# SITE CONCEPTUAL MODEL UPDATE
# FIRST QUARTER 2007

Tesoro Station No. 67106
Former Beacon Station No. 3720
1088 Marina Boulevard
San Leandro, California
RDM Project No. 00-67106

Prepared For:

TESORO PETROLEUM COMPANIES, INC.
3450 South 344th Way, Suite 100
Auburn, Washington 98001

Prepared By:

RDM ENVIRONMENTAL, INC.
6280 Brookshire Drive
Rocklin, California 95677
(916) 415-1134

HALEY & ALDRICH OF NEW YORK
200 Town Centre Drive, Suite 2
Rochester, New York 14623
(585) 359-9000

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## EXECUTIVE SUMMARY

This Site Conceptual Model (SCM) Update has been prepared by RDM Environmental, Inc. (RDM) and Haley & Aldrich, Inc. (Haley & Aldrich), on behalf of Tesoro Petroleum Companies, Inc. (Tesoro), for the former Tesoro Station No. 67106 located at 1088 Marina Boulevard, San Leandro, California. This report is submitted in fulfillment of the requirements for the California Regional Water Quality Control Board, San Francisco Bay Region (CRWQCBSFB), the Alameda County Health Care (ACEH) Agency – Department of Health and the City of San Leandro – Environmental Service Division. This report contains only updates to the Site Conceptual Model Update Fourth Quarter 2006 report dated 15 February 2006 (RDM). Standard background information previously submitted to the agency in hard copy is not included in this update report. This information can be found in hard copy by referring to the SCM report dated 10 November 2005, or electronically accessed on the Tesoro San Leandro Sharepoint website (https://portal.haleyaldrich.com/sites/ext/San Leandro).

Currently, the groundwater flow is toward the southwest, which is consistent with recent monitoring events, and consistent with historical groundwater flow direction. Total Petroleum Hydrocarbons as gasoline (TPH-G) are currently detected in wells MW-1 through MW-5 at concentrations greater than the environmental screening level (ESL) for groundwater that is a current or potential drinking water resource. Benzene, Ethylbenzene and Total Xylenes are currently detected in well MW-2 at concentrations greater than the drinking water resource ESL. All other on-site and off-site wells are either non-detect (ND) or have concentrations below the drinking water resource ESLs for TPH-G, BTEX, MTBE or other fuel oxygenates.

Based on a leveling off of treatment system performance and indications that laboratory analytical results may be biased low because many of the on-site wells were either vapor extraction or ozone injection points, it was proposed in 1Q2006 to temporarily suspend active remediation to allow an assessment of site rebound and equilibrium concentrations for a minimum six month period. This approach was agreed to by ACEH (letter dated 11 April 2006) and all active remediation systems were shutdown on 12 May 2006. To date, laboratory analytical data indicate a relatively low rebound of gasoline constituent concentrations, which one would expect with the temporary cessation of active remediation. The relatively low post-shutdown concentrations suggest that only a minimal amount of petroleum compounds remain as residuals in the subsurface. It is important to note that current contaminant concentrations are at or below values observed at the time of systems shut down (May 2006), demonstrating that natural processes have attenuated the slight contaminant rebound observed in the post 3 month shutdown samples.

In summary, based on Third and Fourth Quarters 2006 and First Quarter 2007 observations, while the subsurface may not yet be at equilibrium, the plume itself appears to be stable. Additional site data demonstrating equilibrium conditions (including both MNA and petroleum compounds) is needed to complete site assessment activities; therefore Tesoro has requested and received verbal approval from ACEH to extend the temporary suspension of active remediation until at least the Third Quarter of 2007 to continue to allow the site to stabilize and to complete a year's worth (a full four seasons) of post-shutdown evaluation data. That data will then be utilized to develop a revised site management strategy.

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## 1.0 INTRODUCTION

This Site Conceptual Model (SCM) Update Report has been prepared by RDM Environmental, Inc. (RDM) and Haley & Aldrich, Inc. (Haley & Aldrich), on behalf of Tesoro Petroleum Companies, Inc. (Tesoro) for the former Tesoro Station No. 67106 located at 1088 Marina Boulevard, San Leandro, California. This report contains only updates to the previously submitted documents. The most recently prepared project reports and standard project reference materials consistently contained in quarterly reports submitted to the CRWQCBSFB (e.g., site background, local groundwater use, site geology and hydrogeology, general field procedures, previous work, remedial system descriptions) are available in hard copy in any of the previous report submittals or electronically on the Tesoro San Leandro Sharepoint website (https://portal.haleyaldrich.com/sites/ext/Tesoro/San Leandro), a project data portal and collaborative resource that is currently available to all members of the project team and interested stakeholders.

After collection of the 2Q2006 groundwater samples (12 May 2006) all active remediation systems (i.e., ozone/air sparging and soil vapor extraction) were shutdown. The temporary suspension of active remediation for a 6+ month period was agreed to in the Alameda County Health Care Services (ACEH) letter dated 11 April 2006; this approach would have allowed for an assessment of site rebound and equilibrium contaminant concentrations. Baseline groundwater samples were collected, from all monitoring wells, immediately prior to shutdown on 12 May 2006 and sampled again after 3 months of inactivity (13 August 2006), and again after 6 months of inactivity (20 October 2006). This quarterly report summarizes the results from the fourth planned sampling event, completed on 2 February 2007, after 9 months of inactivity.

Site wells that had been previously used for active remediation (i.e., ozone/air sparging or soil vapor extraction) demonstrated, in general, a decrease in contaminant levels when compared to sample results from the 4Q2006 sampling event. Total Petroleum Hydrocarbons as gasoline (TPH-G) are currently detected in wells MW-1 through MW-5 at concentrations greater than the environmental screening level (ESL) for groundwater that is a current or potential drinking water resource. Benzene, Ethylbenzene and Total Xylenes are currently detected in well MW-2 at concentrations greater than the drinking water resource ESL. All other on-site and off-site wells are either non-detect (ND) or have concentrations below the drinking water resource ESLs for TPH-G, BTEX, MTBE or other fuel oxygenates.

## 2.0 SITE BACKGROUND

Site Description and Groundwater Use details are available in hard copy in any of the previous report submittals or electronically on the Tesoro San Leandro Sharepoint website (https://portal.haleyaldrich.com/sites/ext/Tesoro/San Leandro).

## 3.0 ENVIRONMENTAL SETTING

Descriptions of the site geologic and hydrogeologic conditions are available in hard copy in any of the previous report submittals or electronically on the Tesoro San Leandro Sharepoint website (https://portal.haleyaldrich.com/sites/ext/Tesoro/San Leandro). A site topographic map and site map are shown in Figures 1 and 2, respectively.

## 4.0 SITE ASSESSMENT ACTIVITIES

No supplemental site assessment activities were performed during the reporting period. A summary of previous work conducted at the site is available in hard copy in any of the previous report submittals or electronically on the Tesoro San Leandro Sharepoint website (https://portal.haleyaldrich.com/sites/ext/Tesoro/San Leandro).

## 5.0 QUARTERLY GROUNDWATER MONITORING AND SAMPLING

### 5.1 GROUNDWATER MONITORING AND SAMPLING ACTIVITIES

On 12 February 2007, groundwater levels in Monitoring wells MW-1 through MW-9 were measured prior to well purging and sampling. No free product was observed in any of the groundwater monitoring wells and has not been observed in any project monitoring well since before March 1998. Groundwater monitoring data are presented in Table 1.

Data used to prepare the groundwater elevation contour maps were obtained from fluid level sensors deployed during the 12 February 2007 sampling event. Groundwater elevation data are summarized in Table 1. The groundwater elevation contour map, using data obtained during the 12 February 2007 sampling event, is shown in Figure 3 and indicates that groundwater direction is predominately to the southwest.

### 5.2 LABORATORY ANALYSIS

Groundwater samples collected during this sampling event were analyzed by a State-certified laboratory, for total petroleum hydrocarbons as gasoline (TPH-G) using the Department of Health Services Leaking Underground Fuel Tank (DHS LUFT) Method, and volatile organic compounds (VOCs), including benzene, toluene, ethylbenzene, total xylenes (BTEX), MTBE, and other fuel oxygenates using Environmental Protection Agency (EPA) Method 8260B.

Additional samples were collected for the analysis of monitored natural attenuation (MNA) parameters (including: dissolved oxygen, redox potential, pH, conductivity, ferrous iron, total iron, alkalinity, carbon dioxide, total organic carbon) from all wells using low flow sampling methods. MNA parameter results are summarized in Table 2. These parameters were collected to determine typical subsurface conditions during periods of inactive remediation to assess equilibrium conditions and potential rebound effects when compared to subsurface conditions from samples collected during periods of active remediation.

Historical and quarterly results of laboratory analysis of groundwater samples (including First Quarter 2007) are presented in Table 1. Dissolved-phase Benzene, TPH-G, MTBE and total Xylenes iso-concentration maps are shown on Figures 4, 5, 6, and 7, respectively. Copies of the official laboratory reports and chain of custody records for the First Quarter 2007 quarterly groundwater sampling event are

included in Appendix B. In addition, field data sheets from the quarterly monitoring and sampling event are included in Appendix A.

## 5.3 FINDINGS

On 12 February 2007, groundwater was measured at depths between 11.22 feet and 13.73 feet bgs. Based on previous groundwater elevation data, the groundwater elevation has risen, following decreases in the last two quarters, across the site. Annual groundwater fluctuations in recent years have ranged 2-3 feet and elevation highs have generally occurred between the months of February and May. Therefore the increase observed during this quarter is likely due to seasonal variability. Groundwater flow beneath the site is to the southwest under a hydraulic gradient of less than 0.05 foot per foot; similar to previous quarters. Groundwater monitoring data are presented in Tables 1 and 2, and the groundwater elevation contour map is shown on Figure 3.

Results of laboratory analysis of groundwater samples collected on 12 February 2007, from wells MW-1 through MW-9 are summarized in Table 1 and indicate the following:

- Benzene was detected in a groundwater sample collected from well MW-2 at a concentration of 24 ug/L (ESL of 1 ug/L). All other wells were ND (<0.5 ug/L).

- Toluene was not observed in any groundwater samples at a concentration greater than the groundwater ESL of 40 ug/L. Wells MW-2 and MW-4 showed Toluene detections of 8.5 ug/L and 0.58 ug/L, respectively; all other wells were ND (<0.5 ug/L). Results demonstrate continued Toluene attenuation in MW-2 and MW-4 has occurred during the approximate 1 year following active remediation system shutdown.

- Ethylbenzene was detected in a groundwater sample collected from well MW-2 at a concentration of 450 ug/L, a significant decrease in concentration when compared to results obtained prior to systems shutdown. All other wells were ND (<0.5 ug/L) or less than the groundwater ESL of 30 ug/L.

- Total Xylenes were also detected in a groundwater sample collected from well MW-2 at a concentration of 110 ug/L, significantly lower (68%) than concentrations observed during the previous year of active remediation. All other wells were ND (<0.5 ug/L) or less than the groundwater ESL of 20 ug/L.

- All wells were ND (<0.5 ug/L) for MTBE or less than the groundwater ESL of 5 ug/L.

- TPH-G was detected in groundwater samples collected from wells MW-1 through MW-5 at concentrations ranging from 150 ug/L to 7,700 ug/L (ESL of 100 ug/L). Wells MW-6 through MW-9 were ND (<50 ug/L) or less than the groundwater ESL of 100 ug/L. A comparison of the current quarter to data from data obtained from the previous year of active remediation shows that concentrations of TPH-g significantly improved, with one exception (MW-2, statistically no change), suggesting that natural processes are actively attenuating site contaminants.

Results of field MNA parameter analysis of groundwater samples collected on 12 February 2007, from wells MW-1 through MW-9 are summarized in Table 2 and indicate the following:

- Dissolved oxygen (DO) concentrations and ORP values continue to fluctuate in all monitoring and may be related to seasonal variability or sampling inaccuracies.

- MNA parameters do not suggest the presence of large amounts of residual source. Specifically, ORP values are not significantly negative and groundwater shows the presence of measurable dissolved oxygen, as expected when large amounts of source are present, and dissolved $CO_2$ values have only decreased moderately.

- Other MNA parameters have also not stabilized further supporting the assessment that the site has not yet achieved equilibrium conditions.

The changes observed in both the MNA and groundwater monitoring parameters indicate that the site is returning to but may not have yet achieved equilibrium conditions. The groundwater monitoring analytical trends show a continued decrease in site contaminants even though active remediation (i.e., ozone sparging and soil vapor extraction) were temporarily suspended approximately 1 year ago. Comparing compound concentrations during the year of inactive remediation to data collected during active remediation (prior to May 2006) show that contaminant concentrations have continued to decline at a rate equal to or better than those observed pre-systems shutdown. These results strongly suggest that natural processes at the site may be operating on their own to remediate the constituents present, and that active remediation may be an unnecessary use of resources at this site.

## 6.0 SITE CONCEPTUAL MODEL OVERVIEW AND UPDATE

Currently, the groundwater flow is toward the southwest, which is consistent with recent monitoring events, and consistent with the previous SCM for the site. During the Second Quarter 2006 active remediation was temporarily suspended to conduct an assessment of site rebound and conditions under equilibrium conditions.

## 7.0 QUARTERLY REMEDIAL PROGRESS OF SOIL VAPOR EXTRACTION SYSTEM

### 7.1 OPERATIONS UPDATE

Active SVE remediation was temporarily suspended on 12 May 2006 and has remained off to conduct an assessment of site rebound and conditions under equilibrium conditions.

## 8.0 QUARTERLY REMEDIAL PROGRESS OF GROUNDWATER TREATMENT SYSTEM

### 8.1 OPERATIONS UPDATE

Active ozone/air sparging was temporarily suspended on 12 May 2006 and has remained off to conduct an assessment of site rebound and conditions under equilibrium conditions (i.e., stable DO and ORP readings).

## 9.0 PROPOSED WORK ACTIVITIES

RDM, Haley & Aldrich, and Tesoro propose the following work activities for the Second Quarter of 2007:

- Regularly scheduled monitoring of water levels in key wells within the monitoring network to provide groundwater flow gradient and direction data.

- Continue quarterly groundwater compliance reporting under this new reporting format, including updates to the SCM as appropriate.

- Based on the preliminary assessment (analytical results from groundwater samples collected 13 August 2006, 20 October 2006 and 12 February 2007), Tesoro requested and received verbal approval from ACEH to extend the temporary suspension of active remediation until at least the Third Quarter of 2007. Extending the temporary suspension period will provide insight with respect to the following:
    - Site equilibrium conditions and seasonal variability with respect to TPH-G, BTEX, MTBE concentrations and MNA parameter values. Data will provide a more thorough understanding of equilibrium plume dynamics.
    - Whether equilibrium plume conditions are appropriate for continuation of the historical remedial approach (i.e., SVE, air/ozone injection) or if alternative approaches should be considered.
    - On-site groundwater quality through a full year (four full seasons) following system shut-down. Specifically, when groundwater levels return to seasonal highs; typically observed in February – April.
    - The static water levels in key wells within the monitoring network to determine groundwater flow gradient and direction while the system is at equilibrium.

