# GROUNDWATER MONITORING REPORT
# FIRST QUARTER 2006

## FORMER GASAMAT #953
## 3185 SANTA ROSA AVENUE
## SANTA ROSA, CALIFORNIA

GEOCON
CONSULTANTS, INC.

GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

PREPARED FOR

GASAMAT OIL CORPORATION OF COLORADO
3223 ARAPAHOE AVENUE
BOULDER, COLORADO

GEOCON PROJECT NO. E8299-06-01

MARCH 2006

GEOCON
CONSULTANTS, INC
ENVIRONMENTAL ■ GEOTECHNICAL ■ MATERIALS

Project No. E8299-06-01
March 22, 2006

Mr. Cliff Ives
County of Sonoma Department of Health Services
Environmental Health Division
475 Aviation Boulevard, #220
Santa Rosa, California 95403

Subject: GROUNDWATER MONITORING REPORT
FIRST QUARTER 2006
FORMER GASAMAT #953
3185 SANTA ROSA AVENUE
SANTA ROSA, CALIFORNIA

Dear Mr. Ives:

Geocon has prepared the *Groundwater Monitoring Report First Quarter 2006* for the Former Gasamat #953 site. The report contains details of field services and laboratory analytical results.

Mr. Gallagher's authorization to submit this report is enclosed. Please contact the undersigned if you have any questions or comments.

Sincerely,

**GEOCON CONSULTANTS, INC.**

Richard Dreessen, CEG
Project Geologist

Richard Day, PG
Regional Manager

PROFESSIONAL GEOLOGIST
RICHARD S. DREESSEN
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RSD:RWD:rjk

(1) Addressee
(1) RWQCB – North Coast Region
(1) Client
(1) UST Cleanup Fund

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# 1.0 INTRODUCTION

On behalf of Gasamat Corporation of Colorado, Geocon performed quarterly groundwater monitoring for the Former Gasamat Station No. 953 located at 3185 Santa Rosa Avenue, Santa Rosa, Sonoma County, California (Figure 1). The quarterly groundwater sampling was performed in response to the County of Sonoma Department of Health Services (DHS) letter dated October 3, 2005.

## 1.1 Background

In 1998 the site existed as a Gasamat gasoline station and had four underground storage tanks (USTs) containing gasoline. Two of the tanks were 8,000 gallons in capacity and the other two were 10,000 gallons in capacity.

In October 1998, a subsurface investigation was conducted in conjunction with the facility upgrade of the fuel storage and delivery system. Ten soil borings were advanced adjacent to the USTs and associated product piping. Results of the investigation indicated that petroleum hydrocarbon compounds, including methyl tertiary butyl ether (MTBE) had impacted subsurface soil and groundwater. The primary source of the contamination appeared to be a release near the south end of UST #3 (see Figure 2).

In November 1998, 16 additional soil borings were advanced to assess the lateral extent of impacted soil and groundwater beneath the site and adjacent property to the south (3219 Santa Rosa Avenue, known as Henry's Used Car Lot). As a result of the October and November 1998 investigations, four monitoring wells (MW-1 through MW-4) and two extraction wells (EW-1 and EW-2) were constructed in December 1998. Monitoring wells MW-1 and MW-2 were constructed on the Gasamat property, and MW-3 and MW-4 were constructed on the Henry's Used Car Lot property.

In November 1999, monitoring well MW-5 was constructed to provide qualitative data associated with a dual-phase extraction pilot test scheduled for extraction well EW-2 in December 1999. The only well located within a relatively close proximity of EW-2 prior to the construction of MW-5 was extraction well EW-1.

In December 1999, the pilot test was conducted at extraction well EW-2. The results of the pilot test indicated that subsurface soil and groundwater conditions were favorable towards the selection of dual-phase extraction as a remediation method at the site.

In September 2002, monitoring wells MW-6 and MW-7 were constructed to further define the lateral extent of contamination. Active remediation had not yet been conducted at the site because negotiation was underway to fund the remediation project under the State's pay-for-performance program, and the new monitoring wells (MW-6 and MW-7) would be necessary to evaluate the effectiveness of the proposed remediation system for future cleanup reimbursement purposes. The pay-for-performance reimbursement mechanism was later abandoned due to regulatory costs associated with the disposal of treated groundwater.

Groundwater monitoring has been conducted at the site from 1998 through early 2004. In February 2004, monitoring wells MW-3 and MW-4 were destroyed to facilitate redevelopment of 3219 Santa Rosa Avenue for the site's new owner, Redwood Credit Union. Groundwater monitoring resumed October 20, 2005, at the direction of Department of Health Services (DHS).

## 2.0 QUARTERLY GROUNDWATER MONITORING

Quarterly groundwater sampling was conducted on January 19, 2006.

### 2.1 Water Level Measurements and Groundwater Flow Direction

Prior to groundwater sample collection, depth to groundwater was measured in each well using a battery-operated water level meter. The depth to groundwater ranged from 3.51 feet below the top of the well casing in MW-2 to 6.46 feet in MW-7.

Well construction details for each monitoring well are presented in Table 1. Historical depth to groundwater measurements for each monitoring well are presented in Table 2.

The hydraulic gradient beneath the site, as shown on Figure 3, is towards the east at approximately 0.010 to 0.023 ft/ft.

### 2.2 Groundwater Sampling Procedures

Monitoring wells were purged using a battery operated submersible pump. The submersible pump was decontaminated between each well using a non-phosphate detergent and deionized water rinse. A minimum of three well casing volumes of groundwater was removed from each well prior to sample collection. Purged groundwater was monitored for temperature, pH and conductivity to insure that groundwater samples were representative of the aquifer formation. The well purge process was considered complete when these parameters had stabilized. After the water level in each well had recovered at least 80 percent of its pre-purge volume, a groundwater sample was collected for laboratory analysis. Groundwater samples were collected using disposable polyethylene bailers equipped with volatile organic compound (VOC) sample ports designed to minimize aeration of groundwater samples during transfer from the bailer to the sample containers. One groundwater sample was also collected from one onsite domestic-use well (WW-1). The sample was collected from the spigot located a few feet from the wellhead after the water was allowed to run for 15 minutes.

Groundwater samples were containerized in 40-milliliter glass vials preserved with HCl, and delivered under chain-of-custody protocol to Kiff Analytical Labs, Inc., a state of California certified laboratory located in Davis, California. Copies of the field data sheets are provided in Appendix A.

### 2.3 Groundwater Sample Analyses

Groundwater samples collected from the monitoring and extraction wells were analyzed for total petroleum hydrocarbon compounds as gasoline (TPHg) benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tert-butyl ether (MTBE) following EPA Test Method 8260B. The water sample collected from WW-1 was also analyzed for trichloroethene (TCE) following EPA Test Method 8260B.

## 2.4 Groundwater Sample Results

Target analyte concentrations in groundwater samples collected from wells MW-1, MW-2 and EW-1 were less than laboratory reporting limit concentrations.

TPHg was detected at concentrations above the reporting limit of 0.050 milligrams per liter (mg/l) in groundwater samples collected from MW-5, MW-6, and EW-2, all positioned in close proximity to the south end of UST #3. Detected TPHg concentrations ranged from 3.9 mg/l in EW-2 and MW-5 to 52 mg/l in the groundwater samples collected from MW-6.

BTEX and MTBE were also detected in groundwater samples collected from MW-5, MW-6 and EW-2. Benzene concentrations ranged from 240 micrograms per liter (ug/l) in MW-5 to 2,400 ug/l in MW-6. MTBE concentrations ranged from 90 ug/l in EW-2 to 52,000 ug/l in MW-6. MTBE was also reported in the MW-7 groundwater sample at a concentration of 1.1 ug/l.

TCE was reported at concentrations of 36 ug/l, respectively, in the water sample collected from WW-1.

Compared to Fourth Quarter 2005 results, contaminant levels increased in wells MW-5 and MW-6, and except for TPHg, decreased in EW-2.

Historical groundwater sample results are presented in Table 2. Appendix B presents the laboratory Certificate of Analysis-Final Report and the Chain of Custody/Analysis Request documentation.

## 2.5 Waste Disposal

Purge water generated during the First Quarter 2006 sample event was transported to the Geocon warehouse in Sacramento, California for subsequent disposal.

