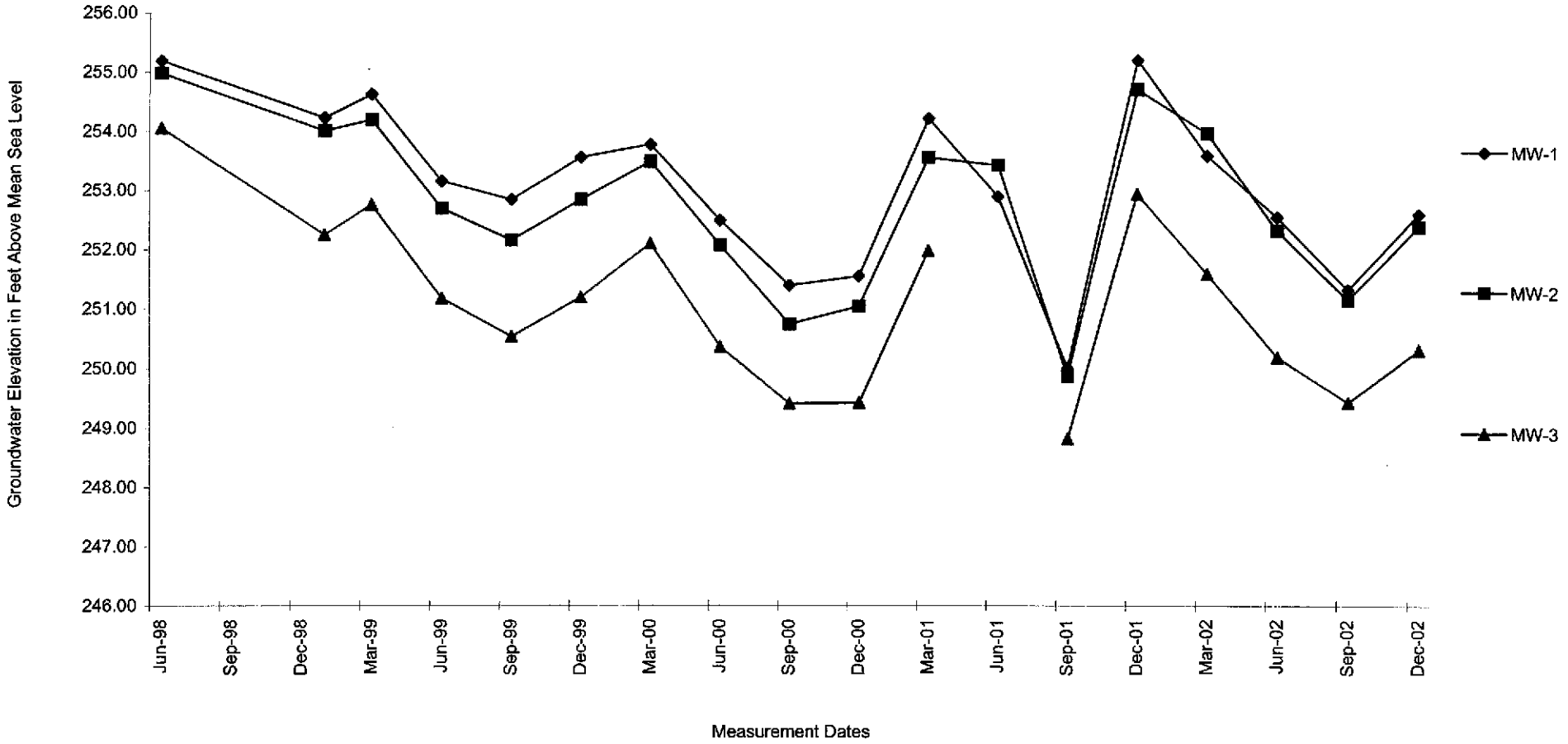

Chart 2
Historical TPHd Concentrations - Third Quarter 2002
Mission Valley Rock Company
Sunol, California