- Use laboratory and field data to assess whether the site has achieved equilibrium conditions or if another period of monitoring is required.

- If the Second Quarter 2007 data suggest that the current trend of attenuation without active remediation is continuing (indicating the there is no benefit from running these systems), investigate alternative and more cost-effective approaches for achieving site closure conditions.

- Schedule a meeting with Stakeholders to discuss data obtained during the year of inactive remediation and discuss possible alternative site closure approaches.

## 11.0 STATEMENT OF LIMITATIONS AND PROFESSIONAL CERTIFICATION

The conclusions presented herein are based solely upon the agreed upon scope of work outlined in this report. RDM makes no warranties or guarantees as to the accuracy or completeness of information provided or compiled by others. It is possible that information exists beyond the scope of this investigation. Additional information, which was not found or available to RDM at the time of writing this report, may result in modification of the conclusions presented. This report is not a legal opinion. The services performed by RDM have been conducted in a manner consistent with the level of care ordinarily exercised by members of our profession currently practicing under similar conditions. No other warranty, expressed or implied, is made.

This report was supervised or prepared by the licensed professional whose signature and license number appear below.

RDM ENVIRONMENTAL, INC.

Richard D. Munsch
Project Manager

HALEY & ALDRICH OF NEW YORK

Michael G. Nickelsen
Senior Scientist

Michael G. Lee, P.E.
CA Reg. Civil Engineer No. C055795

Paul M. Tomatore, P.E. in New York
Vice President/Senior Consultant

## 12.0 REFERENCES

Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater; Volume 1: Summary Tier 1 Lookup Tables. California Regional Water Quality Control Board, San Francisco Bay Region, Interim Final – 2005.

Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater; Volume 2: Background Documentation for the Development of Tier I Environmental Screening Levels. California Regional Water Quality Control Board, San Francisco Bay Region, Interim Final – 2005.

**TABLE 1**

**GROUND WATER MONITORING DATA**

Tesoro Station No. 67106
Former Beacon Station No. 3720
1088 Marina Boulevard
San Leandro, California

| Monitoring Well | Date | Reference Elevation (ft) [a] | Depth to Ground Water (ft) | Ground Water Elevation (ft) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | TPH as gasoline (µg/L) | MTBE (µg/L) | Oxygenates (µg/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 03/12/98 | 33.10 | 11.09 | 22.01 | <0.5 | <0.5 | 5.0 | 2.8 | 100 | <5.0 | NA | No sheen |
| | 05/28/98 | | 11.36 | 21.74 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 08/31/98 | | 12.61 | 20.49 | <0.5 | <0.5 | 6.4 | 1.4 | 130 | <5.0 | NA | No sheen |
| | 11/19/98 | | 13.84 | 19.26 | 0.75 | <0.5 | <0.5 | 3.0 | 120 | <5.0 | NA | No sheen |
| | 03/15/99 | | 11.95 | 21.15 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 06/07/99 | | 13.45 | 19.65 | 1.6 | 1.9 | 230 | 110 | 5,200 | <5.0 | NA | No sheen |
| | 09/07/99 | | 13.10 | 20.00 | 1.0 | <0.5 | 22 | 15 | 490 | <5.0 | NA | No sheen |
| | 12/13/99 | | 14.29 | 18.81 | <2.5 | <2.5 | 170 | 110 | 4,100 | <25 | NA | No sheen |
| | 03/08/00 | | 11.22 | 21.88 | <0.5 | <0.5 | 21 | 7.7 | 1,200 | 150 | NA | No sheen |
| | 06/12/00 | | 12.85 | 20.25 | 1.5 | 0.9 | 160 | 98 | 3,000 | 34 | NA | No sheen |
| | 11/15/00 | | 14.19 | 18.91 | <20 | <20 | 470 | 390 | 8,500 | 14,000 | NA | No sheen |
| | 02/27/01 | | 12.35 | 20.75 | 5.4 | 2.6 | 260 | 190 | 6,100 | 4,300 | NA | No sheen |
| | 05/22/01 | | 14.18 | 18.92 | 8.9 | 13 | 1,100 | 1,300 | 21,000 | 2,300 | NA | No sheen |
| | 09/05/01 | | 13.70 | 19.10 | <2.0 | 3.6 | 600 | 850 | 12,000 | 93 | NA | No sheen |
| | 11/07/01 | | 14.25 | 18.85 | <5.0 | <5.0 | 1,300 | 1,600 | 23,000 | 87 | NA | No sheen |
| | 02/11/02 | 35.47 | 13.05 | 22.42 | <0.5 | <0.5 | 140 | 150 | 4,500 | 18 | NA | No sheen |
| | 06/03/02 | | 13.31 | 22.16 | <2.5 | <2.5 | 520 | 460 | 12,000 | 12 | NA | No sheen |
| | 08/06/02 | | 13.75 | 21.72 | <0.5 | <0.5 | 710 | 580 | 22,000 | 15 | NA | No sheen |
| | 11/14/02 | | 14.10 | 21.37 | <5.0 | <5.0 | 300 | 250 | 16,000 | 8.1 | ND | No sheen |
| | 02/20/03 | | 12.80 | 22.67 | <1.5 | <1.5 | 130 | 89 | 7,300 | 9.3 | ND | No sheen |
| | 05/15/03 | | 12.90 | 22.57 | <2.5 | <2.5 | 270 | 120 | 14,000 | 4.7 | ND | No sheen |
| | 07/31/03 | | 13.50 | 21.97 | <5.0 | <5.0 | 380 | 230 | 18,000 | 5.2 | ND | No sheen |
| | 10/28/03 | | 14.42 | 21.05 | <5.0 | <5.0 | 340 | 210 | 17,000 | <5.0 | ND | No sheen |
| | 02/28/04 | | 12.72 | 22.75 | <2.0 | <2.0 | 140 | 48 | 10,000 | 4.8 | ND | No sheen |
| | 04/16/04 | | 13.52 | 21.95 | <0.5 | <0.5 | 29 | 11 | 2,800 | 2.1 | ND | No sheen |
| | 07/16/04 | | 14.04 | 21.43 | <0.5 | 0.57 | 130 | 74 | 5,500 | 1.4 | ND | No sheen |
| | 11/13/04 | | 13.99 | 21.43 | <0.70 | <0.70 | 56 | 25 | 4,000 | ND | ND | No sheen |
| | 02/04/05 | | 13.36 | 22.11 | 0.57 | <0.5 | 140 | 58 | 9,700 | 0.75 | ND | No sheen |
| | 04/08/05 | | 12.43 | 23.04 | <1.5 | <1.5 | 84 | 24 | 8,100 | <1.5 | ND | No sheen |
| | 08/10/05 | | 13.62 | 21.85 | <1.5 | <1.5 | 92 | 32 | 8,700 | <1.5 | ND | No sheen |
| | 11/05/05 | | 13.95 | 21.52 | <1.5 | <1.5 | 92 | 38 | 9,200 | <1.5 | ND | No sheen |
| | 01/13/06 | | 12.43 | 23.04 | <1.5 | <1.5 | 34 | 17 | 6,500 | <1.5 | ND | No sheen |
| | 05/12/06 | | 12.40 | 23.33 | <0.5 | 1.0 | 26 | 12 | 3,600 | <0.5 | 330[d], 390[e] | No sheen |
| | 08/13/06 | | 13.08 | 22.39 | <0.5 | 0.57 | 40 | 12 | 5,200 | <0.5 | ND | No sheen |
| | 10/20/06 | | 13.58 | 21.89 | <0.5 | 0.61 | 52 | 16 | 5,300 | <0.5 | ND | No sheen |
| | 02/12/07 | | 12.94 | 22.53 | <0.5 | <0.5 | 12 | 2.7 | 3,500 | <0.5 | ND | No sheen |

**TABLE 1**

**GROUND WATER MONITORING DATA**

Tesoro Station No. 67106
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San Leandro, California

| Monitoring Well | Date | Reference Elevation (ft) [a] | Depth to Ground Water (ft) | Ground Water Elevation (ft) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | TPH as gasoline (µg/L) | MTBE (µg/L) | Oxygenates (µg/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-2 | 03/12/98 | 32.80 | 10.92 | 21.88 | 32 | 1.0 | 12 | 6.5 | 440 | 20 | NA | No sheen |
| | 05/28/98 | | 10.41 | 22.39 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | 27 | NA | No sheen |
| | 08/31/98 | | 12.29 | 20.51 | 9.3 | 0.95 | 4.9 | 8.8 | 270 | 20 | NA | No sheen |
| | 11/19/98 | | 13.47 | 19.33 | 16 | 0.72 | <0.5 | 4.3 | 180 | 7.4 | NA | No sheen |
| | 03/15/99 | | 11.95 | 20.85 | 12 | 3.5 | 59 | 840 | 2,400 | 10 | NA | No sheen |
| | 06/07/99 | | 13.11 | 19.69 | 21 | 0.99 | 6.9 | 10 | 690 | 6.1 | NA | No sheen |
| | 09/07/99 | | 12.92 | 19.88 | 7.8 | 1.2 | 42 | 100 | 610 | <5.0 | NA | No sheen |
| | 12/13/99 | | 13.96 | 18.84 | 26 | 0.93 | 52 | 96 | 3,000 | <5.0 | NA | No sheen |
| | 03/08/00 | | 10.87 | 21.93 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 06/12/00 | | 12.53 | 20.27 | 51 | 17 | 170 | 320 | 5,500 | 18 | NA | No sheen |
| | 11/15/00 | | 13.96 | 18.84 | 75 | 48 | 1,200 | 2,800 | 16,000 | 19,000 | NA | No sheen |
| | 02/27/01 | | 12.29 | 20.51 | 54 | 24 | 320 | 870 | 10,000 | 6,000 | NA | No sheen |
| | 05/22/01 | | 15.51 | 17.29 | 12 | 5.0 | 79 | 100 | 2,400 | 3,500 | NA | No sheen |
| | 09/05/01 | | 13.75 | 19.05 | 120 | 180 | 1,500 | 5,100 | 34,000 | 400 | NA | No sheen |
| | 11/07/01 | | 13.99 | 18.81 | 87 | 170 | 1,400 | 3,700 | 32,000 | 870 | NA | No sheen |
| | 02/11/02 | 35.11 | 12.98 | 22.13 | 170 | 250 | 1,600 | 4,700 | 34,000 | 390 | NA | No sheen |
| | 06/03/02 | | 13.24 | 21.87 | 130 | 260 | 1,700 | 5,100 | 29,000 | 110 | NA | No sheen |
| | 08/06/02 | | 13.73 | 21.38 | 110 | 240 | 1,700 | 4,700 | 34,000 | 84 | NA | No sheen |
| | 11/14/02 | | 13.55 | 21.56 | 51 | 150 | 1,300 | 3,600 | 35,000 | 39 | ND | No sheen |
| | 02/20/03 | | 11.80 | 23.31 | 67 | 130 | 1,100 | 2,800 | 23,000 | 71 | ND | No sheen |
| | 05/15/03 | | 12.27 | 22.84 | 57 | 110 | 840 | 2,300 | 19,000 | 43 | ND | No sheen |
| | 07/31/03 | | 13.46 | 21.65 | 78 | 210 | 2,000 | 5,000 | 31,000 | 36 | ND | No sheen |
| | 10/28/03 | | 14.09 | 21.02 | 59 | 120 | 2,000 | 3,600 | 32,000 | 19 | ND | No sheen |
| | 02/28/04 | | 12.27 | 22.84 | 21 | 26 | 520 | 980 | 10,000 | 35 | ND | No sheen |
| | 04/16/04 | | 13.22 | 21.89 | 30 | 30 | 540 | 890 | 11,000 | 30 | 23[c] | No sheen |
| | 07/16/04 | | 13.76 | 21.35 | 42 | 36 | 1,200 | 2,300 | 21,000 | 17 | ND | No sheen |
| | 11/13/04 | | 13.79 | 21.35 | 25 | 27 | 780 | 1,300 | 14,000 | 9.1 | ND | No sheen |
| | 02/04/05 | | 13.08 | 22.03 | 24 | 20 | 720 | 1,000 | 14,000 | 8.6 | ND | No sheen |
| | 04/08/05 | | 12.11 | 23.00 | 19 | 11 | 580 | 630 | 14,000 | 7.9 | ND | No sheen |
| | 08/10/05 | | 13.27 | 21.84 | 21 | 11 | 610 | 520 | 13,000 | 7.6 | ND | No sheen |
| | 11/05/05 | | 11.92 | 23.19 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 01/13/06 | | 12.26 | 22.85 | 17 | 7.8 | 220 | 230 | 6,800 | 3.5 | ND | No sheen |
| | 05/12/06 | | 11.64 | 23.47 | 2.3 | 1.6 | 39 | 34 | 1,400 | <0.5 | 200[d], 190[e] | No sheen |
| | 08/13/06 | | 12.80 | 22.31 | 17 | 6.4 | 520 | 160 | 7,700 | 3.4 | ND | No sheen |
| | 10/20/06 | | 13.31 | 21.80 | 22 | 7.6 | 620 | 140 | 8,800 | 3.1 | ND | No sheen |
| | 02/12/07 | | 12.81 | 22.30 | 24 | 8.5 | 450 | 110 | 7,700 | 2.5 | ND | No sheen |