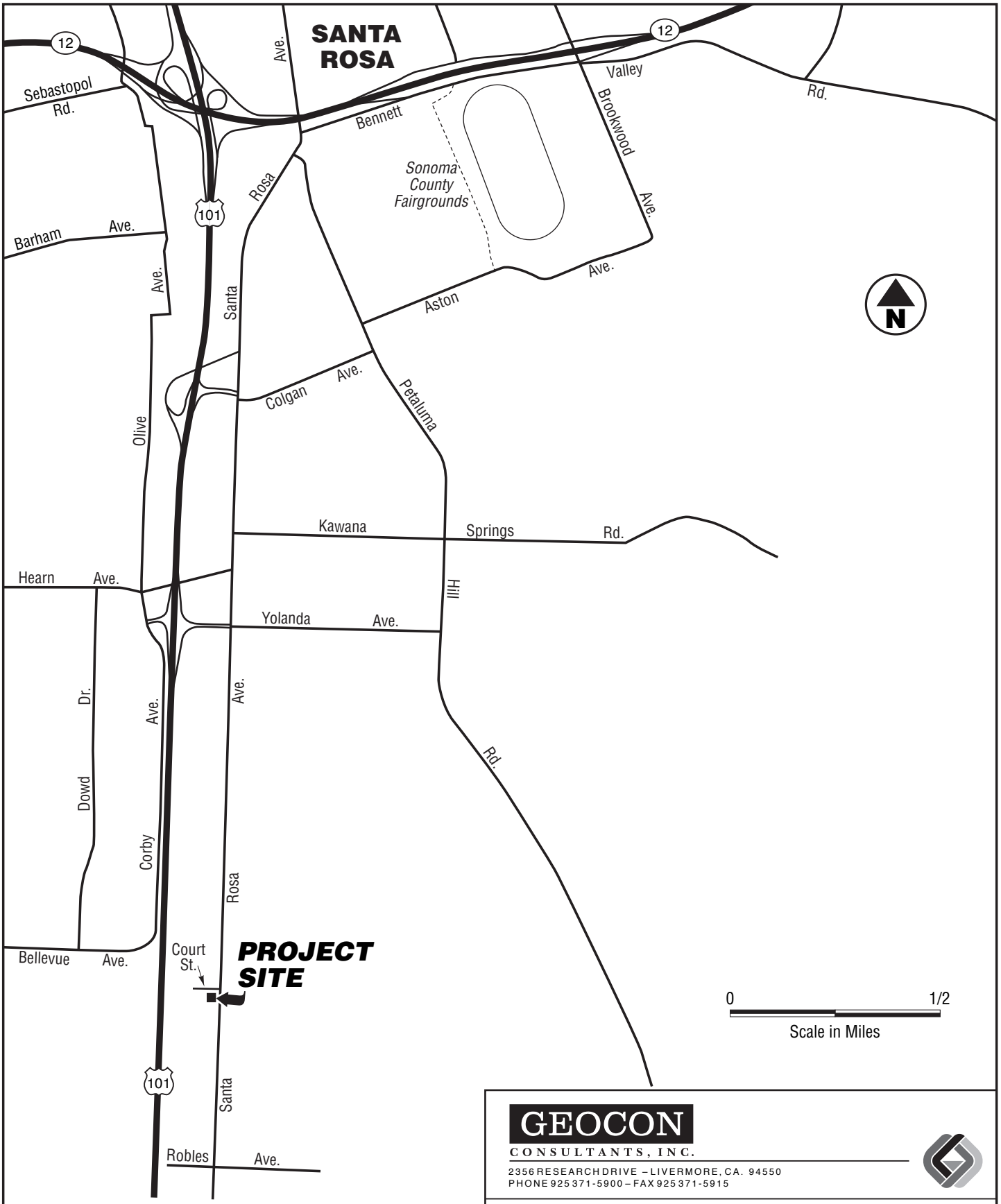
## 3.0 CONCLUSIONS AND RECOMMENDATIONS

The laboratory results indicate that contaminant concentrations increased in wells MW-5 and MW-6 as compared to last quarter. However, long-term historical trends are still decreasing in hydrocarbon concentrations. TPHg, benzene and MTBE concentrations reported in the groundwater sample collected from monitoring well EW-2 (located within closest proximity to UST #3) were the lowest since June 2003. The TPHg concentration in EW-2 decreased from 13.0 mg/l to 3.9 mg/l; the benzene concentration decreased from 1,300 ug/l to 450 ug/l; and the MTBE concentration decreased from 3,800 ug/l to 90 ug/l

The TCE (36 ug/l) concentration reported in the WW-1 water sample are within the historical range reported over the last five years, and indicates the concentration of this compound has stabilized and is not increasing with time.

Historical reductions in contaminant concentrations were reported over the long-term in the onsite monitoring wells. However, concentrations in two of the three wells located within closest proximity to UST #3 increased since last quarter. Therefore, Geocon recommends continuing the quarterly groundwater-monitoring program to assess contaminant concentration trends.

On February 2 and 3, 2006, three additional monitoring wells were constructed at 3219 Santa Rosa Avenue (the Redwood Credit Union property), and three additional direct-push borings were advanced along the sanitary sewer line located beneath Santa Rosa Avenue to assess whether this utility is providing a preferential pathway for the southward migration of petroleum hydrocarbon compounds. Results of this additional investigation will be reported under separate cover.

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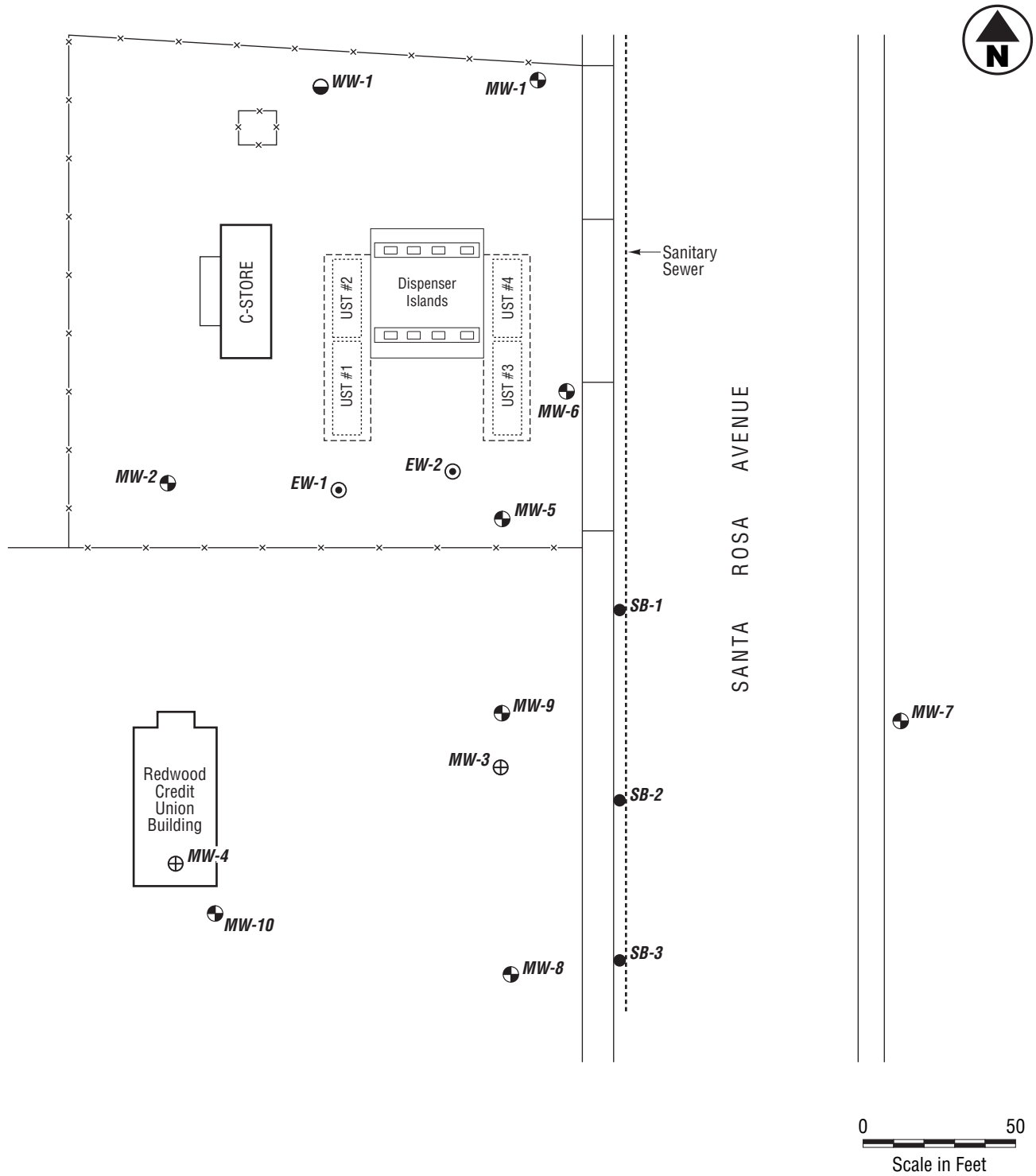
Gasamat Site

3185 Santa Rose Avenue
Santa Rosa, California

**VICINITY MAP**

| E8299-06-01 | March 2006 | Figure 1 |
|---|---|---|




LEGEND:

- MW-1 Approximate Groundwater Monitoring Well Location
- MW-3 Approximate Destroyed Well Location
- EW-1 Approximate Soil Vapor/Co-Extraction Well Location
- WW-1 Approximate Water Well Location
- SB-1 Approximate Temporary Soil Boring Location
- Approximate Former UST Location

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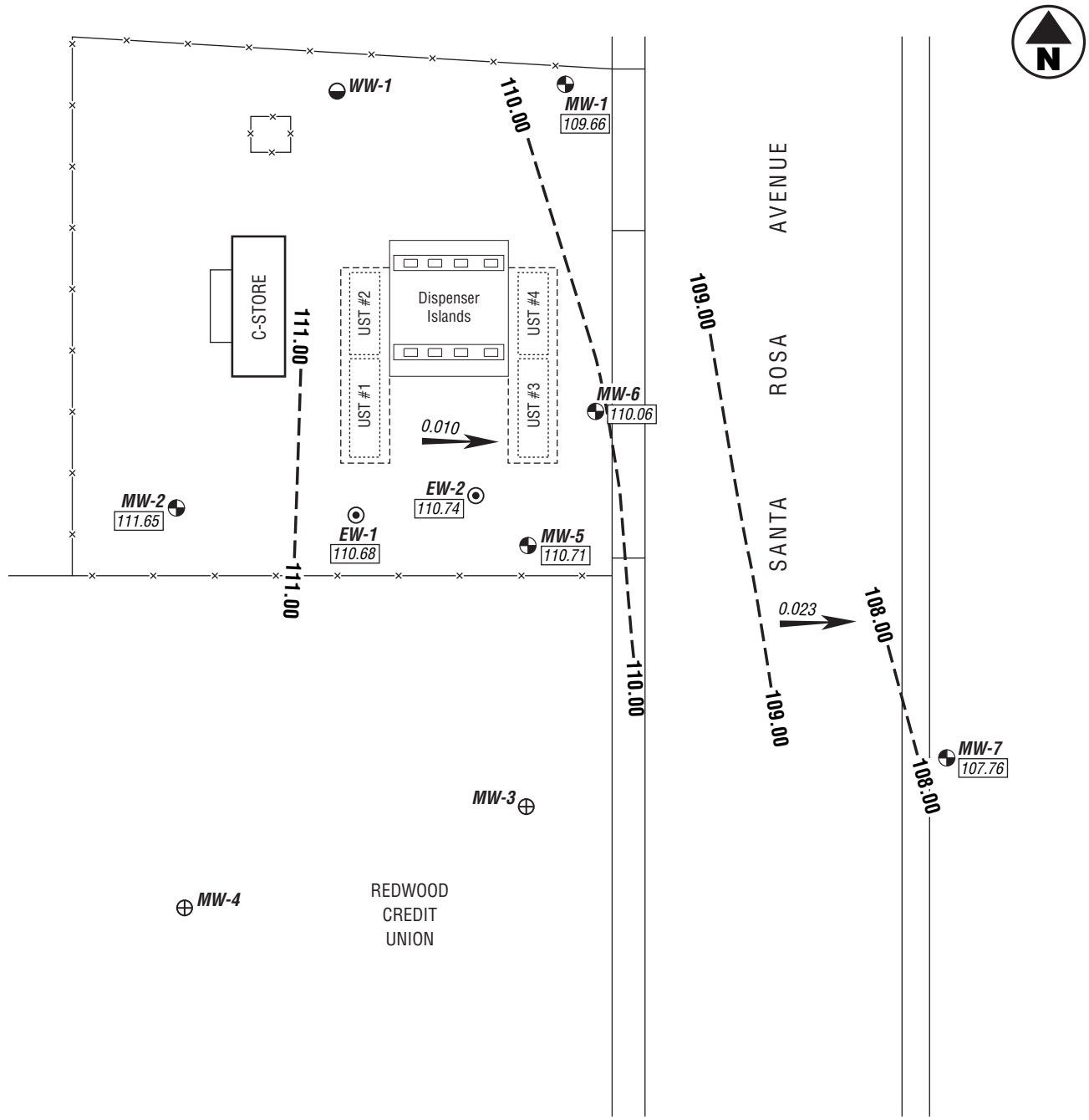
Gasamat Site