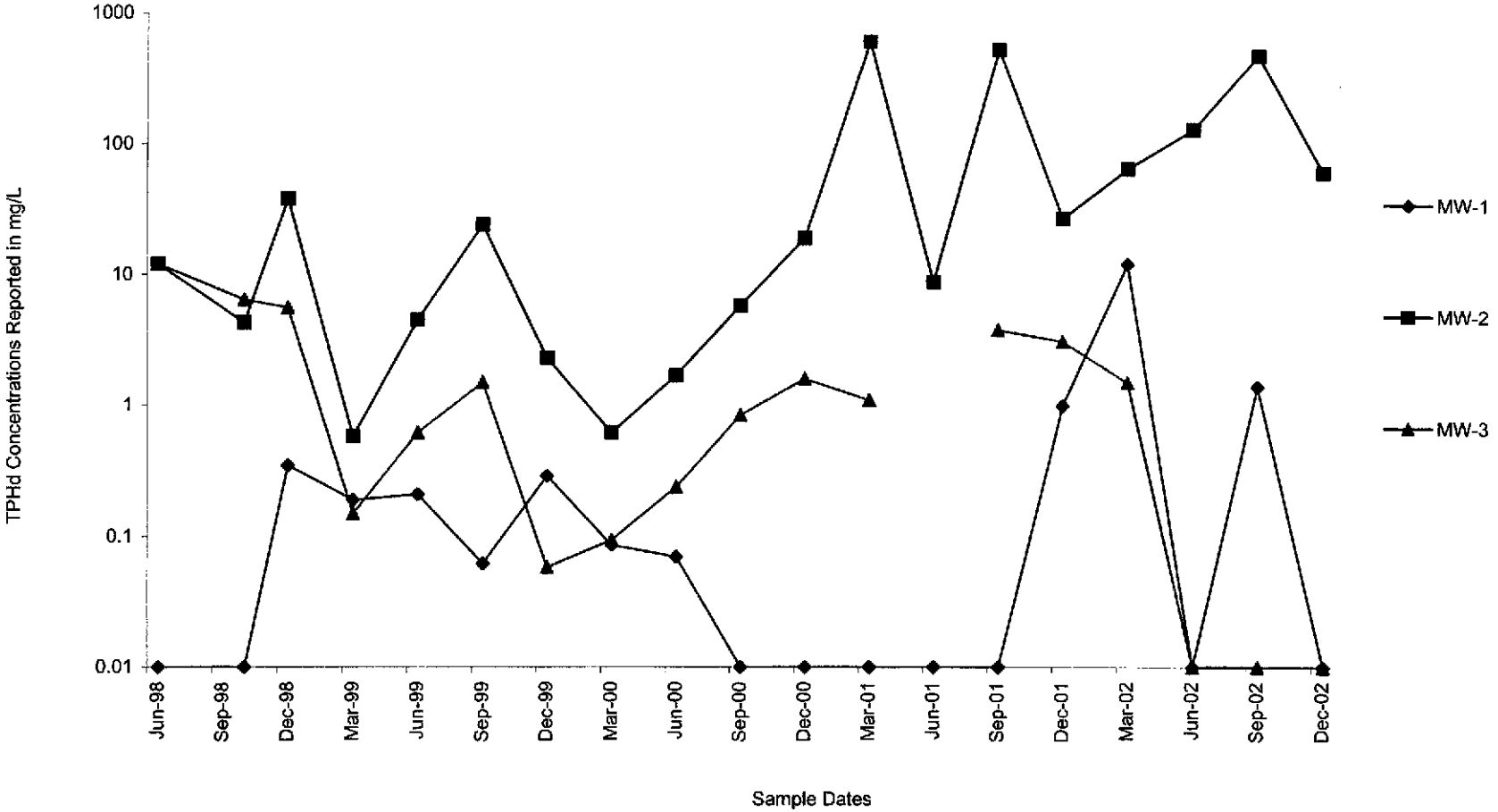

Chart 3
Historical TPHg Concentrations - Fourth Quarter 2002
Mission Valley Rock Company
Sunol, California