**TABLE 1**

**GROUND WATER MONITORING DATA**

Tesoro Station No. 67106
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1088 Marina Boulevard
San Leandro, California

| Monitoring Well | Date | Reference Elevation (ft) [a] | Depth to Ground Water (ft) | Ground Water Elevation (ft) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | TPH as gasoline (µg/L) | MTBE (µg/L) | Oxygenates (µg/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-3 | 03/12/98 | 32.30 | 10.81 | 21.49 | 0.67 | <0.5 | 7.1 | 3.4 | 1,200 | 7.3 | NA | No sheen |
| | 05/28/98 | | 11.45 | 20.85 | <0.5 | 0.5 | <0.5 | <0.5 | 350 | <5.0 | NA | No sheen |
| | 08/31/98 | | 12.21 | 20.09 | <0.5 | 0.89 | 0.69 | <0.5 | 240 | <5.0 | NA | No sheen |
| | 11/19/98 | | 13.26 | 19.04 | 5.3 | 0.72 | 0.86 | 4.2 | 440 | <5.0 | NA | No sheen |
| | 03/15/99 | | 11.89 | 20.41 | 3.3 | 1.3 | 0.77 | <0.5 | 410 | <5.0 | NA | No sheen |
| | 06/07/99 | | 12.91 | 19.39 | <0.5 | 2.0 | <0.5 | 0.66 | 680 | <5.0 | NA | No sheen |
| | 09/07/99 | | 12.81 | 19.49 | <0.5 | 0.62 | <0.5 | 8.7 | 150 | 12 | NA | No sheen |
| | 12/13/99 | | 13.75 | 18.55 | <0.5 | 0.52 | <0.5 | 1.0 | 830 | <5.0 | NA | No sheen |
| | 03/08/00 | | 11.39 | 20.91 | 0.58 | <0.5 | 0.77 | <0.5 | 960 | <5.0 | NA | No sheen |
| | 06/12/00 | | 12.58 | 19.72 | 1.7 | <0.5 | 46 | 6.3 | 1,700 | <5.0 | NA | No sheen |
| | 11/15/00 | | 13.85 | 18.45 | <200 | <200 | <200 | <200 | <20,000 | 84,000 | NA | No sheen |
| | 02/27/01 | | 12.22 | 20.08 | 98 | <20 | 130 | 30 | 3,500 | 16,000 | NA | No sheen |
| | 05/22/01 | | 13.66 | 18.64 | 41 | <20 | 20 | <20 | <2,000 | 5,800 | NA | No sheen |
| | 09/05/01 | | 13.41 | 18.89 | 9.9 | 1.5 | 49 | 8.2 | 5,300 | 430 | NA | No sheen |
| | 11/07/01 | | 13.85 | 18.45 | 9.4 | 1.8 | 47 | 8.8 | 6,500 | 1,600 | NA | No sheen |
| | 02/11/02 | 34.84 | 12.86 | 21.98 | 8.9 | <2.0 | 14 | <2.0 | 2,400 | 530 | NA | No sheen |
| | 06/03/02 | | 13.10 | 21.74 | 13 | 0.77 | 19 | 0.94 | 2,100 | 110 | NA | No sheen |
| | 08/06/02 | | 13.52 | 21.32 | 25 | 2.5 | 12 | 1.1 | 2,800 | 120 | NA | No sheen |
| | 11/14/02 | | 13.49 | 21.35 | 29 | 0.89 | 3.7 | <0.5 | 2,200 | 420 | 1.1[b], 19[c] | No sheen |
| | 02/20/03 | | 12.92 | 21.92 | 2.5 | <0.5 | <0.5 | <0.5 | 2,400 | 340 | 13[c] | No sheen |
| | 05/15/03 | | 12.83 | 22.01 | 2.0 | <0.5 | 1.2 | <0.5 | 2,100 | 200 | 0.85[b], 15[c] | No sheen |
| | 07/31/03 | | 13.44 | 21.40 | 1.2 | <0.5 | <0.5 | <0.5 | 1,600 | 330 | 0.81[b], 15[c] | No sheen |
| | 10/28/03 | | 13.92 | 20.92 | 1.0 | <0.5 | <0.5 | <0.5 | 1,600 | 160 | 7.1[c] | No sheen |
| | 02/28/04 | | 12.50 | 22.34 | 1.2 | <0.5 | 0.74 | <0.5 | 1,400 | 58 | 74[c] | No sheen |
| | 04/16/04 | | 13.07 | 21.77 | 1.2 | <0.5 | <0.5 | <0.5 | 1,400 | 45 | 95[c] | No sheen |
| | 07/16/04 | | 13.62 | 21.22 | 6.1 | 1.1 | <0.5 | 0.83 | 1,900 | 43 | 21[c] | No sheen |
| | 11/13/04 | | 13.70 | 21.22 | 4.7 | 0.79 | <0.5 | <0.5 | 1,300 | 30 | 82[c] | No sheen |
| | 02/04/05 | | 12.94 | 21.90 | 0.79 | <0.5 | <0.5 | <0.5 | 1,300 | 10 | 12[c] | No sheen |
| | 04/08/05 | | 12.10 | 22.74 | <0.5 | <0.5 | <0.5 | <0.5 | 770 | 4.2 | ND | No sheen |
| | 08/10/05 | | 13.19 | 21.65 | 3.4 | 0.61 | 0.57 | <0.5 | 1,600 | 6.3 | 11[c] | No sheen |
| | 11/05/05 | | 13.46 | 21.38 | 7.1 | 1.0 | 2.7 | 0.75 | 2,200 | 3.6 | 13[c] | No sheen |
| | 01/13/06 | | 12.20 | 22.64 | 5.0 | 1.1 | 4.9 | 1.2 | 1,200 | 3.1 | 9.8[a] | No sheen |
| | 05/12/06 | | 11.79 | 23.05 | 2.4 | 1.2 | 1.8 | 1.1 | 960 | 2.1 | 6.1[c], 220[d], 300[e] | No sheen |
| | 08/13/06 | | 12.66 | 22.18 | 2.2 | 0.62 | 1.6 | 1.0 | 1,700 | 1.1 | 5.5[c] | No sheen |
| | 10/20/06 | | 13.19 | 21.65 | 1.9 | <0.5 | <0.5 | <0.5 | 1,200 | 1.6 | ND | No sheen |
| | 02/12/07 | | 12.74 | 22.10 | <0.5 | <0.5 | <0.5 | <0.5 | 990 | 1.2 | 5.5[c], 8.8[e] | No sheen |

**TABLE 1**

**GROUND WATER MONITORING DATA**

Tesoro Station No. 67106
Former Beacon Station No. 3720
1088 Marina Boulevard
San Leandro, California

| Monitoring Well | Date | Reference Elevation (ft) [a] | Depth to Ground Water (ft) | Ground Water Elevation (ft) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | TPH as gasoline (µg/L) | MTBE (µg/L) | Oxygenates (µg/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-4 | 03/12/98 | 32.90 | 11.31 | 21.59 | 2,200 | 1,500 | 630 | 3,000 | 14,000 | 440 | NA | No sheen |
| | 05/28/98 | | 10.40 | 22.50 | <0.5 | 0.75 | 0.68 | 6.9 | 67 | 26 | NA | No sheen |
| | 08/31/98 | | 12.54 | 20.36 | 1.8 | 2.5 | 0.65 | 3.4 | <50 | <5.0 | NA | No sheen |
| | 11/19/98 | | 13.99 | 18.91 | <0.5 | <0.5 | <0.5 | 0.61 | <50 | 17 | NA | No sheen |
| | 03/15/99 | | 12.06 | 20.84 | 1.2 | 1.6 | 0.76 | 4.5 | 160 | 9.3 | NA | No sheen |
| | 06/07/99 | | 13.57 | 19.33 | 210 | 370 | 350 | 2,000 | 5,800 | <20 | NA | No sheen |
| | 09/07/99 | | 10.30 | 22.60 | 2.2 | 2.8 | 4.8 | 25 | 130 | 12 | NA | No sheen |
| | 12/13/99 | | 14.18 | 18.72 | 1.3 | 1.0 | 1.2 | 4.8 | <50 | 12 | NA | No sheen |
| | 03/08/00 | | 11.77 | 21.13 | 78 | 200 | 160 | 750 | 3,700 | 11 | NA | No sheen |
| | 06/12/00 | | 13.47 | 19.43 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | 24 | NA | No sheen |
| | 11/15/00 | | 14.33 | 18.57 | 12 | 38 | 28 | 130 | 710 | 1,300 | NA | No sheen |
| | 02/27/01 | | 14.25 | 18.65 | 67 | 300 | 310 | 1,400 | 6,500 | 1,000 | NA | No sheen |
| | 05/22/01 | | 13.99 | 18.91 | 2.1 | 5.6 | 4.8 | 20 | 130 | 350 | NA | No sheen |
| | 09/05/01 | | 15.75 | 17.15 | 110 | 670 | 250 | 1,300 | 6,200 | 600 | NA | No sheen |
| | 11/07/01 | | 16.10 | 16.80 | 40 | 270 | 180 | 940 | 4,100 | 110 | NA | No sheen |
| | 02/11/02 | 35.33 | 15.04 | 20.29 | 91 | 590 | 620 | 3,000 | 14,000 | 350 | NA | No sheen |
| | 06/03/02 | | 13.61 | 21.72 | 69 | 390 | 190 | 1,100 | 4,300 | 240 | NA | No sheen |
| | 08/06/02 | | 15.01 | 20.32 | 100 | 690 | 570 | 2,900 | 13,000 | 170 | NA | No sheen |
| | 11/14/02 | | 13.98 | 21.35 | 65 | 380 | 550 | 3,400 | 20,000 | 130 | ND | No sheen |
| | 02/20/03 | | 13.33 | 22.00 | 57 | 240 | 650 | 3,700 | 18,000 | 98 | ND | No sheen |
| | 05/15/03 | | 13.29 | 22.04 | 44 | 100 | 200 | 1,200 | 8,500 | 120 | 21[c] | No sheen |
| | 07/31/03 | | 13.76 | 21.57 | 42 | 59 | 250 | 1,400 | 11,000 | 87 | ND | No sheen |
| | 10/28/03 | | 14.48 | 20.85 | 80 | 40 | 130 | 650 | 8,100 | 130 | 20[c] | No sheen |
| | 02/28/04 | | 12.96 | 22.37 | 85 | 430 | 570 | 3,700 | 17,000 | 67 | ND | No sheen |
| | 04/16/04 | | 13.57 | 21.76 | 72 | 420 | 570 | 3,800 | 19,000 | 60 | ND | No sheen |
| | 07/16/04 | | 14.16 | 21.17 | 46 | 330 | 360 | 2,200 | 10,000 | 58 | 28[c] | No sheen |
| | 11/13/04 | | 14.34 | 21.17 | 50 | 240 | 360 | 2,200 | 9,400 | 22 | ND | No sheen |
| | 02/04/05 | | 13.56 | 21.77 | 14 | 160 | 170 | 1,100 | 4,800 | 7.9 | ND | No sheen |
| | 04/08/05 | | 12.65 | 22.68 | 15 | 160 | 200 | 1,200 | 5,800 | 6.6 | ND | No sheen |
| | 08/10/05 | | 13.73 | 21.60 | 7.0 | 110 | 100 | 570 | 3,000 | 5.2 | 9.9[c] | No sheen |
| | 11/05/05 | | 14.35 | 20.98 | 6.0 | 91 | 95 | 630 | 3,000 | 5.3 | 9.1[c] | No sheen |
| | 01/13/06 | | 12.76 | 22.57 | 8.3 | 100 | 160 | 860 | 4,000 | 4.9 | 6.7[a] | No sheen |
| | 05/12/06 | | 12.56 | 22.75 | <0.5 | 0.62 | <0.5 | <0.5 | <50 | <0.5 | 180[d], 260[b] | No sheen |
| | 08/13/06 | | 13.30 | 22.30 | 2.5 | 20 | 41 | 240 | 1,200 | 2.0 | ND | No sheen |
| | 10/20/06 | | 13.78 | 21.55 | 2.9 | 28 | 56 | 350 | 1,500 | 2.7 | ND | No sheen |
| | 02/12/07 | | 13.21 | 22.10 | <0.5 | 0.58 | 1.5 | 3.3 | 150 | 3.1 | 9.7[e] | No sheen |

**TABLE 1**

**GROUND WATER MONITORING DATA**

Tesoro Station No. 67106
Former Beacon Station No. 3720
1088 Marina Boulevard
San Leandro, California

| Monitoring Well | Date | Reference Elevation (ft) [a] | Depth to Ground Water (ft) | Ground Water Elevation (ft) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | TPH as gasoline (µg/L) | MTBE (µg/L) | Oxygenates (µg/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-5 | 03/12/98 | 32.70 | 11.11 | 21.59 | 2,600 | 160 | 470 | 2,200 | 12,000 | <250 | NA | No sheen |
| | 05/28/98 | | 10.92 | 21.78 | 480 | 99 | 160 | 730 | 4,700 | <250 | NA | No sheen |
| | 08/31/98 | | 12.79 | 19.91 | 200 | 14 | 55 | 220 | 1,400 | 180 | NA | No sheen |
| | 11/19/98 | | 13.39 | 19.31 | 1.4 | <0.5 | <0.5 | <0.5 | <50 | 39 | NA | No sheen |
| | 03/15/99 | | 11.71 | 20.99 | 320 | 17 | 290 | 780 | 3,400 | 33 | NA | No sheen |
| | 06/07/99 | | 13.26 | 19.44 | 220 | 8.9 | 240 | 290 | 3,200 | <25 | NA | No sheen |
| | 09/07/99 | | 9.70 | 23.00 | 8.5 | <0.5 | 8.5 | 12 | 140 | 38 | NA | No sheen |
| | 12/13/99 | | 14.06 | 18.64 | <0.5 | <0.5 | <0.5 | 13 | 140 | <5.0 | NA | No sheen |
| | 03/08/00 | | 11.80 | 20.90 | 0.66 | <0.5 | 2.5 | 30 | 280 | <5.0 | NA | No sheen |
| | 06/12/00 | | 12.99 | 19.71 | 22 | 1.2 | 79 | 170 | 2,700 | 6.4 | NA | No sheen |
| | 11/15/00 | | 14.23 | 18.47 | 36 | 1.6 | 180 | 180 | 4,500 | 10 | NA | No sheen |
| | 02/27/01 | | 12.66 | 20.04 | 33 | 1.6 | 160 | 220 | 2,800 | 110 | NA | No sheen |
| | 05/22/01 | | 13.58 | 19.12 | 49 | 2.2 | 180 | 230 | 3,200 | 240 | NA | No sheen |
| | 09/05/01 | | 14.05 | 18.65 | 28 | 1.0 | 100 | 100 | 2,400 | 560 | NA | No sheen |
| | 11/07/01 | | 14.32 | 18.38 | <2.0 | <2.0 | 2.1 | 20 | 390 | 590 | NA | No sheen |
| | 02/11/02 | 35.09 | 13.31 | 21.78 | 19 | <5.0 | 59 | 52 | 1,200 | 1,800 | NA | No sheen |
| | 06/03/02 | | 13.55 | 21.54 | 44 | <2.0 | 150 | 210 | 3,200 | 610 | NA | No sheen |
| | 08/06/02 | | 14.10 | 20.99 | 42 | <2.0 | 140 | 150 | 3,200 | 820 | NA | No sheen |
| | 11/14/02 | | 14.03 | 21.06 | 29 | 1.3 | 94 | 100 | 2,900 | 560 | 100[c] | No sheen |
| | 02/20/03 | | 13.35 | 21.74 | 22 | <1.0 | 81 | 77 | 2,900 | 270 | 170[c] | No sheen |
| | 05/15/03 | | 13.11 | 21.98 | 55 | 1.8 | 94 | 85 | 3,700 | 220 | 0.64[b], 170[c] | No sheen |
| | 07/31/03 | | 13.88 | 21.21 | 45 | 1.1 | 26 | 19 | 2,400 | 200 | 180[c] | No sheen |
| | 10/28/03 | | 14.41 | 20.68 | 6.8 | <0.5 | 4.4 | 1.1 | 570 | 77 | 8.0[c] | No sheen |
| | 02/28/04 | | 12.89 | 22.20 | 37 | 1.4 | 130 | 120 | 3,400 | 72 | 32[c] | No sheen |
| | 04/16/04 | | 13.41 | 21.68 | 26 | 0.73 | 45 | 53 | 2,400 | 81 | 130[c] | No sheen |
| | 07/16/04 | | 13.92 | 21.17 | 24 | 0.85 | 36 | 20 | 2,100 | 71 | 46[c] | No sheen |
| | 11/13/04 | | 14.35 | 21.17 | 19 | 0.55 | 37 | 17 | 1,600 | 38 | 59[c] | No sheen |
| | 02/04/05 | | 13.48 | 21.61 | 40 | 1.40 | 120 | 80 | 4,500 | 32 | 43[c] | No sheen |
| | 04/08/05 | | 12.42 | 22.67 | <0.5 | <0.5 | <0.5 | <0.5 | 67 | 7.9 | ND | No sheen |
| | 08/10/05 | | 13.36 | 21.73 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | 1.5 | ND | No sheen |
| | 11/05/05 | | 13.96 | 21.13 | <0.5 | <0.5 | 2.2 | 1.5 | 110 | <0.5 | ND | No sheen |
| | 01/13/06 | | 12.53 | 22.56 | <0.5 | <0.5 | 1.2 | <0.5 | 0.58 | <0.5 | ND | No sheen |
| | 05/12/06 | | 12.26 | 22.83 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | 0.54 | 28[e] | No sheen |
| | 08/13/06 | | 13.05 | 22.04 | <0.5 | <0.5 | 0.58 | <0.5 | 140 | 0.66 | ND | No sheen |
| | 10/20/06 | | 13.52 | 21.57 | 0.76 | <0.5 | 2.8 | 1.1 | 320 | 1.40 | 5.9[c] | No sheen |
| | 02/12/07 | | 13.04 | 22.05 | <0.5 | <0.5 | <0.5 | <0.5 | 210 | 2.80 | 6.4[c] | No sheen |