3185 Santa Rose Avenue
Santa Rosa, California

**SITE PLAN**

| E8299-06-01 | March 2006 | Figure 2 |
|---|---|---|




LEGEND:

- MW-1 Approximate Groundwater Monitoring Well Location
- MW-3 Approximate Destroyed Well Location
- EW-1 Approximate Soil Vapor/Co-Extraction Well Location
- WW-1 Approximate Water Well Location
- Approximate Former UST Location
- Groundwater Elevation Contour (Interval = 1.00 Ft.)
- 110.71 MSL Elevation of Groundwater Measured on 1/19/06
- 0.010 Approximate Groundwater Direction & Gradient

0 50
Scale in Feet

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Gasamat Site

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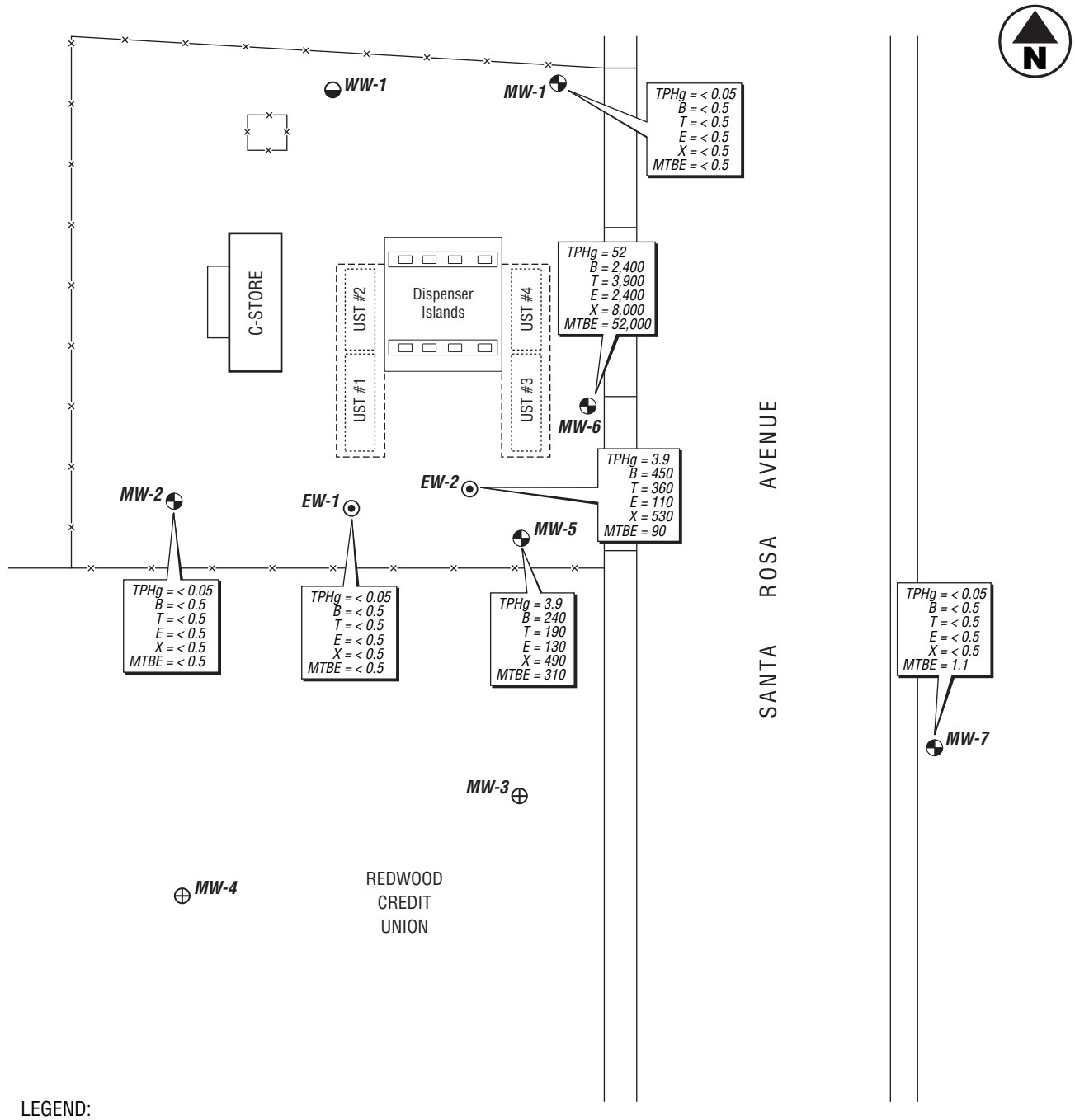
Santa Rosa, California

**Groundwater Elevation Map – January 2006**

| E8299-06-01 | March 2006 | Figure 3 |
|---|---|---|




LEGEND:

- **MW-1** Approximate Groundwater Monitoring Well Location
- **MW-3** Approximate Destroyed Well Location
- **EW-1** Approximate Soil Vapor/Co-Extraction Well Location
- **WW-1** Approximate Water Well Location
- Approximate Former UST Location
- * Compound also reported in laboratory method blank sample

*TPHg = Total Petroleum Hydrocarbons as Gasoline (mg/l)*
*B = Benzene (ug/l)*
*T = Toluene (ug/l)*
*E = Ethylbenzene (ug/l)*
*X = Xylenes (ug/l)*
*MTBE = Methyl tert-butyl ether (ug/l)*

0 50
Scale in Feet

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Gasamat Site

3185 Santa Rose Avenue
Santa Rosa, California

**Groundwater Sample Results – January 2006**

| E8299-06-01 | March 2006 | Figure 4 |
|---|---|---|

**Table 1**
**Well Construction Details**
**Gasamat #953**
**Santa Rosa, California**

| Location | Construction Date | Well Type | Borehole Diameter (inches) | Borehole Depth (feet) | Casin Diameter (inches) | Screened Interval (feet) | Filter Pack (feet) | Bentonite Seal (feet) | Cement Seal (feet) |
|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 12/10/98 | MW | 8 | 25 | 2 | 7-25 | 5-25 | 4-5 | 0-4 |
| MW-2 | 12/10/98 | MW | 8 | 25.5 | 2 | 7-25.5 | 5-25.5 | 4-5 | 0-4 |
| MW-3* | 12/10/98 | MW | 8 | 25 | 2 | 7-25 | 5-25 | 4-5 | 0-4 |
| MW-4* | 12/10/98 | MW | 8 | 25 | 2 | 7-25 | 5-25 | 4-5 | 0-4 |
| MW-5 | 11/29/99 | MW | 8 | 25 | 2 | 7-25 | 5-25 | 4-5 | 0-4 |
| MW-6 | 09/16/02 | MW | 8 | 23 | 2 | 8-23 | 6-23 | 5-6 | 0-5 |
| MW-7 | 09/16/02 | MW | 8 | 22 | 2 | 8-22 | 6-22 | 5-6 | 0-5 |
| EW-1 | 07/20/99 | EW | 10 | 25 | 4 | 7-25 | 5-25 | 4-5 | 0-4 |
| EW-2 | 07/20/99 | EW | 10 | 25 | 4 | 7-25 | 5-25 | 4-5 | 0-4 |