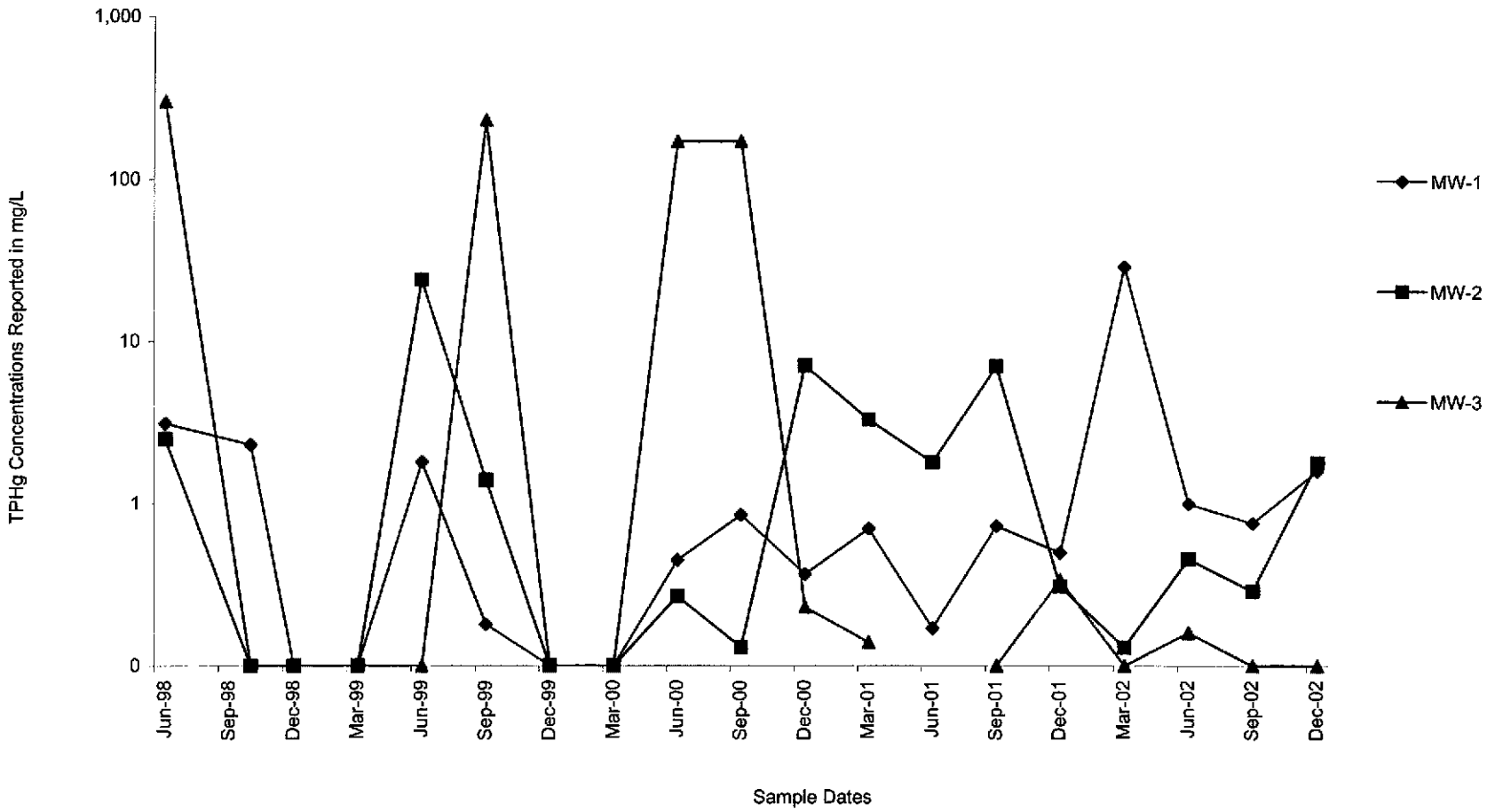

Chart 4
Historical MTBE Concentrations - Fourth Quarter 2002
Mission Valley Rock Company
Sunol, California