**TABLE 1**

**GROUND WATER MONITORING DATA**

Tesoro Station No. 67106
Former Beacon Station No. 3720
1088 Marina Boulevard
San Leandro, California

| Monitoring Well | Date | Reference Elevation (ft) [a] | Depth to Ground Water (ft) | Ground Water Elevation (ft) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | TPH as gasoline (µg/L) | MTBE (µg/L) | Oxygenates (µg/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-6 | 03/12/98 | 30.40 | 10.49 | 19.91 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 05/28/98 | | 10.58 | 19.82 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 08/31/98 | | 10.85 | 19.55 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 11/19/98 | | 10.88 | 19.52 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 03/15/99 | | 10.83 | 19.57 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 06/07/99 | | 11.01 | 19.39 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 09/07/99 | | 11.89 | 18.51 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 12/13/99 | | 12.09 | 18.31 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 03/08/00 | | 10.02 | 20.38 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 06/12/00 | | 11.07 | 19.33 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 11/15/00 | | 12.34 | 18.06 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | NA | No sheen |
| | 02/27/01 | | 10.75 | 19.65 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | NA | No sheen |
| | 05/22/01 | | 11.55 | 18.85 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | NA | No sheen |
| | 09/05/01 | | 12.10 | 18.30 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | NA | No sheen |
| | 11/07/01 | | 12.31 | 18.09 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | NA | No sheen |
| | 02/11/02 | 32.74 | 11.05 | 21.69 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | NA | No sheen |
| | 06/03/02 | | 11.70 | 21.40 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | NA | No sheen |
| | 08/06/02 | | 12.28 | 20.46 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | NA | No sheen |
| | 11/14/02 | | 12.46 | 20.28 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 02/20/03 | | 11.26 | 21.48 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 05/15/03 | | 11.85 | 20.89 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 07/31/03 | | 11.73 | 21.01 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 10/28/03 | | 12.38 | 20.36 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 02/28/04 | | 11.88 | 20.86 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 04/16/04 | | 11.85 | 20.89 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 07/16/04 | | 12.84 | 19.90 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 11/13/04 | | 12.13 | 19.90 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 02/04/05 | | 11.14 | 21.60 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 04/08/05 | | 10.94 | 21.80 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 08/10/05 | | 11.42 | 21.32 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 11/05/05 | | 11.90 | 20.84 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 01/13/06 | | 10.70 | 22.04 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 05/12/06 | | 10.63 | 22.11 | <0.5 | 0.72 | <0.5 | <0.5 | <50 | <0.5 | 35[e] | No sheen |
| | 08/13/06 | | 11.08 | 21.66 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 10/20/06 | | 11.58 | 21.16 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 02/12/07 | | 11.22 | 21.52 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | 9.3[e] | No sheen |

**TABLE 1**

**GROUND WATER MONITORING DATA**

Tesoro Station No. 67106
Former Beacon Station No. 3720
1088 Marina Boulevard
San Leandro, California

| Monitoring Well | Date | Reference Elevation (ft) [a] | Depth to Ground Water (ft) | Ground Water Elevation (ft) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | TPH as gasoline (µg/L) | MTBE (µg/L) | Oxygenates (µg/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-7 | 03/12/98 | 31.20 | 10.14 | 21.06 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 05/28/98 | | 10.93 | 20.27 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 08/31/98 | | 12.01 | 19.19 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 11/19/98 | | 12.54 | 18.66 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 03/15/99 | | 10.94 | 20.26 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 06/07/99 | | 12.05 | 19.15 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 09/07/99 | | 12.67 | 18.53 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 12/13/99 | | 12.73 | 18.47 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 03/08/00 | | 10.90 | 20.30 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 06/12/00 | | 12.61 | 18.59 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 11/15/00 | | 13.06 | 18.14 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | NA | No sheen |
| | 02/27/01 | | 11.85 | 19.35 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | NA | No sheen |
| | 05/22/01 | | 12.31 | 18.89 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | NA | No sheen |
| | 09/05/01 | | 12.85 | 18.35 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | NA | No sheen |
| | 11/07/01 | | 12.75 | 18.45 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | NA | No sheen |
| | 02/11/02 | 33.64 | NM | NC | NS | NS | NS | NS | NS | NS | NS | |
| | 06/03/02 | | 12.58 | 21.06 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | 0.95 | NA | No sheen |
| | 08/06/02 | | 12.93 | 20.71 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | NA | No sheen |
| | 11/14/02 | | 13.04 | 20.60 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 02/20/03 | | 12.75 | 20.89 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 05/15/03 | | 12.45 | 21.19 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | 0.69 | ND | No sheen |
| | 07/31/03 | | 12.80 | 20.84 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | 0.65 | ND | No sheen |
| | 10/28/03 | | NM | NC | NS | NS | NS | NS | NS | NS | NS | No sheen |
| | 02/28/04 | | 12.21 | 21.43 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 04/16/04 | | 12.26 | 21.38 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 07/16/04 | | 12.85 | 20.79 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 11/13/04 | | 13.01 | 20.79 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 02/04/05 | | 12.57 | 21.07 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 04/08/05 | | 11.82 | 21.82 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | 0.78 | ND | No sheen |
| | 08/10/05 | | 12.44 | 21.20 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | 0.61 | ND | No sheen |
| | 11/05/05 | | 12.91 | 20.73 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | 0.76 | ND | No sheen |
| | 01/13/06 | | 11.51 | 22.13 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | 0.61 | ND | No sheen |
| | 05/12/06 | | 11.37 | 22.27 | <0.5 | 0.59 | <0.5 | <0.5 | <50 | 0.57 | 15[e] | No sheen |
| | 08/13/06 | | 11.88 | 21.76 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 10/20/06 | | 12.32 | 21.32 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | 0.54 | ND | No sheen |
| | 02/12/07 | | 12.21 | 21.43 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |

**TABLE 1**

**GROUND WATER MONITORING DATA**

Tesoro Station No. 67106
Former Beacon Station No. 3720
1088 Marina Boulevard
San Leandro, California

| Monitoring Well | Date | Reference Elevation (ft) [a] | Depth to Ground Water (ft) | Ground Water Elevation (ft) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | TPH as gasoline (µg/L) | MTBE (µg/L) | Oxygenates (µg/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-8 | 03/12/98 | 33.80 | 11.81 | 21.99 | 1.4 | <0.5 | <0.5 | <0.5 | 72 | <5.0 | NA | No sheen |
| | 05/28/98 | | 12.14 | 21.66 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 08/31/98 | | 13.16 | 20.64 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 11/19/98 | | 14.56 | 19.24 | 510 | 24 | 1,200 | 2,800 | 14,000 | <5.0 | NA | No sheen |
| | 03/15/99 | | 12.40 | 21.40 | 160 | 16 | 910 | 2,100 | 14,000 | <50 | NA | No sheen |
| | 06/07/99 | | 14.06 | 19.74 | 330 | 14 | 470 | 880 | 7,800 | <50 | NA | No sheen |
| | 09/07/99 | | 14.01 | 19.79 | 150 | 2.6 | 260 | 370 | 3,200 | <5.0 | NA | No sheen |
| | 12/13/99 | | 14.91 | 18.89 | 35 | <5.0 | 280 | 730 | 6,700 | <50 | NA | No sheen |
| | 03/08/00 | | 11.85 | 21.95 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 06/12/00 | | 13.59 | 20.21 | 4.0 | <0.5 | 4.9 | 2.1 | 140 | <5.0 | NA | No sheen |
| | 11/15/00 | | 14.94 | 18.86 | 2.0 | <0.5 | 3.1 | 2.6 | 100 | 110 | NA | No sheen |
| | 02/27/01 | | NM | NC | NS | NS | NS | NS | NS | NS | NA | Tank Over Well |
| | 05/22/01 | | NM | NC | NS | NS | NS | NS | NS | NS | NA | Tank Over Well |
| | 09/05/01 | | 14.68 | 19.12 | 160 | <2.0 | 200 | 330 | 4,800 | 850 | NA | No sheen |
| | 11/07/01 | | 15.10 | 18.70 | 1.1 | <1.0 | 2.0 | 6.1 | <100 | 590 | NA | No sheen |
| | 02/11/02 | 36.08 | 14.06 | 22.02 | 7.9 | <5.0 | 16 | 22 | <500 | 1,700 | NA | No sheen |
| | 06/03/02 | | 14.25 | 21.83 | 20.0 | <2.0 | 19 | 35 | 550 | 650 | NA | No sheen |
| | 08/06/02 | | 14.55 | 21.53 | 220 | <2.0 | 170 | 280 | 4,800 | 1,000 | NA | No sheen |
| | 11/14/02 | | 14.73 | 21.35 | 250 | <2.5 | 160 | 220 | 4,800 | 1,200 | 47[c] | No sheen |
| | 02/20/03 | | 13.81 | 22.27 | 17 | <1.0 | 19 | 42 | 760 | 520 | 16[c] | No sheen |
| | 05/15/03 | | 13.68 | 22.40 | 14 | <0.5 | 16 | 23 | 690 | 370 | 0.79[b], 10[c] | No sheen |
| | 07/31/03 | | 14.54 | 21.54 | 29 | <1.0 | 15 | 18 | 700 | 380 | 36[c] | No sheen |
| | 10/28/03 | | 15.09 | 20.99 | 87 | <1.0 | 34 | 40 | 2,000 | 490 | 130[c] | No sheen |
| | 02/28/04 | | 13.45 | 22.63 | 21 | <0.5 | 15 | 49 | 1,100 | 200 | 110[c] | No sheen |
| | 04/16/04 | | 14.19 | 21.89 | 57 | <0.5 | 52 | 75 | 2,900 | 300 | 140[c] | No sheen |
| | 07/16/04 | | 14.76 | 21.32 | 32 | <0.5 | 34 | 51 | 2,000 | 92 | 67[c] | No sheen |
| | 11/13/04 | | 14.91 | 21.32 | 30 | 0.64 | 84 | 92 | 4,100 | 61 | 76[c] | No sheen |
| | 02/04/05 | | 14.09 | 21.99 | 27 | <0.5 | 65 | 92 | 2,700 | 56 | 38[c] | No sheen |
| | 04/08/05 | | 13.11 | 22.97 | 1.1 | <0.5 | <0.5 | <0.5 | 81 | 6.9 | ND | No sheen |
| | 08/10/05 | | 14.20 | 21.88 | 14 | <0.5 | 26 | 22 | 2,000 | 27 | 22[c] | No sheen |
| | 11/05/05 | | 14.79 | 21.29 | 9.7 | <0.5 | 54 | 67 | 2,300 | 15 | 21[c] | No sheen |
| | 01/13/06 | | 13.24 | 22.84 | <0.5 | <0.5 | <0.5 | 0.51 | 52 | 0.58 | ND | No sheen |
| | 05/12/06 | | 12.97 | 23.11 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | 90[d], 91[e] | No sheen |
| | 08/13/06 | | 13.83 | 22.25 | 0.51 | <0.5 | 0.84 | 0.51 | 77 | 6.1 | ND | No sheen |
| | 10/20/06 | | 14.33 | 21.75 | 1.1 | <0.5 | 1.8 | 0.94 | 100 | 5.8 | 6.5[c] | No sheen |
| | 02/12/07 | | 13.73 | 22.35 | <0.5 | <0.5 | <0.5 | 4.5 | 69 | 4.2 | 14[e] | No sheen |

**TABLE 1**

**GROUND WATER MONITORING DATA**

Tesoro Station No. 67106
Former Beacon Station No. 3720
1088 Marina Boulevard
San Leandro, California