**Notes:**

MW- Monitoring Well
EW - Extraction Well
* - Abandoned in February 2004

**Table 2**
**Historical Depth to Water and Groundwater Sample Results**
**Gasamat #953**
**Santa Rosa, California**

| Location | Date | TOC Elevation (feet amsl) | Depth to Water (feet) | Groundwater Elevation (feet amsl) | Change in Elevation (feet) | TPHg (mg/l) | Benzene (ug/l) | Toluene (ug/l) | Ethybenzene (ug/l) | Xylenes (ug/l) | MTBE (ug/l) | TCE (ug/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 12/15/1998 | 115.31 | 7.47 | 107.84 | - - | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | 7.4 | - - |
| | 3/30/1999 | 115.31 | 6.19 | 109.12 | 1.28 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | - - |
| | 7/14/1999 | 115.31 | 10.44 | 104.87 | -4.25 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | - - |
| | 2/23/2000 | 115.31 | 5.21 | 110.10 | 5.23 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | <1.0 |
| | 5/24/2000 | 115.31 | 8.46 | 106.85 | -3.25 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | - - |
| | 8/2/2000 | 115.31 | 10.21 | 105.10 | -1.75 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | - - |
| | 11/21/2000 | 115.31 | 9.98 | 105.33 | 0.23 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | - - |
| | 2/22/2001 | 115.31 | 6.12 | 109.19 | 3.86 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | - - |
| | 5/10/2001 | 115.31 | 9.45 | 105.86 | -3.33 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | - - |
| | 8/16/2001 | 115.31 | 10.80 | 104.51 | -1.35 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | - - |
| | 11/29/2001 | 115.31 | 6.96 | 108.35 | 3.84 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | - - |
| | 2/7/2002 | 115.31 | 8.57 | 106.74 | -1.61 | <0.05 | <0.3 | <0.3 | <0.3 | <0.6 | <5 | <5 |
| | 5/9/2002 | 115.31 | 9.18 | 106.13 | -0.61 | <0.05 | <0.5 | <0.5 | <0.5 | <1.5 | <5 | - - |
| | 9/25/2002 | 115.31 | 10.84 | 104.47 | -1.66 | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <5 | - - |
| | 1/8/2003* | 115.34 | 6.45 | 108.89 | 4.42 | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <1.0 | - - |
| | 3/25/2003 | 115.34 | 7.77 | 107.57 | -1.32 | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <1.0 | - - |
| | 6/25/2003 | 115.34 | 9.41 | 105.93 | -1.64 | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <1.0 | - - |
| | 10/21/2003 | 115.34 | 11.30 | 104.04 | -1.89 | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <1.0 | - - |
| | 2/10/2004 | 115.34 | 6.85 | 108.49 | 4.45 | <0.05 | <0.5 | <0.5 | <0.5 | <1 | <1 | - - |
| | 10/20/2005 | 115.34 | 9.99 | 105.35 | -3.14 | 0.032 | <0.50 | *1.1 | <0.50 | <0.50 | <1.0 | - - |
| | **1/19/2006** | **115.34** | **5.68** | **109.66** | **4.31** | **<0.050** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **- -** |
| MW-2 | 12/15/1998 | 114.29 | 4.98 | 109.31 | - - | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| | 3/30/1999 | 114.29 | 3.30 | 110.99 | 1.68 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | - - |
| | 7/14/1999 | 114.29 | 9.05 | 105.24 | -5.75 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | - - |
| | 2/23/2000 | 114.29 | 2.37 | 111.92 | 6.68 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | <1.0 |
| | 5/24/2000 | 114.29 | 7.40 | 106.89 | -5.03 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | - - |
| | 8/2/2000 | 114.29 | 9.93 | 104.36 | -2.53 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | - - |
| | 11/21/2000 | 114.29 | 9.45 | 104.84 | 0.48 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | - - |
| | 2/22/2001 | 114.29 | 3.52 | 110.77 | 5.93 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | - - |
| | 5/10/2001 | 114.29 | 8.55 | 105.74 | -5.03 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | - - |
| | 8/16/2001 | 114.29 | 10.86 | 103.43 | -2.31 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | - - |
| | 11/29/2001 | 114.29 | 5.20 | 109.09 | 5.66 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | - - |
| | 2/7/2002 | 114.29 | 6.39 | 107.90 | -1.19 | <0.05 | <0.3 | <0.3 | <0.3 | <0.6 | <5 | <5 |
| | 5/9/2002 | 114.29 | 8.47 | 105.82 | -2.08 | <0.05 | <0.5 | <0.5 | <0.5 | <1.5 | <5 | - - |
| | 9/25/2002 | 114.29 | 10.91 | 103.38 | -2.44 | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <5 | - - |
| | 1/8/2003* | 115.16 | 4.35 | 110.81 | 7.43 | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <1.0 | - - |

Table 2
Historical Depth to Water and Groundwater Sample Results
Gasamat #953
Santa Rosa, California

| Location | Date | TOC Elevation (feet amsl) | Depth to Water (feet) | Groundwater Elevation (feet amsl) | Change in Elevation (feet) | TPHg (mg/l) | Benzene (ug/l) | Toluene (ug/l) | Ethybenzene (ug/l) | Xylenes (ug/l) | MTBE (ug/l) | TCE (ug/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-2 | 3/25/2003 | 115.16 | 6.32 | 108.84 | -1.97 | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <1.0 | - - |
| continued | 6/25/2003 | 115.16 | 8.88 | 106.28 | -2.56 | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <1.0 | - - |
| | 10/21/2003 | 115.16 | 11.50 | 103.66 | -2.62 | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <1.0 | - - |
| | 2/10/2004 | 115.16 | 5.27 | 109.89 | 6.23 | <0.05 | <0.5 | <0.5 | <0.5 | <1 | <1 | - - |
| | 10/20/2005 | 115.16 | 10.20 | 104.96 | -4.93 | <0.025 | <0.50 | *0.99 | <0.50 | <0.50 | <1.0 | - - |
| | **1/19/2006** | **115.16** | **3.51** | **111.65** | **6.69** | **<0.050** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **- -** |
| MW-3 | 12/15/1998 | 113.78 | 5.97 | 107.81 | - - | 0.1 | 0.8 | <0.5 | <0.5 | <0.5 | 140 | <0.5 |
| | 3/30/1999 | 113.78 | 4.39 | 109.39 | 1.58 | 0.5 | 54 | 2.4 | 23.0 | 6.3 | 64 | - - |
| | 7/14/1999 | 113.78 | 8.93 | 104.85 | -4.54 | 1.1 | 67 | 4.0 | 3.5 | <2.5 | 400 | - - |
| | 2/23/2000 | 113.78 | 3.21 | 110.57 | 5.72 | 0.26 | <0.5 | 2.8 | <0.5 | <0.5 | 570 | <1.0 |
| | 5/24/2000 | 113.78 | 6.92 | 106.86 | -3.71 | 0.64 | 13.0 | <0.5 | <0.5 | <0.5 | 430 | - - |
| | 8/2/2000 | 113.78 | 8.86 | 104.92 | -1.94 | 1.2 | 21 | <0.5 | <0.5 | <0.5 | 740 | - - |
| | 11/21/2000 | 113.78 | 8.64 | 105.14 | 0.22 | 1.6 | 210 | 3.5 | <2.5 | <2.5 | 1,100 | - - |
| | 2/22/2001 | 113.78 | 4.07 | 109.71 | 4.57 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | 409 | - - |
| | 5/10/2001 | 113.78 | 7.95 | 105.83 | -3.88 | 0.73 | 3.0 | <2.5 | <2.5 | <2.5 | 677 | - - |
| | 8/16/2001 | 113.78 | 9.75 | 104.03 | -1.80 | 0.86 | 160 | <2.5 | <2.5 | <2.5 | 1,800 | - - |
| | 11/29/2001 | 113.78 | 5.66 | 108.12 | 4.09 | <0.25 | <2.5 | <2.5 | <2.5 | <2.5 | 1,700 | - - |
| | 2/7/2002 | 113.78 | 6.36 | 107.42 | -0.70 | 0.11 | 0.8 | <0.3 | <0.3 | <0.6 | 320 | <5 |
| | 5/9/2002 | 113.78 | 7.87 | 105.91 | -1.51 | 0.33 | 3.7 | 5.8 | <0.5 | <1.5 | 540 | - - |
| | 9/25/2002 | 113.78 | 9.85 | 103.93 | -1.98 | 2.5 | 410 | <20 | <20 | <40 | 2,100 | - - |
| | 1/8/2003 | 113.84 | 4.62 | 109.22 | 5.29 | 0.41 | <2.5 | 3.5 | <2.5 | <5.0 | 700 | - - |
| | 3/25/2003 | 113.84 | 6.32 | 107.52 | -1.70 | 0.32 | 1.4 | <1.25 | <1.25 | <2.5 | 370 | - - |
| | 6/25/2003 | 113.84 | 8.04 | 105.80 | -1.72 | 0.77 | 4.9 | <2.5 | <2.5 | <5 | 470 | - - |
| | 10/21/2003 | 113.84 | 10.39 | 103.45 | -2.35 | 1.0 | 31 | <5 | <5 | <10 | 1,300 | - - |
| | 2/10/2004 | 113.84 | 5.30 | 108.54 | 5.09 | 0.21 | <1 | <1 | <1 | <2 | 210 | - - |
| | | | | **MW-3 Abandoned in February 2004** | | | | | | | | |
| MW-4 | 12/15/1998 | 113.79 | 5.12 | 108.67 | - - | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| | 3/30/1999 | 113.79 | 3.31 | 110.48 | 1.81 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | - - |
| | 7/14/1999 | 113.79 | 8.99 | 104.80 | -5.68 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | - - |
| | 2/23/2000 | 113.79 | 1.84 | 111.95 | 7.15 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | <1.0 |
| | 5/24/2000 | 113.79 | 6.45 | 107.34 | -4.61 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | - - |
| | 8/2/2000 | 113.79 | 8.97 | 104.82 | -2.52 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | - - |
| | 11/21/2000 | 113.79 | 8.84 | 104.95 | 0.13 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | - - |
| | 2/22/2001 | 113.79 | 2.81 | 110.98 | 6.03 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | - - |
| | 5/10/2001 | 113.79 | 7.82 | 105.97 | -5.01 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | - - |

**Table 2**
**Historical Depth to Water and Groundwater Sample Results**
**Gasamat #953**
**Santa Rosa, California**

| Location | Date | TOC Elevation (feet amsl) | Depth to Water (feet) | Groundwater Elevation (feet amsl) | Change in Elevation (feet) | TPHg (mg/l) | Benzene (ug/l) | Toluene (ug/l) | Ethybenzene (ug/l) | Xylenes (ug/l) | MTBE (ug/l) | TCE (ug/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-4 | 8/16/2001 | 113.79 | 9.93 | 103.86 | -2.11 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | - - |
| continued | 11/29/2001 | 113.79 | 5.28 | 108.51 | 4.65 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | - - |
| | 2/7/2002 | 113.79 | 5.64 | 108.15 | -0.36 | <0.05 | <0.3 | <0.3 | <0.3 | <0.6 | <5 | <5 |
| | 5/9/2002 | 113.79 | 7.76 | 106.03 | -2.12 | <0.05 | <0.5 | <0.5 | <0.5 | <1.5 | <5 | - - |
| | 9/25/2002 | 113.79 | 10.08 | 103.71 | -2.32 | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <5^ | - - |
| | 1/8/2003 | 113.80 | 3.94 | 109.86 | 6.15 | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <1.0 | - - |
| | 3/25/2003 | 113.80 | 5.59 | 108.21 | -1.65 | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <1.0 | - - |
| | 6/25/2003 | 113.80 | 8.05 | 105.75 | -2.46 | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <1.0 | - - |
| | 10/21/2003 | 113.80 | 10.50 | 103.30 | -2.45 | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <1.0 | - - |
| | 2/10/2004 | 113.80 | 4.51 | 109.29 | 5.99 | <0.05 | <0.5 | <0.5 | <0.5 | <1 | <1 | - - |
| | | | | **MW-4 Abandoned in February 2004** | | | | | | | | |
| MW-5 | 2/23/2000 | 115.22 | 3.53 | 111.69 | - - | 8.7 | 940 | 850 | 370 | 1,700 | 1,800 | <1.0 |
| | 5/24/2000 | 115.22 | 7.85 | 107.37 | -4.32 | 1.9 | 160 | 160 | 77 | 420 | 160 | - - |
| | 8/2/2000 | 115.22 | 10.10 | 105.12 | -2.25 | 1.9 | 240 | 120 | 42 | 230 | 310 | - - |
| | 11/21/2000 | 115.22 | 9.62 | 105.60 | 0.48 | 1.2 | 100 | 34 | 14 | 71 | 750 | - - |
| | 2/22/2001 | 115.22 | 4.71 | 110.51 | 4.91 | 8.2 | 715 | 886 | 259 | 1,280 | 6,460 | - - |
| | 5/10/2001 | 115.22 | 8.89 | 106.33 | -4.18 | 6.7 | 558 | 747 | 175 | 913 | 2,360 | - - |
| | 8/16/2001 | 115.22 | 10.91 | 104.31 | -2.02 | 1.1 | 120 | 53 | 19 | 110 | 950 | - - |
| | 11/29/2001 | 115.22 | 6.16 | 109.06 | 4.75 | 6.6 | 630 | 780 | 280 | 1,300 | 3,900 | - - |
| | 2/7/2002 | 115.22 | 7.02 | 108.20 | -0.86 | 6.6 | 618 | 684 | 213 | 1,030 | 1,100 | <5 |
| | 5/9/2002 | 115.22 | 8.81 | 106.41 | -1.79 | 6.0 | 650 | 630 | 220 | 1,070 | 1,100 | - - |
| | 9/25/2002 | 115.22 | 10.98 | 104.24 | -2.17 | 1.5 | 240 | 76 | 43 | 120 | 360 | - - |
| | 1/8/2003 | 115.22 | 5.21 | 110.01 | 5.77 | 6.4 | 470 | 400 | 180 | 810 | 1,100 | - - |
| | 3/25/2003 | 115.22 | 7.02 | 108.20 | -1.81 | 3.1 | 310 | 180 | 73 | 350 | 290 | - - |
| | 6/25/2003 | 115.22 | 9.17 | 106.05 | -2.15 | 3.8 | 450 | 210 | 110 | 490 | 750 | - - |
| | 10/21/2003 | 115.22 | 11.57 | 103.65 | -2.40 | 1.2 | 130 | 40 | 25 | 61 | 170 | - - |
| | 2/10/2004 | 115.22 | 6.01 | 109.21 | 5.56 | 5.0 | 430 | 200 | 100 | 420 | 1,400 | - - |
| | 10/20/2005 | 115.22 | 10.32 | 104.90 | -4.31 | 0.057 | 1.3 | *1.3 | <0.50 | 0.92 | 48 | - - |
| | **1/19/2006** | **115.22** | **4.51** | **110.71** | **5.81** | **3.9** | **240** | **190** | **130** | **490** | **310** | **- -** |
| MW-6 | 9/25/2002 | 115.04 | 10.67 | 104.37 | - - | 18 | 1,300 | 420 | 510 | 660 | 22,000 | - - |
| | 1/8/2003 | 115.04 | 5.88 | 109.16 | 4.79 | 93 | 7,500 | 10,000 | 3,200 | 15,000 | 8,500 | - - |
| | 3/25/2003 | 115.04 | 7.34 | 107.70 | -1.46 | 62 | 5,200 | 7,300 | 2,500 | 11,000 | 8,800 | - - |
| | 6/25/2003 | 115.04 | 9.15 | 105.89 | -1.81 | 45 | 4,900 | 4,500 | 2,000 | 8,200 | 6,400 | - - |
| | 10/21/2003 | 115.04 | 11.19 | 103.85 | -2.04 | 28 | 2,500 | 360 | 840 | 980 | 19,000 | - - |
| | 2/10/2004 | 115.04 | 6.37 | 108.67 | 4.82 | 83 | 4,400 | 6,000 | 2,400 | 9,900 | 11,000 | - - |
| | 10/20/2005 | 115.04 | 9.93 | 105.11 | -3.56 | 13 | 2,300 | 42 | 800 | 370 | 1,500 | - - |
| | **1/19/2006** | **115.04** | **4.98** | **110.06** | **4.95** | **52** | **2,400** | **3,900** | **2,400** | **8,000** | **52,000** | **- -** |

**Table 2**
**Historical Depth to Water and Groundwater Sample Results**
**Gasamat #953**
**Santa Rosa, California**

| Location | Date | TOC Elevation (feet amsl) | Depth to Water (feet) | Groundwater Elevation (feet amsl) | Change in Elevation (feet) | TPHg (mg/l) | Benzene (ug/l) | Toluene (ug/l) | Ethybenzene (ug/l) | Xylenes (ug/l) | MTBE (ug/l) | TCE (ug/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-7 | 9/25/2002 | 114.22 | 10.68 | 103.54 | - - | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | 7.9 | - - |
| | 1/8/2003 | 114.22 | 7.27 | 106.95 | 3.41 | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | 4.5 | - - |
| | 3/25/2003 | 114.22 | 7.89 | 106.33 | -0.62 | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <1.0 | - - |
| | 6/25/2003 | 114.22 | 9.32 | 104.90 | -1.43 | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <1.0 | - - |
| | 10/21/2003 | 114.22 | 11.26 | 102.96 | -1.94 | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <1.0 | - - |
| | 2/10/2004 | 114.22 | 7.31 | 106.91 | 3.95 | <0.05 | <0.5 | <0.5 | <0.5 | <1 | <1 | - - |
| | 10/20/2005 | 114.22 | 9.98 | 104.24 | -2.67 | <0.025 | <0.50 | *0.85 | <0.50 | <0.50 | 6.2 | - - |
| | **1/19/2006** | **114.22** | **6.46** | **107.76** | **3.52** | **<0.050** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **1.1** | **- -** |
| EW-1 | 12/15/1998 | 115.19 | 6.41 | 108.78 | - - | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | 57 | <0.5 |
| | 3/30/1999 | 115.19 | 4.70 | 110.49 | 1.71 | <0.05 | <0.5 | <0.5 | 0.6 | 0.6 | <5.0 | - - |
| | 7/14/1999 | 115.19 | 10.08 | 105.11 | -5.38 | 0.16 | <0.5 | <0.5 | <0.5 | <0.5 | 7.2 | - - |
| | 2/23/2000 | 115.19 | 3.13 | 112.06 | 6.95 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | <1.0 |
| | 5/24/2000 | 115.19 | 7.75 | 107.44 | -4.62 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | - - |
| | 8/2/2000 | 115.19 | 10.14 | 105.05 | -2.39 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | 26 | - - |
| | 11/21/2000 | 115.19 | 9.55 | 105.64 | 0.59 | 0.11 | 0.8 | 2.6 | 1.0 | 5.1 | 81 | - - |
| | 2/22/2001 | 115.19 | 4.33 | 110.86 | 5.22 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | 3.8 | - - |
| | 5/10/2001 | 115.19 | 8.77 | 106.42 | -4.44 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | - - |
| | 8/16/2001 | 115.19 | 10.91 | 104.28 | -2.14 | 0.36 | 1.0 | <1.0 | <1.0 | <1.0 | 96 | - - |
| | 11/29/2001 | 115.19 | 5.73 | 109.46 | 5.18 | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | 5.3 | - - |
| | 2/7/2002 | 115.19 | 6.82 | 108.37 | -1.09 | <0.05 | <0.3 | <0.3 | <0.3 | <0.6 | <5 | <5 |
| | 5/9/2002 | 115.19 | 8.69 | 106.50 | -1.87 | <0.25 | <2.5 | <2.5 | <2.5 | <2.5 | <25 | - - |
| | 9/25/2002 | 115.19 | 10.94 | 104.25 | -2.25 | 0.22 | 3.8 | 0.7 | <0.5 | <1.0 | 17 | - - |
| | 1/8/2003 | 115.19 | 5.87 | 109.32 | 5.07 | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | 2.5 | - - |
| | 3/25/2003 | 115.19 | 6.81 | 108.38 | -0.94 | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | 2.5 | - - |
| | 6/25/2003 | 115.19 | 9.08 | 106.11 | -2.27 | 0.05 | 0.9 | <0.5 | <0.5 | <1.0 | 2.7 | - - |
| | 10/21/2003 | 115.19 | 11.59 | 103.60 | -2.51 | 0.4 | 8.4 | <0.5 | <0.5 | <1.0 | 54.0 | - - |
| | 2/10/2004 | 115.19 | 5.81 | 109.38 | 5.78 | 0.1 | 1.3 | <0.5 | <0.5 | <1 | 1.9 | - - |
| | 10/20/2005 | 115.19 | 10.30 | 104.89 | -4.49 | <0.025 | <0.50 | *0.85 | <0.50 | <0.50 | <1.0 | - - |
| | **1/19/2006** | **115.19** | **4.51** | **110.68** | **5.79** | **<0.050** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **- -** |
| EW-2 | 12/15/1998 | 115.17 | 6.63 | 108.54 | - - | 49 | 10,000 | 9,600 | 1,700 | 7,900 | 8,200 | <10 |
| | 3/30/1999 | 115.17 | 4.99 | 110.18 | 1.64 | 64 | 6,200 | 9,000 | 1,100 | 6,700 | 2,400 | - - |
| | 7/14/1999 | 115.17 | 10.09 | 105.08 | -5.10 | 29 | 2,700 | 3,500 | 770 | 3,500 | 490 | - - |
| | 2/23/2000 | 115.17 | 3.56 | 111.61 | 6.53 | 44 | 3,800 | 8,200 | 1,700 | 10,000 | 1,200 | <1.0 |
| | 5/24/2000 | 115.17 | 7.83 | 107.34 | -4.27 | 27 | 1,700 | 3,500 | 1,100 | 5,800 | 900 | - - |
| | 8/2/2000 | 115.17 | 10.09 | 105.08 | -2.26 | 23 | 1,400 | 2,400 | 880 | 3,600 | 13,000 | - - |
| | 11/21/2000 | 115.17 | 9.64 | 105.53 | 0.45 | 69 | 1,600 | 2,300 | 860 | 3,300 | 79,000 | - - |
| | 2/22/2001 | 115.17 | 4.76 | 110.41 | 4.88 | 34 | 3,220 | 5,690 | 1,090 | 6,350 | 2,330 | - - |
| | 5/10/2001 | 115.17 | 8.86 | 106.31 | -4.10 | 13.9 | 559 | 1,170 | 520 | 2,240 | 1,900 | - - |