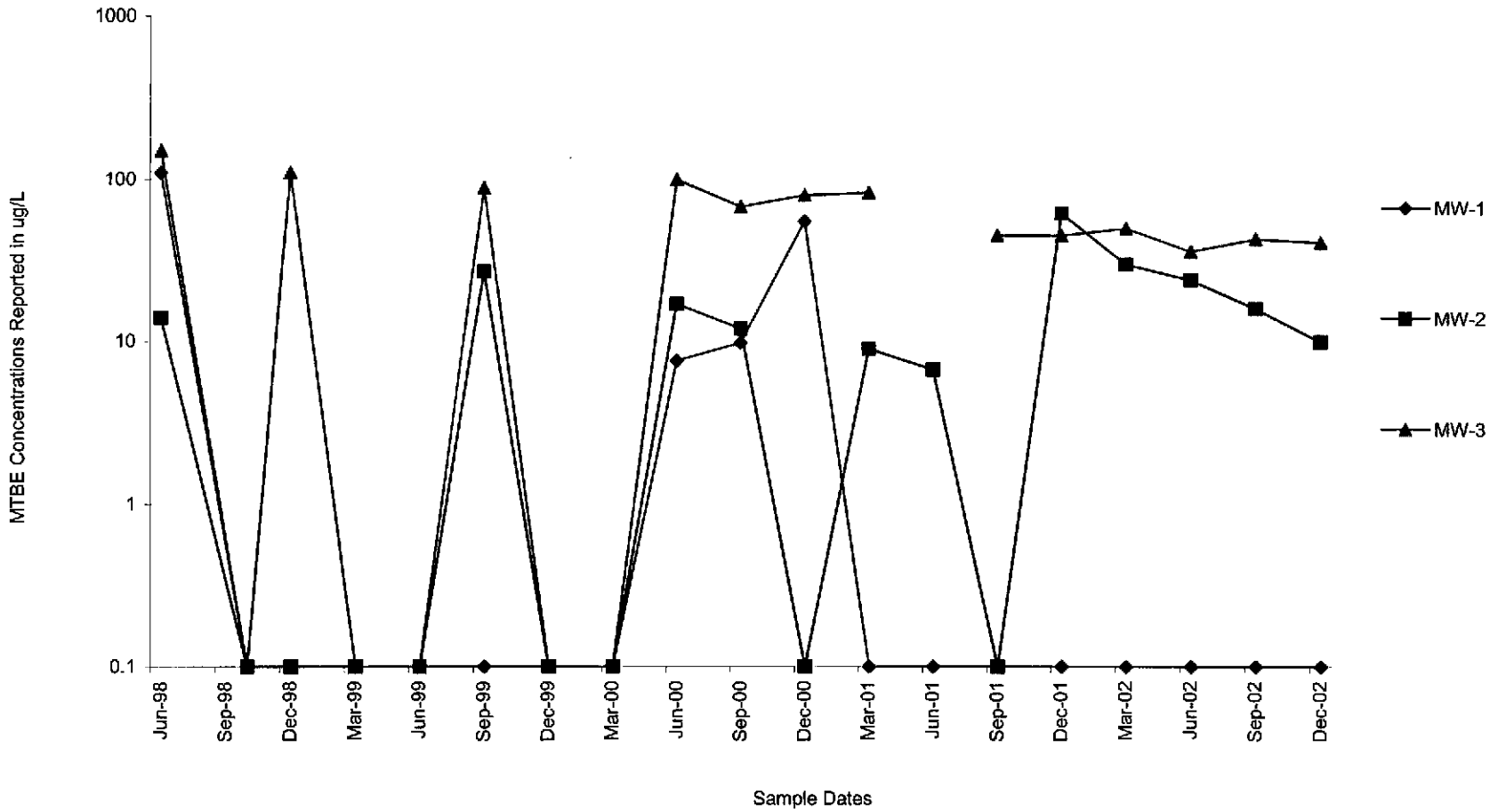

Chart 5
Historical Benzene Concentrations - Fourth Quarter 2002
Mission Valley Rock Company
Sunol, California