| Monitoring Well | Date | Reference Elevation (ft) [a] | Depth to Ground Water (ft) | Ground Water Elevation (ft) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | TPH as gasoline (µg/L) | MTBE (µg/L) | Oxygenates (µg/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-9 | 03/12/98 | 32.56 | 10.93 | 21.63 | 320 | 23 | 180 | 720 | 3,700 | 190 | NA | No sheen |
| | 05/28/98 | | 11.31 | 21.25 | 110 | 6.4 | 87 | 300 | 2,200 | 220 | NA | No sheen |
| | 08/31/98 | | 12.16 | 20.40 | 240 | 23 | 690 | 1,900 | 11,000 | <50 | NA | No sheen |
| | 11/19/98 | | 11.04 | 21.52 | 7.7 | <0.5 | 10 | 22 | 280 | 67 | NA | No sheen |
| | 03/15/99 | | 11.81 | 20.75 | <0.5 | <0.5 | <0.5 | 1.2 | <50 | <5.0 | NA | No sheen |
| | 06/07/99 | | 12.21 | 20.35 | 9.3 | 0.86 | 9.7 | 12 | 340 | <5.0 | NA | No sheen |
| | 09/07/99 | | 10.10 | 22.46 | 0.76 | <0.5 | 1.9 | 0.8 | 72 | 9.9 | NA | No sheen |
| | 12/13/99 | | 13.64 | 18.92 | <0.5 | <0.5 | <0.5 | <0.5 | 60 | <5.0 | NA | No sheen |
| | 03/08/00 | | 10.88 | 21.68 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <5.0 | NA | No sheen |
| | 06/12/00 | | 12.50 | 20.06 | 0.9 | <0.5 | 2.7 | 1.3 | 640 | 10 | NA | No sheen |
| | 11/15/00 | | 13.60 | 18.96 | <0.5 | <0.5 | 0.69 | <0.5 | 200 | 12 | NA | No sheen |
| | 02/27/01 | | 12.15 | 20.41 | 0.61 | <0.5 | 2.2 | 1.2 | 360 | 42 | NA | No sheen |
| | 05/22/01 | | 13.20 | 19.36 | 0.57 | <0.5 | 2.1 | 0.61 | 330 | 290 | NA | No sheen |
| | 09/05/01 | | 13.10 | 19.46 | <2.0 | <2.0 | <2.0 | <2.0 | <200 | 1,100 | NA | No sheen |
| | 11/07/01 | | 13.85 | 18.71 | 1.0 | <1.0 | <1.0 | <1.0 | 230 | 510 | NA | No sheen |
| | 02/11/02 | 34.63 | 12.98 | 21.65 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | 41 | NA | No sheen |
| | 06/03/02 | | 12.48 | 22.15 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | 55 | NA | No sheen |
| | 08/06/02 | | 13.16 | 21.47 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | 65 | NA | No sheen |
| | 11/14/02 | | 13.15 | 21.48 | <0.5 | <0..5 | <0.5 | <0.5 | <50 | 47 | ND | No sheen |
| | 02/20/03 | | 12.46 | 22.17 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | 28 | ND | No sheen |
| | 05/15/03 | | 12.26 | 22.37 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | 8.9 | ND | No sheen |
| | 07/31/03 | | 12.94 | 21.69 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | 0.85 | ND | No sheen |
| | 10/28/03 | | 13.83 | 20.80 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | 0.76 | ND | No sheen |
| | 02/28/04 | | 12.59 | 22.04 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 04/16/04 | | 13.04 | 21.59 | <0.5 | <0.5 | <0.5 | <0.5 | 53 | <0.5 | ND | No sheen |
| | 07/16/04 | | 13.52 | 21.11 | <0.5 | <0.5 | <0.5 | <0.5 | 56 | <0.5 | ND | No sheen |
| | 11/13/04 | | 13.68 | 21.11 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |
| | 02/04/05 | | 13.04 | 21.59 | <0.5 | <0.5 | <0.5 | <0.5 | 90 | <0.5 | ND | No sheen |
| | 04/08/05 | | 12.17 | 22.46 | <0.5 | <0.5 | <0.5 | <0.5 | 150 | <0.5 | ND | No sheen |
| | 08/10/05 | | 13.04 | 21.59 | <0.5 | <0.5 | 0.76 | <0.5 | 260 | <0.5 | ND | No sheen |
| | 11/05/05 | | 13.55 | 21.08 | <0.5 | <0.5 | <0.5 | <0.5 | 150 | <0.5 | ND | No sheen |
| | 01/13/06 | | 12.30 | 22.33 | <0.5 | <0.5 | 0.78 | <0.5 | 280 | <0.5 | ND | No sheen |
| | 05/12/06 | | 5.45 | NC | NS | NS | NS | NS | NS | NS | NS | Well Blocked |
| | 08/13/06 | | 12.66 | 21.97 | <0.5 | <0.5 | 1.7 | <0.5 | 1,000 | <0.5 | ND | No sheen |
| | 10/20/06 | | 13.14 | 21.49 | <0.5 | <0.5 | 0.58 | <0.5 | 490 | <0.5 | ND | No sheen |
| | 02/12/07 | | 12.73 | 21.90 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | ND | No sheen |

a =Referenced to mean sea level.
b =tert-amyl methyl ether
c = tert-butanol
d = methanol
e = ethanol

TPH = Total petroleum hydrocarbons.
MTBE = Methyl tertiary butyl ether.
µg/L = Micrograms per liter.
Oxygenates = methyl-t-butyl ether, diisopropyl ether, ethyl-t-butyl ether, tert-amyl methyl ether, tert-butanol, 1,2-dichloroethane, 1,2-dibromoethane

**TABLE 2**

**MNA MONITORING**

Tesoro Station No. 67106
Former Beacon Station No. 3720
1088 Marina Boulevard
San Leandro, California

| Monitoring Well | Date | pH | D.O. (ppm) | ORP | Specific Conductivity | Temperature | Dissolved $CO_2$ (ppm) | Ferrous Iron ($Fe^{+2}$) | Total Alkalinity (ppm) | Total Organic Carbon (ppm) | Total Iron (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 05/12/06 | 7.01 | 2.97 | -23 | 277 | 18.3 | 41 | 0.6 | 120 | 11 | 1.36 |
| | 08/13/06 | 6.97 | 1.11 | -84 | 227 | 66.6 | 26 | 1.2 | 94 | 2.7 | 14.7 |
| | | 6.88 | 1.07 | -81 | 232 | 67.6 | | 1.4 | | | |
| | | 6.84 | 1.00 | -89 | 228 | 66.3 | | 1.4 | | | |
| | 10/20/06 | 6.87 | 0.17 | 131 | 233 | 71.9 | 19 | 0.6 | 94 | 2.5 | 0.83 |
| | | 6.87 | 0.26 | 146 | 237 | 71.9 | | 0.6 | | | |
| | | 6.86 | 0.18 | 152 | 238 | 71.7 | | 0.6 | | | |
| | 02/12/07 | 7.17 | 2.16 | -48 | 243 | 65.2 | 18 | 0.8 | 102 | 2.1 | 0.258 |
| | | 7.21 | 2.22 | -50 | 247 | 65.4 | | 0.8 | | | |
| | | 7.19 | 2.24 | -52 | 255 | 65.5 | | 0.6 | | | |
| MW-2 | 05/12/06 | 7.38 | 7.51 | 82 | 332 | 18.1 | 59 | 0.0 | 68 | 3.9 | 0.703 |
| | 08/13/06 | 6.70 | 0.65 | -113 | 239 | 72.8 | 26 | 2.0 | 120 | 3.2 | 25.5 |
| | | 6.71 | 0.67 | -119 | 240 | 73.0 | | 1.8 | | | |
| | | 6.71 | 0.72 | -120 | 239 | 73.2 | | 1.8 | | | |
| | 10/20/06 | 6.93 | 0.06 | 132 | 272 | 72.1 | 24 | 1.2 | 120 | 3.3 | 21.4 |
| | | 6.85 | 0.04 | 140 | 267 | 72.3 | | 1.2 | | | |
| | | 6.82 | 0.04 | 138 | 267 | 72.5 | | 1.2 | | | |
| | 02/12/07 | 6.98 | 0.48 | -186 | 279 | 65.8 | 18 | 1.3 | 122 | 3.7 | 1.11 |
| | | 6.93 | 0.51 | -189 | 271 | 65.7 | | 1.3 | | | |
| | | 6.99 | 0.47 | -195 | 268 | 65.8 | | 1.3 | | | |
| MW-3 | 05/12/06 | 6.84 | 2.21 | -48 | 283 | 19.1 | 42 | 1.0 | 76 | 3.8 | 1.23 |
| | 08/13/06 | 6.82 | 0.51 | -199 | 276 | 69.4 | 20 | 1.6 | 94 | 2.4 | 3.47 |
| | | 6.79 | 0.52 | -185 | 274 | 71.9 | | 1.4 | | | |
| | | 6.72 | 0.47 | -183 | 262 | 72.5 | | 1.4 | | | |
| | 10/20/06 | 6.87 | 0.58 | -32 | 297 | 75.1 | 21 | 0.6 | 118 | 2.5 | 2.65 |
| | | 6.80 | 0.62 | -38 | 298 | 75.9 | | 0.6 | | | |
| | | 6.78 | 0.63 | -33 | 301 | 76.2 | | 0.6 | | | |
| | 02/12/07 | 6.94 | 0.70 | -172 | 302 | 66.3 | 22 | 0.6 | 144 | 2.4 | 0.959 |
| | | 6.90 | 0.71 | -181 | 301 | 66.5 | | 0.6 | | | |
| | | 6.77 | 0.68 | -183 | 297 | 66.3 | | 0.6 | | | |
| MW-4 | 05/12/06 | 7.59 | 9.65 | 40 | 534 | 19.8 | 3.9 | 0.0 | 190 | 2.4 | 95 |
| | 08/13/06 | 7.08 | 2.41 | -14 | 509 | 68.5 | 20 | NM | 180 | 3.7 | 308 |
| | | 7.04 | 2.86 | -17 | 475 | 68.2 | | NM | | | |
| | | 7.17 | 2.88 | -14 | 499 | 68.0 | | NM | | | |
| | 10/20/06 | 6.99 | 0.56 | 92 | 630 | 74.0 | 29 | 0.0 | 198 | 3.5 | 105 |
| | | 7.00 | 0.44 | 94 | 622 | 73.9 | | 0.0 | | | |
| | | 7.03 | 0.54 | 91 | 642 | 75.1 | | 0.0 | | | |
| | 02/12/07 | 7.02 | 1.04 | -28 | 665 | 66.5 | 31 | 0.3 | 334 | 3.8 | 0.689 |
| | | 7.02 | 1.07 | -29 | 658 | 66.6 | | 0.3 | | | |
| | | 7.14 | 1.03 | -28 | 643 | 66.5 | | 0.3 | | | |

**TABLE 2**

**MNA MONITORING**

Tesoro Station No. 67106
Former Beacon Station No. 3720
1088 Marina Boulevard
San Leandro, California

| Monitoring Well | Date | pH | D.O. (ppm) | ORP | Specific Conductivity | Temperature | Dissolved $CO_2$ (ppm) | Ferrous Iron ($Fe^{+2}$) | Total Alkalinity (ppm) | Total Organic Carbon (ppm) | Total Iron (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-5 | 05/12/06 | 7.28 | 22.41 | 173 | 538 | 20.0 | 12 | 0.0 | 250 | 1.90 | 0.36 |
| | 08/13/06 | 6.90 | 2.28 | 79 | 689 | 71.8 | 23 | 0.0 | 350 | 2.5 | 2.49 |
| | | 6.86 | 2.16 | 75 | 668 | 72.7 | | 0.0 | | | |
| | | 6.87 | 1.92 | 7.2 | 659 | 72.0 | | 0.0 | | | |
| | 10/20/06 | 6.98 | 1.28 | 88 | 776 | 70.2 | 53 | 0.0 | 344 | 2.6 | 8.73 |
| | | 6.92 | 0.34 | 96 | 761 | 69.8 | | 0.0 | | | |
| | | 6.93 | 0.30 | 92 | 758 | 71.8 | | 0.0 | | | |
| | | 6.62 | 0.29 | 89 | 756 | 72.6 | | 0.0 | | | |
| | 02/12/07 | 6.95 | 1.36 | 79 | 712 | 65.4 | 51 | 0.0 | 438 | 3.2 | 0.158 |
| | | 6.94 | 1.36 | 80 | 727 | 65.5 | | 0.0 | | | |
| | | 6.97 | 1.42 | 82 | 768 | 65.3 | | 0.0 | | | |
| MW-6 | 05/12/06 | 7.02 | 4.30 | 53 | 1079 | 17.9 | 160 | 0.2 | 510 | 3.9 | <0.1 |
| | 08/13/06 | 6.87 | 2.58 | 47 | 1067 | 67.7 | 81 | 0.0 | 480 | 4.9 | <0.1 |
| | | 6.91 | 2.36 | 44 | 1045 | 67.1 | | 0.0 | | | |
| | | 6.86 | 2.42 | 42 | 1052 | 66.9 | | 0.0 | | | |
| | 10/20/06 | 7.07 | 3.58 | -73 | 1120 | 68.5 | 100 | 0.2 | 500 | 5.0 | 1.04 |
| | | 7.04 | 3.12 | -86 | 1150 | 68.9 | | 0.0 | | | |
| | | 6.97 | 3.46 | -62 | 1115 | 69.1 | | 0.2 | | | |
| | 02/12/07 | 6.81 | 3.29 | 48 | 1005 | 63.4 | 78 | 0.0 | 496 | 4.9 | <0.10 |
| | | 6.87 | 3.84 | 48 | 1025 | 63.1 | | 0.0 | | | |
| | | 6.97 | 3.74 | 80 | 1027 | 63.2 | | 0.0 | | | |

**TABLE 2**

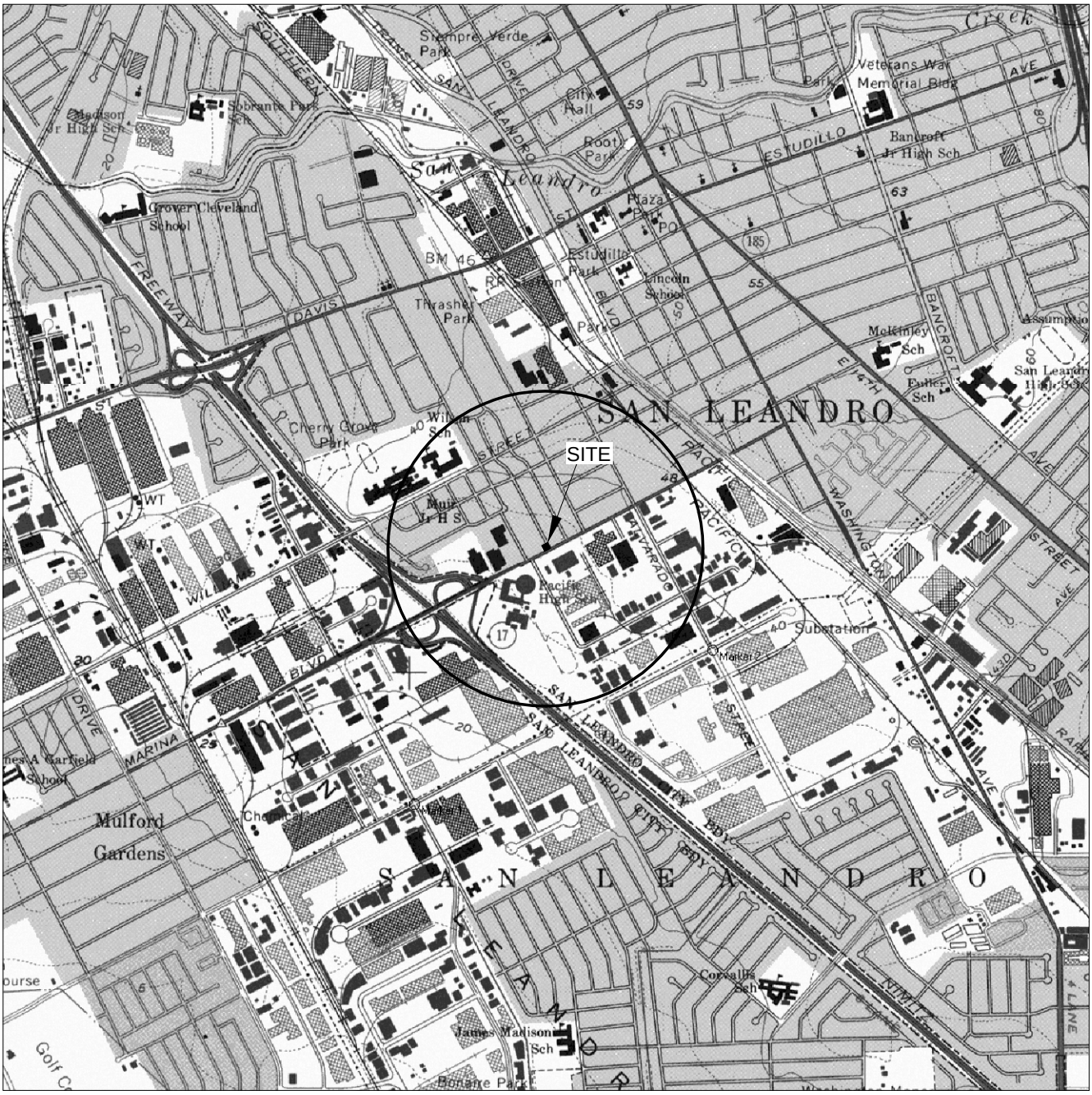
**MNA MONITORING**

Tesoro Station No. 67106
Former Beacon Station No. 3720
1088 Marina Boulevard
San Leandro, California