Table 2
Historical Depth to Water and Groundwater Sample Results
Gasamat #953
Santa Rosa, California

| Location | Date | TOC Elevation (feet amsl) | Depth to Water (feet) | Groundwater Elevation (feet amsl) | Change in Elevation (feet) | TPHg (mg/l) | Benzene (ug/l) | Toluene (ug/l) | Ethybenzene (ug/l) | Xylenes (ug/l) | MTBE (ug/l) | TCE (ug/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EW-2 | 8/16/2001 | 115.17 | 10.87 | 104.30 | -2.01 | 17 | 1,200 | 1,700 | 760 | 2,800 | 17,000 | - - |
| continued | 11/29/2001 | 115.17 | 6.15 | 109.02 | 4.72 | 23 | 2,100 | 3,600 | 760 | 4,600 | 3,400 | - - |
| | 2/7/2002 | 115.17 | 7.04 | 108.13 | -0.89 | 15 | 894 | 1,640 | 490 | 2,460 | 1,600 | <5 |
| | 5/9/2002 | 115.17 | 8.79 | 106.38 | -1.75 | 10 | 730 | 950 | 410 | 1,650 | 920 | - - |
| | 9/25/2002 | 115.17 | 10.94 | 104.23 | -2.15 | 26 | 2,500 | 2,000 | 1,100 | 3,700 | 9,400 | - - |
| | 1/8/2003 | 115.17 | 5.15 | 110.02 | 5.79 | 19 | 1,500 | 2,300 | 470 | 3,000 | 450 | - - |
| | 3/25/2003 | 115.17 | 7.04 | 108.13 | -1.89 | 5.8 | 520 | 350 | 160 | 1,300 | 44 | - - |
| | 6/25/2003 | 115.17 | 9.17 | 106.00 | -2.13 | 6.9 | 400 | 570 | 370 | 1,200 | 430 | - - |
| | 10/21/2003 | 115.17 | 11.55 | 103.62 | -2.38 | 14 | 950 | 380 | 650 | 1,300 | 14,000 | - - |
| | 2/10/2004 | 115.17 | 6.01 | 109.16 | 5.54 | 23 | 1,800 | 2,000 | 510 | 3,000 | 530 | - - |
| | 10/20/2005 | 115.17 | 10.30 | 104.87 | -4.29 | 13 | 1,300 | 360 | 650 | 860 | 3,800 | - - |
| | **1/19/2006** | **115.17** | **4.43** | **110.74** | **5.87** | **3.9** | **450** | **360** | **110** | **530** | **90** | **- -** |
| WW-1 | 2/23/2000 | - - | - - | - - | - - | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | 49 |
| | 5/24/2000 | - - | - - | - - | - - | 0.07 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | - - |
| | 8/2/2000 | - - | - - | - - | - - | 0.06 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | - - |
| | 11/21/2000 | - - | - - | - - | - - | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | - - |
| | 2/22/2001 | - - | - - | - - | - - | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | - - |
| | 5/10/2001 | - - | - - | - - | - - | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | - - |
| | 8/16/2001 | - - | - - | - - | - - | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | 5.5 | - - |
| | 11/29/2001 | - - | - - | - - | - - | <0.05 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | - - |
| | 2/7/2002 | - - | - - | - - | - - | <0.05 | <0.3 | <0.3 | <0.3 | <0.6 | <5.0 | 46 |
| | 5/9/2002 | - - | - - | - - | - - | <0.05 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 36 |
| | 09/25/02 | - - | - - | - - | - - | 0.071 | <5.0 | <5.0 | <5.0 | <5.0 | <5 | 56 |
| | 01/08/03 | - - | - - | - - | - - | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <1.0 | 36 |
| | 03/25/03 | - - | - - | - - | - - | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <1.0 | 46 |
| | 06/25/03 | - - | - - | - - | - - | 0.086 | <0.5 | <0.5 | 3.8 | <1.0 | <1.0 | 36 |
| | 10/21/03 | - - | - - | - - | - - | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <0.001 | 33 |
| | 02/10/04 | - - | - - | - - | - - | <0.05 | <0.5 | <0.5 | <0.5 | <1.0 | <1.0 | 41 |
| | 10/20/2005 | - - | - - | - - | - - | 0.052 | <0.5 | *0.84 | <0.5 | <1.0 | <1.0 | 43 |
| | **1/19/2006** | **- -** | **- -** | **- -** | **- -** | **- -** | **- -** | **- -** | **- -** | **- -** | **- -** | **36** |

Notes:

* Compound also reported in laboratory method blank sample.
mg/l - milligrams per liter
ug/l - micrograms per liter
TOC - top of casing
amsl - above mean sea level
- - Data not collected

# APPENDIX A

# MONITORING WELL SAMPLING DATA

| | |
|---|---|
| **Project Name**: Gasamat – Santa Rosa | **Project Number:** E8299-06-01 |
| Well No.: MW-1 | Date: 1/19/06 |
| Well Diameter: 2 in. | Field Personnel: Mike O'Brien |
| Casing Length: 25 feet | Screened Casing Length: 18' |
| Well Elevation: 115.34 feet MSL measured from TOC | |

| PURGE CHARACTERISTICS | |
|---|---|
| Water Depth Before Purging: 5.68 ft. | 2 in. = .1632 Gal/ft. 4 in. = .6528 Gal/ft. |
| Calculated Water Column Volume: 3.15 Gal. | Volumes Purged: 3 |
| Start Purging Time: 1245 | End Purging Time: 1254 |
| Total Time: 9 min. | Flow Gauge: to |
| Total Volume Purged: 9.5 Gal. | Avg. Flow Rate: gpm |
| Water Depth After Purging: 6.12 feet | Time: 1300 |
| Dissolved Oxygen: mg/l | Free Product: (Y/N); Thickness: inches |

| SAMPLING CHARACTERISTICS | |
|---|---|
| Purging Method: Submersible Pump | Sampling Method: Disposable Bailer |
| Laboratory Analysis: TPHg, BTEX, MTBE | |

| TIME | TEMPERATURE (°C) | CONDUCTIVITY (umhos/cm) | pH | Gallons Purged |
|---|---|---|---|---|
| 1248 | 19.3 | 566 | 6.05 | 3 |
| 1251 | 19.7 | 564 | 5.97 | 6 |
| 1254 | 19.6 | 612 | 5.93 | 9.5 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

comments: Clear sample. No odor.

# MONITORING WELL SAMPLING DATA

| | |
|---|---|
| **Project Name**: Gasamat – Santa Rosa | **Project Number:** E8299-06-01 |
| Well No.: MW-2 | Date: 1/19/06 |
| Well Diameter: 2 in. | Field Personnel: Mike O'Brien |
| Casing Length: 25.5 feet | Screened Casing Length: 18.5 |
| Well Elevation: 115.16 feet MSL measured from TOC | |

| PURGE CHARACTERISTICS | |
|---|---|
| Water Depth Before Purging: 3.51 ft. | 2 in. = .1632 Gal/ft. 4 in. = .6528 Gal/ft. |
| Calculated Water Column Volume: 3.59 Gal. | Volumes Purged: 3+ |
| Start Purging Time: 1053 | End Purging Time: 1107 |
| Total Time: 14 min. | Flow Gauge: to |
| Total Volume Purged: 11 Gal. | Avg. Flow Rate: gpm |
| Water Depth After Purging: 4.69 feet | Time: 1115 |
| Dissolved Oxygen: mg/l | Free Product: (Y/N); Thickness: inches |

| SAMPLING CHARACTERISTICS | |
|---|---|
| Purging Method: Submersible Pump | Sampling Method: Disposable Bailer |
| Laboratory Analysis: TPHg, BTEX, MTBE | |

| TIME | TEMPERATURE (°C) | CONDUCTIVITY (umhos/cm) | pH | Gallons Purged |
|---|---|---|---|---|
| 1059 | 18.1 | 1591 | 5.54 | 4 |
| 1104 | 19.9 | 1678 | 5.64 | 8 |
| 1107 | 19.3 | 1705 | 5.74 | 11 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

comments: Clear sample. No odor.

# MONITORING WELL SAMPLING DATA

| | |
|---|---|
| **Project Name:** Gasamat – Santa Rosa | **Project Number:** E8299-06-01 |
| Well No.: MW-5 | Date: 1/19/06 |
| Well Diameter: 2 in. | Field Personnel: Mike O'Brien |
| Casing Length: 25 feet | Screened Casing Length: |
| Well Elevation: 115.22 feet MSL measured from TOC | |

| PURGE CHARACTERISTICS | |
|---|---|
| Water Depth Before Purging: 4.51 ft. | 2 in. = .1632 Gal/ft. 4 in. = .6528 Gal/ft. |
| Calculated Water Column Volume: 3.34 Gal. | Volumes Purged: 3+ |
| Start Purging Time: 1320 | End Purging Time: 1326 |
| Total Time: 6 min. | Flow Gauge: to |
| Total Volume Purged: 10.5 Gal. | Avg. Flow Rate: gpm |
| Water Depth After Purging: 5.29 feet | Time: 1330 |
| Dissolved Oxygen: mg/l | Free Product: (Y/N); Thickness: inches |

| SAMPLING CHARACTERISTICS | |
|---|---|
| Purging Method: Submersible Pump | Sampling Method: Disposable Bailer |
| Laboratory Analysis: TPHg, BTEX, MTBE | |

| TIME | TEMPERATURE (°C) | CONDUCTIVITY (umhos/cm) | pH | Gallons Purged |
|---|---|---|---|---|
| 1322 | 18.9 | 667 | 6.93 | 3 |
| 1324 | 19.5 | 686 | 6.59 | 7 |
| 1326 | 19.8 | 684 | 6.51 | 10.5 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

comments: Petroleum odor.