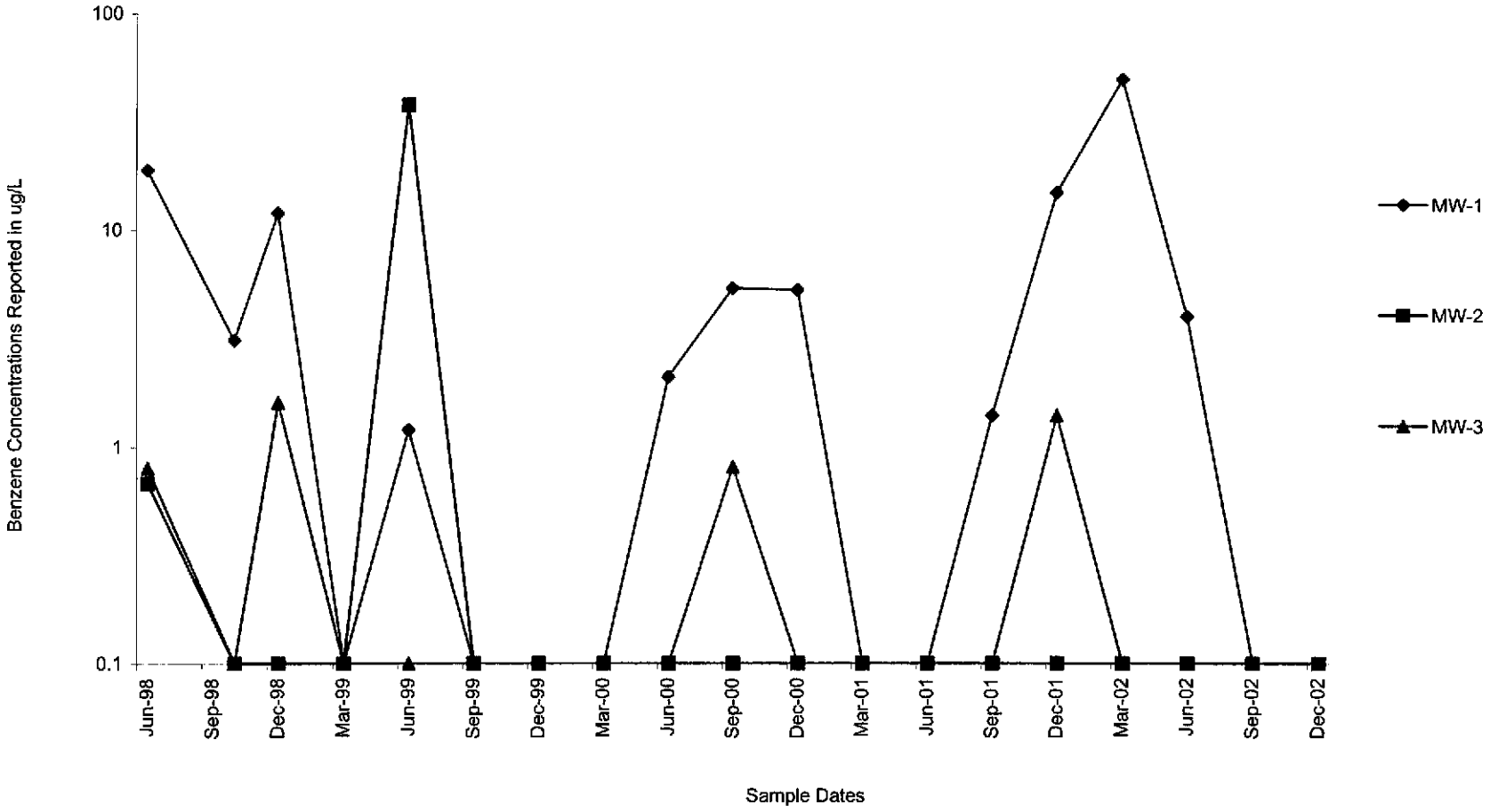

Chart 6
Historical Liquid Phase Hydrocarbon Thickness in Well MW-2 - Fourth Quarter 2002
Mission Valley Rock Company
Sunol, California