| Monitoring Well | Date | pH | D.O. (ppm) | ORP | Specific Conductivity | Temperature | Dissolved $CO_2$ (ppm) | Ferrous Iron ($Fe^{+2}$) | Total Alkalinity (ppm) | Total Organic Carbon (ppm) | Total Iron (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-7 | 05/12/06 | 7.04 | 2.02 | 12 | 425 | 20.1 | 65 | 0.0 | 170 | 2.1 | <0.1 |
| | 08/13/06 | 6.73 | 0.86 | 44 | 455 | 70.0 | 42 | 0.0 | 180 | 2.0 | 0.732 |
| | | 6.68 | 0.91 | 43 | 455 | 70.4 | | 0.0 | | | |
| | | 6.66 | 0.96 | 46 | 458 | 7.09 | | 0.0 | | | |
| | 10/20/06 | 7.07 | 2.92 | 130 | 467 | 69.4 | 50 | 0.0 | 188 | 1.9 | 0.44 |
| | | 6.87 | 3.13 | 142 | 492 | 70.3 | | 0.0 | | | |
| | | 6.84 | 3.07 | 126 | 493 | 71.8 | | 0.0 | | | |
| | 02/12/07 | 7.01 | 1.06 | 56 | 454 | 63.1 | 36 | 0.0 | 178 | 2.3 | 0.143 |
| | | 6.94 | 1.11 | 58 | 457 | 63.0 | | 0.0 | | | |
| | | 6.87 | 1.15 | 58 | 476 | 62.9 | | 0.0 | | | |
| MW-8 | 05/12/06 | 6.99 | 5.60 | -13 | 846 | 18.9 | 87 | 0.0 | 290 | 2.90 | <0.1 |
| | 08/13/06 | 6.86 | 0.89 | -30 | 716 | 70.1 | 97 | 0.6 | 370 | 3.6 | 2.67 |
| | | 6.86 | 0.84 | -32 | 742 | 69.9 | | 0.6 | | | |
| | | 6.86 | 0.80 | -35 | 787 | 70.9 | | 0.6 | | | |
| | 10/20/06 | 6.91 | 0.07 | 49 | 714 | 68.6 | 110 | 0.5 | 368 | 3.1 | 3.56 |
| | | 6.88 | 0.06 | 48 | 710 | 68.5 | | 0.5 | | | |
| | | 6.87 | 0.04 | 45 | 718 | 68.5 | | 0.5 | | | |
| | 02/12/07 | 6.82 | 1.16 | 73 | 589 | 62.9 | 81 | 0.0 | 306 | 2.8 | 0.256 |
| | | 6.80 | 1.08 | 73 | 590 | 63.1 | | 0.0 | | | |
| | | 6.84 | 1.12 | 73 | 602 | 63.8 | | 0.0 | | | |
| MW-9 | 05/12/06 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 08/13/06 | 7.02 | 1.50 | 1.50 | 413 | 68.9 | 21 | 0.0 | 180 | 2.6 | 4.69 |
| | | 7.01 | 1.99 | 1.99 | 410 | 68.9 | | 0.0 | | | |
| | | 6.99 | 2.16 | 2.16 | 412 | 68.9 | | 0.0 | | | |
| | | 6.98 | 2.18 | 2.18 | 416 | 68.8 | | 0.0 | | | |
| | 10/20/06 | 7.06 | 0.11 | 97 | 429 | 73.1 | 23 | 0.0 | 178 | 3.2 | 14.4 |
| | | 7.01 | 0.12 | 96 | 423 | 71.9 | | 0.0 | | | |
| | | 6.99 | 0.13 | 99 | 422 | 71.4 | | 0.0 | | | |
| | 02/12/07 | 7.08 | 0.88 | 34 | 271 | 67.1 | 16 | 0.2 | 116 | 3.0 | 0.232 |
| | | 7.04 | 0.83 | 34 | 267 | 67.1 | | 0.2 | | | |
| | | 7.04 | 0.79 | 33 | 272 | 67.2 | | 0.2 | | | |

a =Referenced to mean sea level.
b =tert-amyl methyl ether
c = tert-butanol
d = methanol
e = ethanol

TPH = Total petroleum hydrocarbons.
MTBE = Methyl tertiary butyl ether.
µg/L = Micrograms per liter.
Oxygenates = methyl-t-butyl ether, diisopropyl ether, ethyl-t-butyl ether, tert-amyl methyl ether, tert-butanol, 1,2-dichloroethane, 1,2-dibromoethane




GENERAL NOTES:
BASE MAP FROM U.S.G.S.
SAN LEANDRO, CA
7.5 MINUTE TOPOGRAPHIC
PHOTOREVISED 1980

QUADRANGLE LOCATION


SCALE 1:24,000

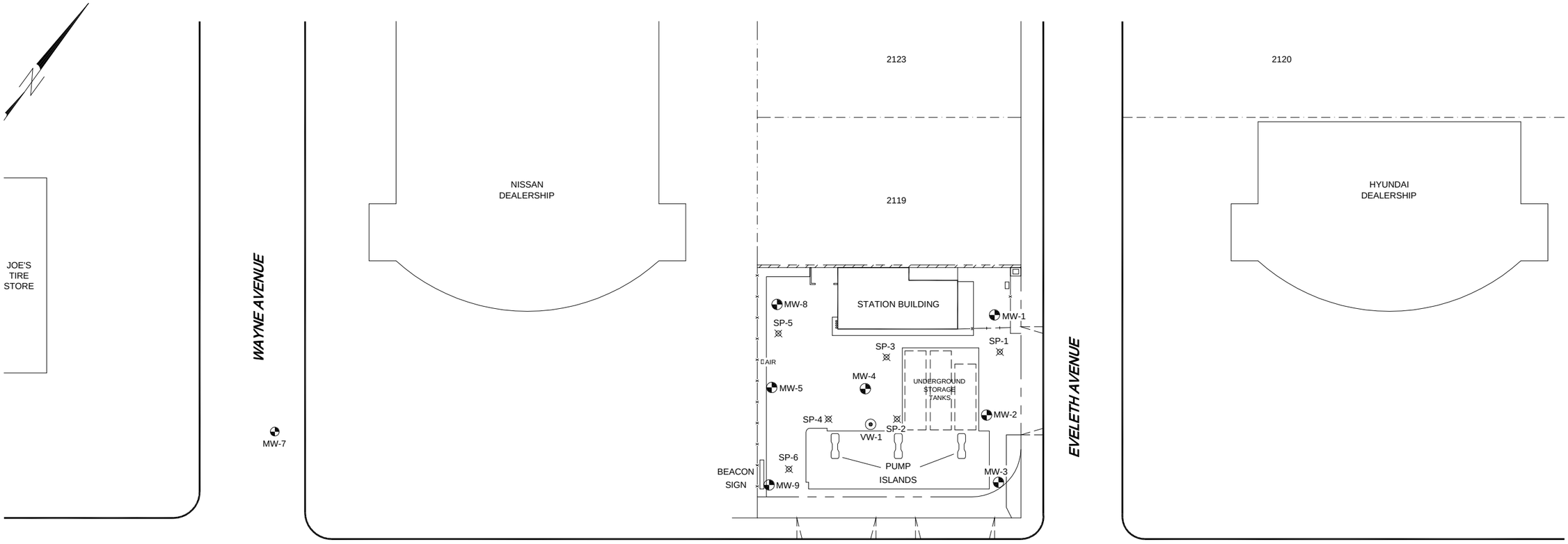
FIGURE 1

SITE LOCATION MAP

TESORO STATION NO. 67106
(FORMER BEACON STATION NO. 3720)
1088 MARINA BOULEVARD
SAN LEANDRO, CA.

| | |
|---|---|
| PROJECT NO. 00-3720 | DRAWN BY M.L. 12/18/01 |
| FILE NO. 00-3720-1A | PREPARED BY RDM |
| REVISION NO. 1 | REVIEWED BY |

R D M Environmental




LEGEND:

| | |
|---|---|
| —— — · —— | PROPERTY LINE |
| ——x——x—— | FENCE |
| MW-1 | MONITORING WELL LOCATION |
| VW-1 | VAPOR EXTRACTION WELL LOCATION |
| SP-1 | AIR SPARGING WELL LOCATION |

NOTES:

1. BASE MAP ADAPTED FROM FUGRO FIGURE DATED 10/24/95
   SITE DIMENSIONS AND FACILTY LOCATIONS NOT VERIFIED.
2. MONITORING WELLS MW-6 AND MW-7 ARE OFF-SITE.

0 40 FT

APPROX. SCALE

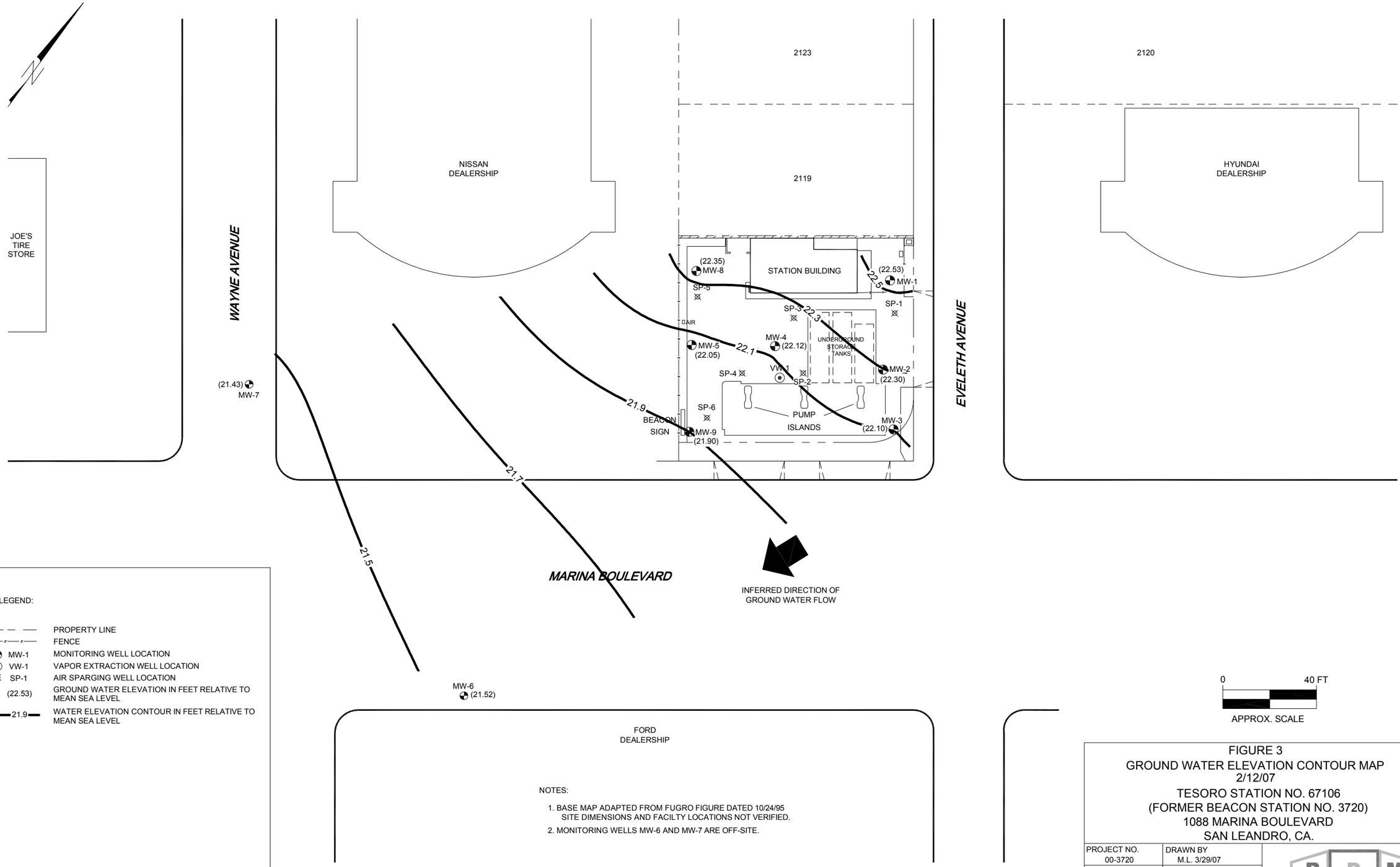
FIGURE 2

SITE MAP

TESORO STATION NO. 67106
(FORMER BEACON STATION NO. 3720)
1088 MARINA BOULEVARD
SAN LEANDRO, CA.

| | |
|---|---|
| PROJECT NO. 00-3720 | DRAWN BY M.L. 5/19/04 |
| FILE NO. 00-3720-11 | PREPARED BY RDM |
| REVISION NO. 1 | REVIEWED BY |

RDM Environmental




LEGEND:

| | |
|---|---|
| —— — —— | PROPERTY LINE |
| ——x——x—— | FENCE |
| MW-1 | MONITORING WELL LOCATION |
| VW-1 | VAPOR EXTRACTION WELL LOCATION |
| SP-1 | AIR SPARGING WELL LOCATION |
| (22.53) | GROUND WATER ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL |
| 21.9 | WATER ELEVATION CONTOUR IN FEET RELATIVE TO MEAN SEA LEVEL |

NOTES:

1. BASE MAP ADAPTED FROM FUGRO FIGURE DATED 10/24/95 SITE DIMENSIONS AND FACILTY LOCATIONS NOT VERIFIED.
2. MONITORING WELLS MW-6 AND MW-7 ARE OFF-SITE.