# MONITORING WELL SAMPLING DATA

| | |
|---|---|
| **Project Name**: Gasamat – Santa Rosa | **Project Number:** E8299-06-01 |
| Well No.: MW-6 | Date: 1/19/06 |
| Well Diameter: 2 in. | Field Personnel: Mike O'Brien |
| Casing Length: 23 feet | Screened Casing Length: 15 |
| Well Elevation: 115.04 feet MSL measured from TOC | |

| PURGE CHARACTERISTICS | |
|---|---|
| Water Depth Before Purging: 4.98 ft. | 2 in. = .1632 Gal/ft. 4 in. = .6528 Gal/ft. |
| Calculated Water Column Volume: 2.94 Gal. | Volumes Purged: 3+ |
| Start Purging Time: 1305 | End Purging Time: 1312 |
| Total Time: 7 min. | Flow Gauge: to |
| Total Volume Purged: 9 Gal. | Avg. Flow Rate: gpm |
| Water Depth After Purging: 6.06 feet | Time: 1315 |
| Dissolved Oxygen: mg/l | Free Product: (Y/N); Thickness: inches |

| SAMPLING CHARACTERISTICS | |
|---|---|
| Purging Method: Submersible Pump | Sampling Method: Disposable Bailer |
| Laboratory Analysis: TPHg, BTEX, MTBE | |

| TIME | TEMPERATURE (°C) | CONDUCTIVITY (umhos/cm) | pH | Gallons Purged |
|---|---|---|---|---|
| 1307 | 19.0 | 574 | 5.98 | 3 |
| 1309 | 19.3 | 652 | 5.99 | 6 |
| 1312 | 19.7 | 580 | 6.03 | 9 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

comments: Petroleum odor.

# MONITORING WELL SAMPLING DATA

| | |
|---|---|
| **Project Name**: Gasamat – Santa Rosa | **Project Number:** E8299-06-01 |
| Well No.: MW-7 | Date: 1/19/06 |
| Well Diameter: 2 in. | Field Personnel: Mike O'Brien |
| Casing Length: 22 feet | Screened Casing Length: |
| Well Elevation: 114.22 feet MSL measured from TOC | |

| PURGE CHARACTERISTICS | |
|---|---|
| Water Depth Before Purging: 6.46 ft. | 2 in. = .1632 Gal/ft. 4 in. = .6528 Gal/ft. |
| Calculated Water Column Volume: 2.54 Gal. | Volumes Purged: |
| Start Purging Time: 1230 | End Purging Time: 1236 |
| Total Time: 6 min. | Flow Gauge: to |
| Total Volume Purged: 8 Gal. | Avg. Flow Rate: gpm |
| Water Depth After Purging: 7.31 feet | Time: 1240 |
| Dissolved Oxygen: mg/l | Free Product: (Y/N); Thickness: inches |

**SAMPLING CHARACTERISTICS**

| | |
|---|---|
| Purging Method: Submersible Pump | Sampling Method: Disposable Bailer |

Laboratory Analysis: TPHg, BTEX, MTBE

| TIME | TEMPERATURE (°C) | CONDUCTIVITY (umhos/cm) | pH | Gallons Purged |
|---|---|---|---|---|
| 1232 | 16.4 | 355 | 6.65 | 4 |
| 1234 | 18.6 | 377 | 6.40 | 6 |
| 1236 | 18.3 | 431 | 6.23 | 8 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

comments: Clear sample. No odor.

# MONITORING WELL SAMPLING DATA

| | |
|---|---|
| **Project Name**: Gasamat – Santa Rosa | **Project Number:** E8299-06-01 |
| Well No.: EW-1 | Date: 1/19/06 |
| Well Diameter: 4 in. | Field Personnel: Mike O'Brien |
| Casing Length: 25 feet | Screened Casing Length: 18 |
| Well Elevation: 115.19 feet MSL measured from TOC | |

| PURGE CHARACTERISTICS | |
|---|---|
| Water Depth Before Purging: 4.51 ft. | 2 in. = .1632 Gal/ft. 4 in. = .6528 Gal/ft. |
| Calculated Water Column Volume: 13.38 Gal. | Volumes Purged: |
| Start Purging Time: 1120 | End Purging Time: 1147 |
| Total Time: 27 min. | Flow Gauge: to |
| Total Volume Purged: ~30 Gal. | Avg. Flow Rate: gpm |
| Water Depth After Purging: 4.96 feet | Time: 1150 |
| Dissolved Oxygen: mg/l | Free Product: (Y/N); Thickness: inches |

| SAMPLING CHARACTERISTICS | |
|---|---|
| Purging Method: Submersible Pump | Sampling Method: Disposable Bailer |
| Laboratory Analysis: TPHg, BTEX, MTBE | |

| TIME | TEMPERATURE (°C) | CONDUCTIVITY (umhos/cm) | pH | Gallons Purged |
|---|---|---|---|---|
| 1129 | 19.5 | 597 | 6.40 | 7.10 |
| 1138 | 20.6 | 579 | 6.24 | 20 |
| 1147 | 20.4 | 584 | 6.27 | 30.5 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

comments: Replaced well cap.

# MONITORING WELL SAMPLING DATA

| | |
|---|---|
| **Project Name**: Gasamat – Santa Rosa | **Project Number:** E8299-06-01 |
| Well No.: EW-2 | Date: 1/19/06 |
| Well Diameter: 4 in. | Field Personnel: John Love |
| Casing Length: 25 feet | Screened Casing Length: |
| Well Elevation: 115.17 feet MSL measured from TOC | |

| PURGE CHARACTERISTICS | |
|---|---|
| Water Depth Before Purging: 4.43 ft. | 2 in. = .1632 Gal/ft. 4 in. = .6528 Gal/ft. |
| Calculated Water Column Volume: 10 Gal. | Volumes Purged: 3+ |
| Start Purging Time: 1155 | End Purging Time: 1222 |
| Total Time: 27 min. | Flow Gauge: to |
| Total Volume Purged: 30.5 Gal. | Avg. Flow Rate: gpm |
| Water Depth After Purging: 6.01 feet | Time: 1225 |
| Dissolved Oxygen: mg/l | Free Product: (Y/N); Thickness: inches |

| SAMPLING CHARACTERISTICS | |
|---|---|
| Purging Method: Submersible Pump | Sampling Method: Disposable Bailer |
| Laboratory Analysis: TPHg, BTEX, MTBE | |

| TIME | TEMPERATURE (°C) | CONDUCTIVITY (umhos/cm) | pH | Gallons Purged |
|---|---|---|---|---|
| 1204 | 19.3 | 753 | 6.38 | 10 |
| 1213 | 20.2 | 773 | 6.26 | 20 |
| 1222 | 20.5 | 760 | 6.28 | 30.5 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

comments: Petroleum odor.

# APPENDIX B

KIFF Analytical LLC

Report Number : 47967
Date : 1/23/2006

John Love
Geocon Consultants, Inc.
2356 Research Drive
Livermore, CA 94550

Subject : 8 Water Samples
Project Name : Gasamat (Santa Rosa)
Project Number : E8299-06-01

Dear Mr. Love,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

KIFF Analytical LLC

Report Number : 47967

Date : 1/23/2006

Project Name : **Gasamat (Santa Rosa)**

Project Number : **E8299-06-01**

Sample : **MW-2** Matrix : Water Lab Number : 47967-01

Sample Date :1/19/2006

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 1/20/2006 |
| Toluene - d8 (Surr) | 99.9 | | % Recovery | EPA 8260B | 1/20/2006 |
| 4-Bromofluorobenzene (Surr) | 94.8 | | % Recovery | EPA 8260B | 1/20/2006 |

Sample : **EW-1** Matrix : Water Lab Number : 47967-02

Sample Date :1/19/2006

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 1/20/2006 |
| Toluene - d8 (Surr) | 99.1 | | % Recovery | EPA 8260B | 1/20/2006 |
| 4-Bromofluorobenzene (Surr) | 111 | | % Recovery | EPA 8260B | 1/20/2006 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF Analytical LLC

Report Number : 47967

Date : 1/23/2006

Project Name : **Gasamat (Santa Rosa)**

Project Number : **E8299-06-01**

Sample : **EW-2** Matrix : Water Lab Number : 47967-03

Sample Date :1/19/2006

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **450** | 1.0 | ug/L | EPA 8260B | 1/21/2006 |
| **Toluene** | **360** | 1.0 | ug/L | EPA 8260B | 1/21/2006 |
| **Ethylbenzene** | **110** | 1.0 | ug/L | EPA 8260B | 1/21/2006 |
| **Total Xylenes** | **530** | 1.0 | ug/L | EPA 8260B | 1/21/2006 |
| **Methyl-t-butyl ether (MTBE)** | **90** | 1.0 | ug/L | EPA 8260B | 1/21/2006 |
| **TPH as Gasoline** | **3900** | 100 | ug/L | EPA 8260B | 1/21/2006 |
| Toluene - d8 (Surr) | 99.3 | | % Recovery | EPA 8260B | 1/21/2006 |
| 4-Bromofluorobenzene (Surr) | 111 | | % Recovery | EPA 8260B | 1/21/2006 |

Sample : **MW-7** Matrix : Water Lab Number : 47967-04

Sample Date :1/19/2006

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **Methyl-t-butyl ether (MTBE)** | **1.1** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 1/20/2006 |
| Toluene - d8 (Surr) | 99.4 | | % Recovery | EPA 8260B | 1/20/2006 |
| 4-Bromofluorobenzene (Surr) | 109 | | % Recovery | EPA 8260B | 1/20/2006 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF Analytical LLC

Report Number : 47967

Date : 1/23/2006

Project Name : **Gasamat (Santa Rosa)**

Project Number : **E8299-06-01**

Sample : **MW-1** Matrix : Water Lab Number : 47967-05

Sample Date :1/19/2006

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 1/20/2006 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 1/20/2006 |
| 4-Bromofluorobenzene (Surr) | 111 | | % Recovery | EPA 8260B | 1/20/2006 |