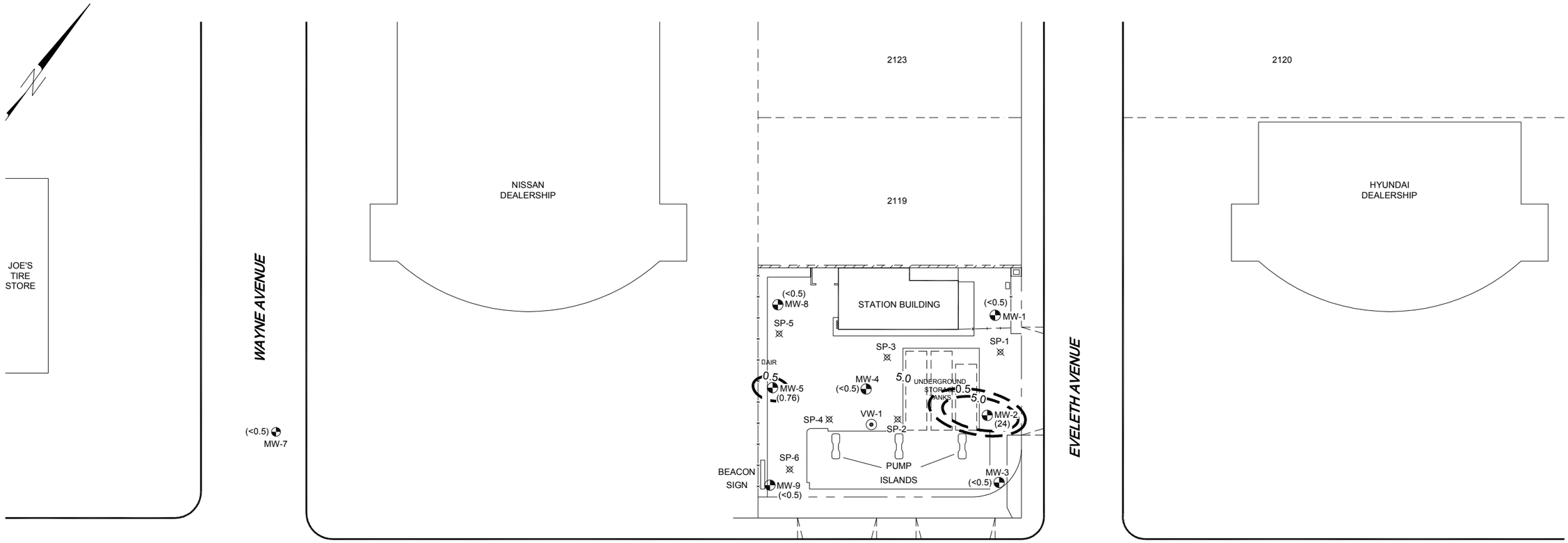
0 40 FT

APPROX. SCALE

FIGURE 3
GROUND WATER ELEVATION CONTOUR MAP
2/12/07
TESORO STATION NO. 67106
(FORMER BEACON STATION NO. 3720)
1088 MARINA BOULEVARD
SAN LEANDRO, CA.

| | |
|---|---|
| PROJECT NO. 00-3720 | DRAWN BY M.L. 3/29/07 |
| FILE NO. 00-3720-11 | PREPARED BY RDM |
| REVISION NO. 1 | REVIEWED BY |

RDM Environmental




LEGEND:

| | |
|---|---|
| —— — —— | PROPERTY LINE |
| ——x——x—— | FENCE |
| MW-1 | MONITORING WELL LOCATION |
| VW-1 | VAPOR EXTRACTION WELL LOCATION |
| SP-1 | AIR SPARGING WELL LOCATION |
| (24) | BENZENE CONCENTRATION IN MICROGRAMS PER LITER (ug/L) |
| 5.0 | BENZENE ISOCONCENTRATION CONTOUR |

NOTES:

1. BASE MAP ADAPTED FROM FUGRO FIGURE DATED 10/24/95 SITE DIMENSIONS AND FACILTY LOCATIONS NOT VERIFIED.
2. MONITORING WELLS MW-6 AND MW-7 ARE OFF-SITE.

0 40 FT

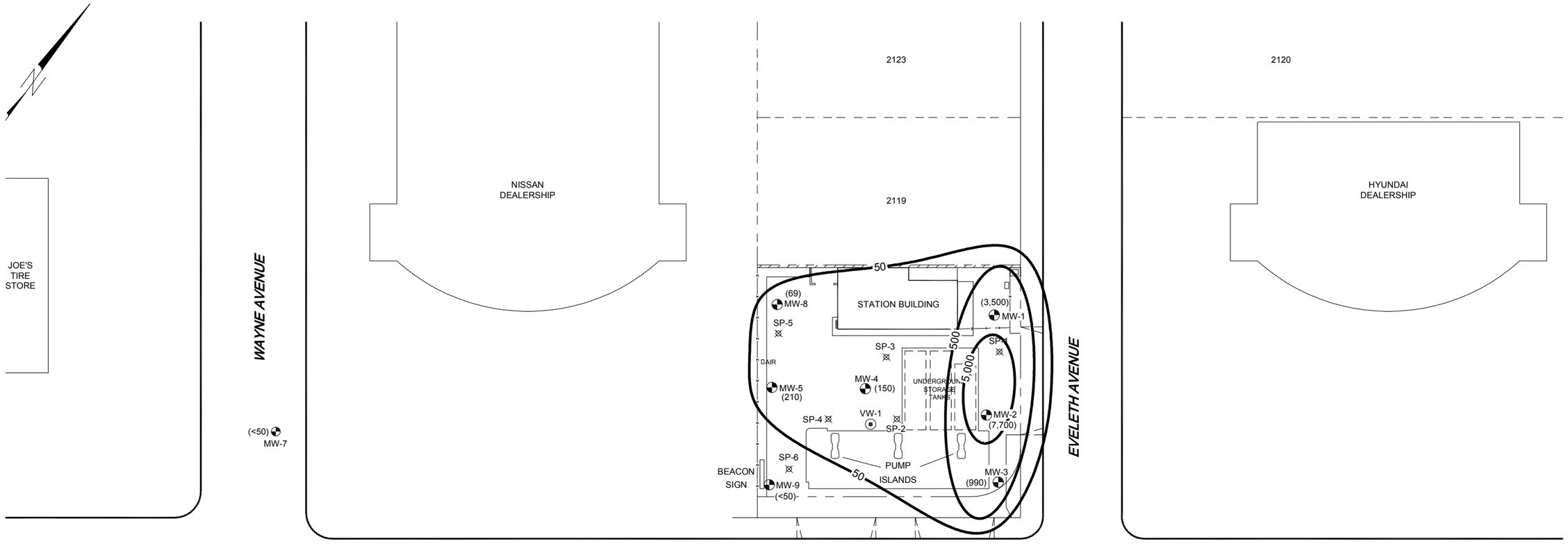
APPROX. SCALE

FIGURE 4
BENZENE ISO-CONCENTRATION MAP
2/12/07

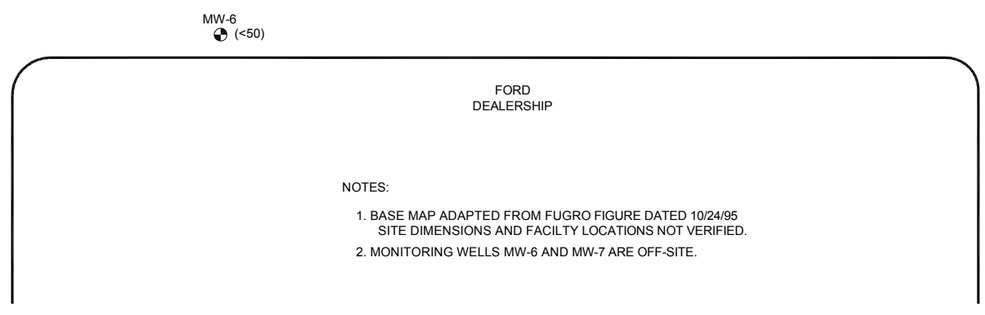
TESORO STATION NO. 67106
(FORMER BEACON STATION NO. 3720)
1088 MARINA BOULEVARD
SAN LEANDRO, CA.

| | |
|---|---|
| PROJECT NO. 00-3720 | DRAWN BY M.L. 3/29/07 |
| FILE NO. 00-3720-11 | PREPARED BY RDM |
| REVISION NO. 1 | REVIEWED BY |

RDM Environmental




*MARINA BOULEVARD*




LEGEND:

| | |
|---|---|
| —— — —— | PROPERTY LINE |
| ——x——x—— | FENCE |
| MW-1 | MONITORING WELL LOCATION |
| VW-1 | VAPOR EXTRACTION WELL LOCATION |
| SP-1 | AIR SPARGING WELL LOCATION |
| (7,700) | TPHg CONCENTRATION IN MICROGRAMS PER LITER (ug/L) |
| 500 | TPHg ISOCONCENTRATION CONTOUR |

NOTES:

1. BASE MAP ADAPTED FROM FUGRO FIGURE DATED 10/24/95 SITE DIMENSIONS AND FACILTY LOCATIONS NOT VERIFIED.
2. MONITORING WELLS MW-6 AND MW-7 ARE OFF-SITE.

0 40 FT

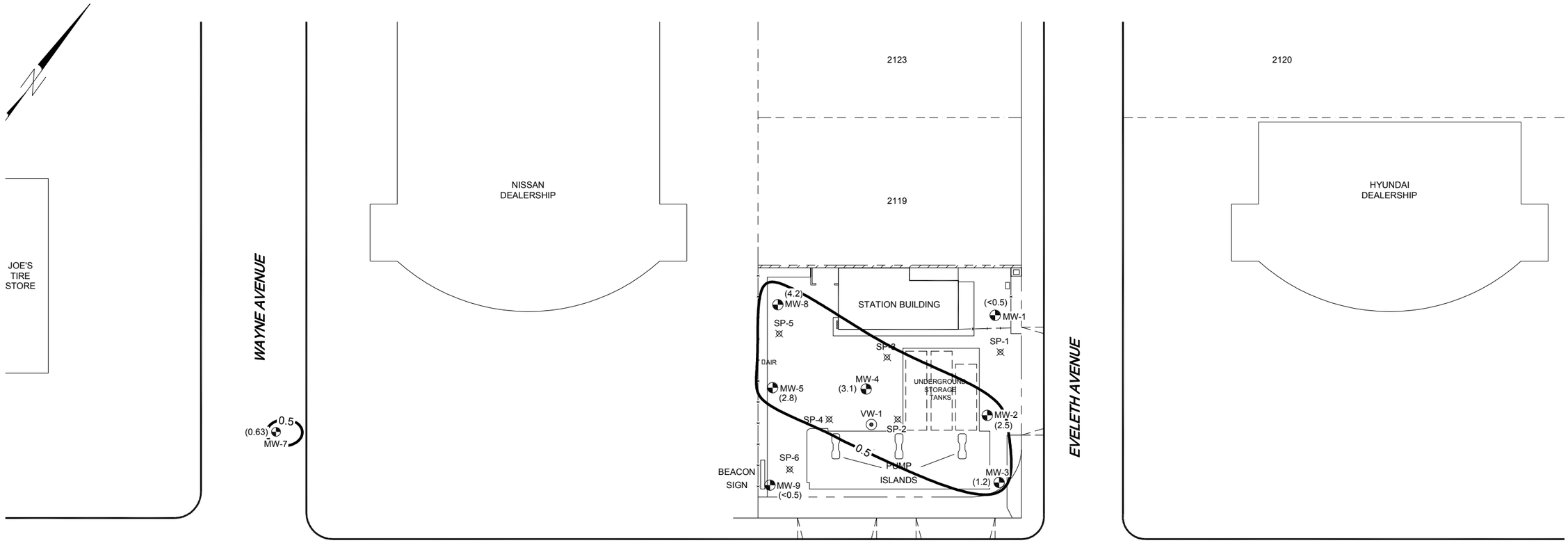
APPROX. SCALE

FIGURE 5
TPHg ISOCONCENTRATION MAP
2/12/07

TESORO STATION NO. 67106
(FORMER BEACON STATION NO. 3720)
1088 MARINA BOULEVARD
SAN LEANDRO, CA.

| | |
|---|---|
| PROJECT NO. 00-3720 | DRAWN BY M.L. 3/29/07 |
| FILE NO. 00-3720-11 | PREPARED BY RDM |
| REVISION NO. 1 | REVIEWED BY |

RDM Environmental




LEGEND:

| | |
|---|---|
| PROPERTY LINE | |
| FENCE | |
| MW-1 | MONITORING WELL LOCATION |
| VW-1 | VAPOR EXTRACTION WELL LOCATION |
| SP-1 | AIR SPARGING WELL LOCATION |
| (4.2) | MTBE CONCENTRATION IN MICROGRAMS PER LITER (ug/L) |
| 0.5 | MTBE ISOCONCENTRATION CONTOUR |

NOTES:

1. BASE MAP ADAPTED FROM FUGRO FIGURE DATED 10/24/95 SITE DIMENSIONS AND FACILTY LOCATIONS NOT VERIFIED.
2. MONITORING WELLS MW-6 AND MW-7 ARE OFF-SITE.

0 40 FT

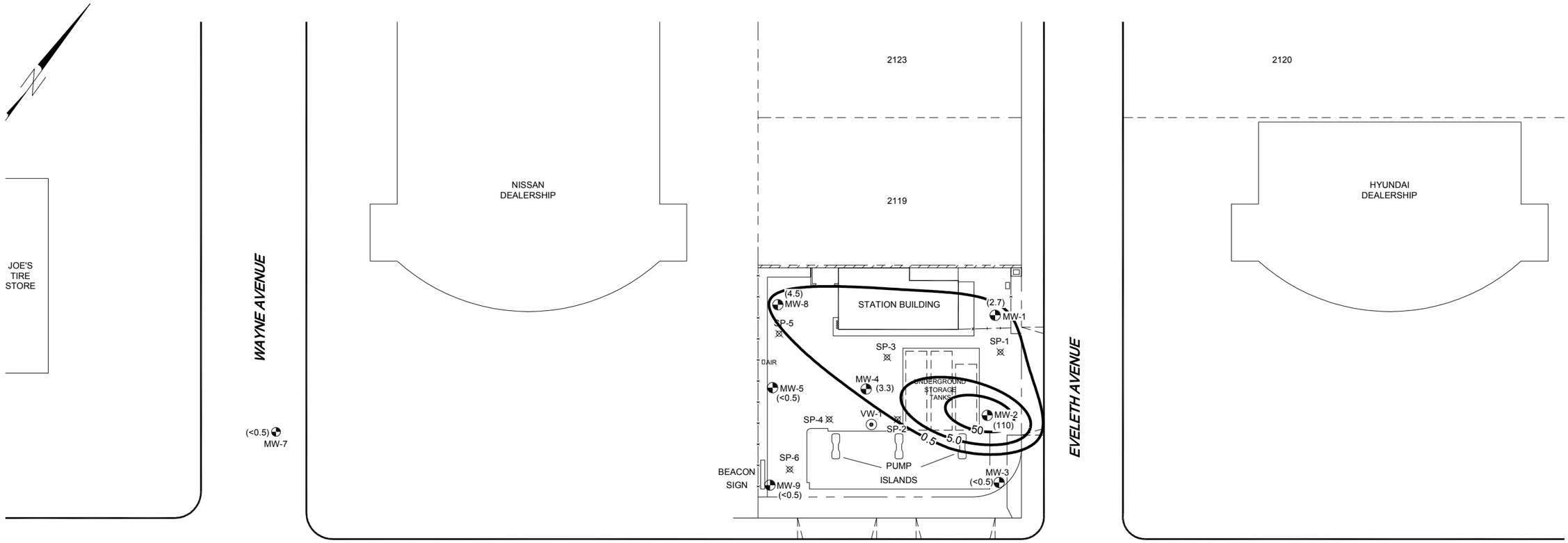
APPROX. SCALE

FIGURE 6
MTBE ISOCONCENTRATION MAP
2/12/07

TESORO STATION NO. 67106
(FORMER BEACON STATION NO. 3720)
1088 MARINA BOULEVARD
SAN LEANDRO, CA.

| | |
|---|---|
| PROJECT NO. 00-3720 | DRAWN BY M.L. 3/29/07 |
| FILE NO. 00-3720-11 | PREPARED BY RDM |
| REVISION NO. 1 | REVIEWED BY |

RDM Environmental




LEGEND:

| | |
|---|---|
| —— — —— | PROPERTY LINE |
| ——x——x—— | FENCE |
| MW-1 | MONITORING WELL LOCATION |
| VW-1 | VAPOR EXTRACTION WELL LOCATION |
| SP-1 | AIR SPARGING WELL LOCATION |
| (110) | XYLENES CONCENTRATION IN MICROGRAMS PER LITER (ug/L) |
| 5.0 | XYLENES ISOCONCENTRATION CONTOUR |

NOTES:

1. BASE MAP ADAPTED FROM FUGRO FIGURE DATED 10/24/95 SITE DIMENSIONS AND FACILTY LOCATIONS NOT VERIFIED.
2. MONITORING WELLS MW-6 AND MW-7 ARE OFF-SITE.