Sample : **MW-6** Matrix : Water Lab Number : 47967-06

Sample Date :1/19/2006

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **2400** | 20 | ug/L | EPA 8260B | 1/21/2006 |
| **Toluene** | **3900** | 20 | ug/L | EPA 8260B | 1/21/2006 |
| **Ethylbenzene** | **2400** | 20 | ug/L | EPA 8260B | 1/21/2006 |
| **Total Xylenes** | **8000** | 20 | ug/L | EPA 8260B | 1/21/2006 |
| **Methyl-t-butyl ether (MTBE)** | **2000** | 20 | ug/L | EPA 8260B | 1/21/2006 |
| **TPH as Gasoline** | **52000** | 2000 | ug/L | EPA 8260B | 1/21/2006 |
| Toluene - d8 (Surr) | 99.2 | | % Recovery | EPA 8260B | 1/21/2006 |
| 4-Bromofluorobenzene (Surr) | 111 | | % Recovery | EPA 8260B | 1/21/2006 |

Approved By: Joel Kiff

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KIFF Analytical LLC

Report Number : 47967

Date : 1/23/2006

Project Name : **Gasamat (Santa Rosa)**

Project Number : **E8299-06-01**

Sample : **MW-5** Matrix : Water Lab Number : 47967-07

Sample Date :1/19/2006

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **240** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **Toluene** | **190** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **Ethylbenzene** | **130** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **Total Xylenes** | **490** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **Methyl-t-butyl ether (MTBE)** | **310** | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| **TPH as Gasoline** | **3900** | 50 | ug/L | EPA 8260B | 1/20/2006 |
| Toluene - d8 (Surr) | 98.1 | | % Recovery | EPA 8260B | 1/20/2006 |
| 4-Bromofluorobenzene (Surr) | 110 | | % Recovery | EPA 8260B | 1/20/2006 |

Sample : **WW-1** Matrix : Water Lab Number : 47967-08

Sample Date :1/19/2006

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Trichloroethene** | **36** | 0.50 | ug/L | EPA 8260B | 1/21/2006 |
| Dibromofluoromethane (Surr) | 106 | | % Recovery | EPA 8260B | 1/21/2006 |
| 1,2-Dichloroethane-d4 (Surr) | 102 | | % Recovery | EPA 8260B | 1/21/2006 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

Report Number : 47967

Date : 1/23/2006

**QC Report : Method Blank Data**

Project Name : **Gasamat (Santa Rosa)**

Project Number : **E8299-06-01**

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 1/20/2006 |
| Trichloroethene | < 0.50 | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| Dibromofluoromethane (Surr) | 108 | | % | EPA 8260B | 1/20/2006 |
| 1,2-Dichloroethane-d4 (Surr) | 104 | | % | EPA 8260B | 1/20/2006 |
| Toluene - d8 (Surr) | 100 | | % | EPA 8260B | 1/20/2006 |
| 4-Bromofluorobenzene (Surr) | 110 | | % | EPA 8260B | 1/20/2006 |
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 1/20/2006 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 1/20/2006 |
| Toluene - d8 (Surr) | 100 | | % | EPA 8260B | 1/20/2006 |
| 4-Bromofluorobenzene (Surr) | 95.4 | | % | EPA 8260B | 1/20/2006 |

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 47967

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Date : 1/23/2006

Project Name : **Gasamat (Santa Rosa)**

Project Number : **E8299-06-01**

| Parameter | Spiked Sample | Sample Value | Spike Level | Spike Dup. Level | Spiked Sample Value | Duplicate Spiked Sample Value | Units | Analysis Method | Date Analyzed | Spiked Sample Percent Recov. | Duplicate Spiked Sample Percent Recov. | Relative Percent Diff. | Spiked Sample Percent Recov. Limit | Relative Percent Diff. Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 47980-03 | <0.50 | 40.0 | 40.0 | 40.9 | 39.0 | ug/L | EPA 8260B | 1/20/06 | 102 | 97.6 | 4.60 | 70-130 | 25 |
| Toluene | 47980-03 | <0.50 | 40.0 | 40.0 | 40.0 | 38.6 | ug/L | EPA 8260B | 1/20/06 | 100 | 96.6 | 3.49 | 70-130 | 25 |
| Tert-Butanol | 47980-03 | 39 | 200 | 200 | 241 | 236 | ug/L | EPA 8260B | 1/20/06 | 101 | 98.2 | 2.42 | 70-130 | 25 |
| Methyl-t-Butyl Ether | 47980-03 | 4.4 | 40.0 | 40.0 | 40.4 | 39.8 | ug/L | EPA 8260B | 1/20/06 | 90.0 | 88.5 | 1.73 | 70-130 | 25 |
| Benzene | 47984-02 | <0.50 | 40.0 | 40.0 | 39.1 | 37.8 | ug/L | EPA 8260B | 1/20/06 | 97.8 | 94.4 | 3.49 | 70-130 | 25 |
| Toluene | 47984-02 | <0.50 | 40.0 | 40.0 | 39.4 | 37.9 | ug/L | EPA 8260B | 1/20/06 | 98.6 | 94.8 | 3.99 | 70-130 | 25 |
| Tert-Butanol | 47984-02 | 510 | 200 | 200 | 721 | 718 | ug/L | EPA 8260B | 1/20/06 | 104 | 102 | 1.56 | 70-130 | 25 |
| Methyl-t-Butyl Ether | 47984-02 | 0.93 | 40.0 | 40.0 | 37.0 | 35.8 | ug/L | EPA 8260B | 1/20/06 | 90.2 | 87.1 | 3.48 | 70-130 | 25 |

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 47967

**QC Report : Laboratory Control Sample (LCS)**

Date : 1/23/2006

Project Name : **Gasamat (Santa Rosa)**

Project Number : **E8299-06-01**

| Parameter | Spike Level | Units | Analysis Method | Date Analyzed | LCS Percent Recov. | LCS Percent Recov. Limit |
|---|---|---|---|---|---|---|
| Benzene | 40.0 | ug/L | EPA 8260B | 1/20/06 | 98.4 | 70-130 |
| Toluene | 40.0 | ug/L | EPA 8260B | 1/20/06 | 101 | 70-130 |
| Tert-Butanol | 200 | ug/L | EPA 8260B | 1/20/06 | 102 | 70-130 |
| Methyl-t-Butyl Ether | 40.0 | ug/L | EPA 8260B | 1/20/06 | 87.8 | 70-130 |
| | | | | | | |
| Benzene | 40.0 | ug/L | EPA 8260B | 1/20/06 | 110 | 70-130 |
| Toluene | 40.0 | ug/L | EPA 8260B | 1/20/06 | 116 | 70-130 |
| Tert-Butanol | 200 | ug/L | EPA 8260B | 1/20/06 | 122 | 70-130 |
| Methyl-t-Butyl Ether | 40.0 | ug/L | EPA 8260B | 1/20/06 | 92.3 | 70-130 |

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

**KIFF Analytical LLC**

2795 2nd Street, Suite 300
Davis, CA 95616
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 47967

Page 1 of 1

# Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): John Love

California EDF Report? ☒ Yes ☐ No

Company / Address: 2356 Research Dr Geocon Livermore, CA 94550

Sampling Company Log Code:

Phone #: 925-371-5900 Fax #: 925-371-5915

Global ID: T0609700048 9

Project #: E8299-06-01 P.O. #:

EDF Deliverable To (Email Address): love@geoconinc.com

Project Name: Gasamat (Santa Rosa)

Sampler Signature:

Project Address: Santa Rosa

TAT: ☐ 12 hr ☐ 24 hr ☐ 48 hr ☐ 72 hr ☒ 1 wk

| Sample Designation | Sampling Date | Sampling Time | Container: 40 ml VOA | Sleeve | Poly | Glass | Tedlar | | Preservative: HCl | $HNO_3$ | None | ICE | | Matrix: Water | Soil | Air | | MTBE (EPA 8260B) per EPA 8021 level @ 5.0 ppb | MTBE (EPA 8260B) @ 0.5 ppb | BTEX (EPA 8260B) | TPH Gas (EPA 8260B) | 5 Oxygenates (EPA 8260B) | 7 Oxygenates (EPA 8260B) | Lead Scav.(1,2 DCA & 1,2 EDB-EPA 8260B) | Volatile Halocarbons (EPA 8260B) | Volatile Organics Full List (EPA 8260B) | Volatile Organics (EPA 524.2 Drinking Water) | TPH as Diesel (EPA 8015M) | TPH as Motor Oil (EPA 8015M) | Total Lead (EPA 6010) | W.E.T. Lead (STLC) | TCE only EPA 8260B | | | For Lab Use Only |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-2 | 1/19/06 | 1115 | 3 | | | | | | X | | | X | | X | | | | | X | X | X | | | | | | | | | | | | | | -01 |
| EW-1 | | 1150 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -02 |
| EW-2 | | 1225 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -03 |
| MW-7 | | 1240 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -04 |
| MW-1 | | 1300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -05 |
| MW-6 | | 1315 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -06 |
| MW-5 | | 1330 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -07 |
| WW-1 | | 1340 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | | | | -08 |

| Relinquished by: | Date | Time | Received by: |
|---|---|---|---|
| M. Le O'Brien | 1/19/06 | 1600 | |
| | | | |
| | 01/19/06 | 1403 1603 | Peter Nguyen KIFF Analytical |

Remarks:

Bill to:

For Lab Use Only: Sample Receipt

| Temp °C | Initials | Date | Time | Therm. ID # | Coolant Present |
|---|---|---|---|---|---|
| 10.4 | PJN | 01/19/06 | 1403 | IR4 | Yes / No |

Distribution: White - Lab; Pink - Originator
Rev: 051805

# APPENDIX C

Mr. Richard Dreessen
Geocon Consultants, Inc.
2356 Research Drive
Livermore, CA 94550
FAX: 925-371-5915

**Subject:** **First Quarter 2006 Groundwater Monitoring Report**
**Former Gasamat #953**
**3185 Santa Rosa Avenue**
**Santa Rosa, California**

**Report Date:** **March 22, 2006**

Dear Mr. Dreessen:

I have reviewed and approved the above-referenced report for the Former Gasamat #953 site. Please submit the report to the Regional Water Quality Control Board – North Coast Region, and the County of Sonoma Health Services Department. Should either of the agencies require it, I am prepared to declare, under penalty of perjury, that to the best of my knowledge, the information contained in the subject report is true and correct.

Sincerely,

Dan Gallagher

Dan Gallagher

Date: 4-4-06