0 40 FT

APPROX. SCALE

FIGURE 7
XYLENES ISOCONCENTRATION MAP
2/12/07

TESORO STATION NO. 67106
(FORMER BEACON STATION NO. 3720)
1088 MARINA BOULEVARD
SAN LEANDRO, CA.

| | |
|---|---|
| PROJECT NO. 00-3720 | DRAWN BY M.L. 3/29/07 |
| FILE NO. 00-3720-11 | PREPARED BY RDM |
| REVISION NO. 1 | REVIEWED BY |

R D M Environmental

# Appendix A

Ground Water Sampling Data Sheets –
Quarterly Ground Water Samples

# RDM ENVIRONMENTAL

GROUND WATER LEVEL DATA

Project Address: Tesoro Station 67106
1088 Marina Blvd., San Leandro, CA

Date: 2/12/2007

Technicians : MJ/DH

Project Number: 02-67106

| Well Number | Sample Order | Time | Depth to Water | Total Depth | Depth to Product | Product Thickness | Comments |
|---|---|---|---|---|---|---|---|
| MW-1 | 7 | 0800 | 12.94 | 27.24 | | | 2" 6.86 |
| MW-2 | 9 | 0804 | 12.81 | 22.31 | | | 2" 4.56 |
| MW-3 | 6 | 0757 | 12.74 | 28.4 | | | 2" 7.52 |
| MW-4 | 8 | 0802 | 13.21 | 27.45 | | | 2" 6.84 |
| MW-5 | 4 | 0753 | 13.04 | 28.8 | | | 2" 7.56 |
| MW-6 | 1 | 0744 | 11.22 | 14.86 | | | 2" 1.75 |
| MW-7 | 2 | 0747 | 12.21 | 25.45 | | | 2" 6.36 |
| MW-8 | 3 | 0752 | 13.73 | 28.05 | | | 2" 6.87 |
| MW-9 | 5 | 0755 | 12.73 | 24.6 | | | 4" 23.15 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

RDM ENVIRONMENTAL

SAMPLE INFORMATION SHEET

| | | | |
|---|---|---|---|
| Client: | Tesoro | Sample Data: | 2/12/2007 |
| Site: | Tesoro Station 67106 | Project Number: | 02-67106 |
| | 1088 Marina Blvd., San Leandro, CA | **Well Designation:** | MW-1 |
| Signature: | | | |

## Well Box Condition/Traffic

| | | | |
|---|---|---|---|
| Traffic Control | (Yes) No | Time: | 0600 hours |
| Standing water | Yes (No) | above or below casing | |
| Top of well level | (Yes) No | Remark: | |
| Well cap & locked | Yes (No) | Remark: | Ozone sparge well |
| Height of Riser | 8" | | |
| Well Box | 8" (12") 24" | Type of well box | CNI |

## Purging/Sampling Equipment

### Purging -

| | | | |
|---|---|---|---|
| 2" Disposable Bailer | | Submersible Pump | |
| 2" PVC Bailer | | Dedicated Bailer | |
| 4" PVC Bailers | | Centrifugal Pump | |
| | | Peristaltic Pump | X |

### Sampling -

| | | | | | |
|---|---|---|---|---|---|
| Disposable Bailer | | Teflon Bailer | | Disposable Tubing | X |

## Well Purging

| | | | | |
|---|---|---|---|---|
| Well Diameter: | 2" X | 4" | 6" | 8" |
| Purge Vol. Multiplier | 0.16 | 0.65 | 1.47 | 2.61 |

| | | | | | |
|---|---|---|---|---|---|
| Initial Measurement | | Recharge Measurement | | Calculated Purge | 6.46 |
| Time: | 0600 | Time: | | Actual Purge | 1.5g |
| Depth of Well | 27.24 | Depth to Water | | | |
| Depth to Water | 12.94 | | | | |

## Sample

| | | | |
|---|---|---|---|
| Start Purge | 1550 | Sample Time | 1105 |

| Time | Temperature | pH | E.C. | D.O. | ORP | Fe+2 | | Volume |
|---|---|---|---|---|---|---|---|---|
| 1054 | 65.2 | 7.17 | 243 | 2.16 | -44 | 0.8 | | .5g |
| 1058 | 65.4 | 7.21 | 247 | 2.22 | -50 | 0.8 | | 1.0g |
| 1102 | 65.5 | 7.19 | 255 | 2.24 | -52 | 0.6 | | 1.5g |
| | | | | | | | | |
| | | | | | | | | |

| | | | |
|---|---|---|---|
| Sample Appearance | Clear. | Lock | N/A. |

## Equipment Replacement

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lock | N/A | Well Cap | ok | Bolts | ok | Box | ok |

Remarks:

RDM ENVIRONMENTAL

SAMPLE INFORMATION SHEET

| | | | |
|---|---|---|---|
| Client: | Tesoro | Sample Data: | 2/12/2007 |
| Site: | Tesoro Station 67106 | Project Number: | 02-67106 |
| | 1088 Marina Blvd., San Leandro, CA | **Well Designation:** | MW-2 |
| Signature: | | | |

## Well Box Condition/Traffic

| | | | |
|---|---|---|---|
| Traffic Control | (Yes) No | Time: | 0819 hours |
| Standing water | Yes (No) | above or below casing | |
| Top of well level | (Yes) No | Remark: | |
| Well cap & locked | (Yes) No | Remark: | |
| Height of Riser | 2" | | |
| Well Box | 8" (12") 24" | Type of well box | Pomeco |

## Purging/Sampling Equipment

### Purging -

| | | | |
|---|---|---|---|
| 2" Disposable Bailer | | Submersible Pump | |
| 2" PVC Bailer | | Dedicated Bailer | |
| 4" PVC Bailers | | Centrifugal Pump | |
| | | Peristaltic Pump | X |

### Sampling -

| | | | | | |
|---|---|---|---|---|---|
| Disposable Bailer | | Teflon Bailer | | Disposable Tubing | X |

## Well Purging

| | | | | |
|---|---|---|---|---|
| Well Diameter: | 2" X | 4" | 6" | 8" |
| Purge Vol. Multiplier | 0.16 | 0.65 | 1.47 | 2.61 |

| | | | | | |
|---|---|---|---|---|---|
| Initial Measurement | | Recharge Measurement | | Calculated Purge | 4.56 |
| Time: | 0804 | Time: | | Actual Purge | 1.50 |
| Depth of Well | 22.31 | Depth to Water | | | |
| Depth to Water | 17.41 | | | | |

## Sample

Start Purge: 1134 Sample Time: 1150

| Time | Temperature | pH | E.C. | D.O. | ORP | Fe+2 | | Volume |
|---|---|---|---|---|---|---|---|---|
| 1138 | 65.8 | 6.98 | 2.79 | 0.48 | -186 | 1.3 | | 0.5 |
| 1142 | 65.7 | 6.93 | 2.71 | 0.51 | -185 | 1.3 | | 1.0 |
| 1146 | 65.8 | 6.99 | 2.68 | 0.47 | -195 | 1.3 | | 1.5 |
| | | | | | | | | |
| | | | | | | | | |

Sample Appearance: Clear Lock: ok

## Equipment Replacement

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lock | ok | Well Cap | ok | Bolts | -1 | Box | ok |

Remarks:

RDM ENVIRONMENTAL

SAMPLE INFORMATION SHEET

| | | | |
|---|---|---|---|
| Client: | Tesoro | Sample Data: | 2/12/2007 |
| Site: | Tesoro Station 67106 | Project Number: | 02-67106 |
| | 1088 Marina Blvd., San Leandro, CA | **Well Designation:** | MW-3 |
| Signature: | | | |

## Well Box Condition/Traffic

| | | | |
|---|---|---|---|
| Traffic Control | (Yes) No | Time: | 0757 hours |
| Standing water | Yes (No) | above or below casing | |
| Top of well level | (Yes) No | Remark: | |
| Well cap & locked | (Yes) No | Remark: | |
| Height of Riser | 2' | | |
| Well Box | 8" (12") 24" | Type of well box | CNI |

## Purging/Sampling Equipment

### Purging -

| | | | |
|---|---|---|---|
| 2" Disposable Bailer | | Submersible Pump | |
| 2" PVC Bailer | | Dedicated Bailer | |
| 4" PVC Bailers | | Centrifugal Pump | |
| | | Peristaltic Pump | X |

### Sampling -

| | | | | | |
|---|---|---|---|---|---|
| Disposable Bailer | | Teflon Bailer | | Disposable Tubing | X |

## Well Purging

| | | | | |
|---|---|---|---|---|
| Well Diameter: 2" | X | 4" | 6" | 8" |
| Purge Vol. Multiplier | 0.16 | 0.65 | 1.47 | 2.61 |

| | | | | | |
|---|---|---|---|---|---|
| Initial Measurement | | Recharge Measurement | | Calculated Purge | 7.52 |
| Time: | 0757 | Time: | | Actual Purge | 1.50 |
| Depth of Well | 28.40 | Depth to Water | | | |
| Depth to Water | 12.74 | | | | |

## Sample

| | | | |
|---|---|---|---|
| Start Purge | 1024 | Sample Time | 1043 |

| Time | Temperature | pH | E.C. | D.O. | ORP | Fe+2 | | Volume |
|---|---|---|---|---|---|---|---|---|
| 1032 | 66.3 | 6.94 | 302 | 0.70 | -172 | 0.6 | | 0.5 |
| 1036 | 66.5 | 6.90 | 301 | 0.71 | -181 | 0.6 | | 1.0 |
| 1040 | 66.3 | 6.77 | 297 | 0.68 | -183 | 0.6 | | 1.5 |
| | | | | | | | | |
| | | | | | | | | |

| | | | |
|---|---|---|---|
| Sample Appearance | Clear. | Lock | ok |

## Equipment Replacement

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lock | ok | Well Cap | ok | Bolts | ok | Box | ok |

Remarks:

RDM ENVIRONMENTAL

SAMPLE INFORMATION SHEET

| | | | |
|---|---|---|---|
| Client: | Tesoro | Sample Data: | 2/12/2007 |
| Site: | Tesoro Station 67106 | Project Number: | 02-67106 |
| | 1088 Marina Blvd., San Leandro, CA | **Well Designation:** | MW-4 |
| Signature: | | | |

## Well Box Condition/Traffic

| | | | |
|---|---|---|---|
| Traffic Control | (Yes) No | Time: | 0802 hours |
| Standing water | Yes (No) | above or below casing | |
| Top of well level | (Yes) No | Remark: | |
| Well cap & locked | Yes (No) | Remark: | Odor Spring well |
| Height of Riser | 2" | | |
| Well Box 8" 12" (24") | | Type of well box | Not Marked |

## Purging/Sampling Equipment

### Purging -

| | | | |
|---|---|---|---|
| 2" Disposable Bailer | | Submersible Pump | |
| 2" PVC Bailer | | Dedicated Bailer | |
| 4" PVC Bailers | | Centrifugal Pump | |
| | | Peristaltic Pump X | |

### Sampling -

| | | | | | |
|---|---|---|---|---|---|
| Disposable Bailer | | Teflon Bailer | | Disposable Tubing | X |

## Well Purging

| | | | | |
|---|---|---|---|---|
| Well Diameter: | 2" | 4" | 6" | 8" |
| | X | | | |
| Purge Vol. Multiplier | 0.16 | 0.65 | 1.47 | 2.61 |

| | | | | | |
|---|---|---|---|---|---|
| Initial Measurement | | Recharge Measurement | | Calculated Purge | 6.48 |
| Time: | 0802 | Time: | | Actual Purge | 1.5 Kg. |
| Depth of Well | 27.45 | Depth to Water | | | |
| Depth to Water | 13.21 | | | | |

## Sample

| | | | |
|---|---|---|---|
| Start Purge | 1112 | Sample Time | 1124 |

| Time | Temperature | pH | E.C. | D.O. | ORP | Fe+2 | | Volume |
|---|---|---|---|---|---|---|---|---|
| 1116 | 66.5 | 7.02 | 665 | 1.04 | -24 | 0.3 | | 0.5 |
| 1120 | 66.6 | 7.02 | 658 | 1.07 | -29 | 0.3 | | 1.0 |
| 1124 | 66.5 | 7.14 | 643 | 1.03 | -28 | 0.3 | | 1.5 |
| | | | | | | | | |
| | | | | | | | | |

| | | | |
|---|---|---|---|
| Sample Appearance | Cloudy. | Lock | N/A. |

## Equipment Replacement

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lock | N/A | Well Cap | ok | Bolts | -4 | Box | ok |

Remarks:

RDM ENVIRONMENTAL

SAMPLE INFORMATION SHEET

| | | | |
|---|---|---|---|
| Client: | Tesoro | Sample Data: | 2/12/2007 |
| Site: | Tesoro Station 67106 | Project Number: | 02-67106 |
| | 1088 Marina Blvd., San Leandro, CA | **Well Designation:** | MW-5 |
| Signature: | | | |

## Well Box Condition/Traffic

| | | | |
|---|---|---|---|
| Traffic Control | (Yes) No | Time: | 0753 hours |
| Standing water | Yes (No) | above or below casing | |
| Top of well level | (Yes) No | Remark: | |
| Well cap & locked | Yes (No) | Remark: | O/S lines. |
| Height of Riser | 2" | | |
| Well Box 8" 12" (24") | Type of well box | Not Marked. | |

## Purging/Sampling Equipment

### Purging -

| | | | |
|---|---|---|---|
| 2" Disposable Bailer | | Submersible Pump | |
| 2" PVC Bailer | | Dedicated Bailer | |
| 4" PVC Bailers | | Centrifugal Pump | |
| | | Peristaltic Pump X | |

### Sampling -

| | | | | | |
|---|---|---|---|---|---|
| Disposable Bailer | | Teflon Bailer | | Disposable Tubing | X |

## Well Purging

| | | | | |
|---|---|---|---|---|
| Well Diameter: | 2" X | 4" | 6" | 8" |
| Purge Vol. Multiplier | 0.16 | 0.65 | 1.47 | 2.61 |

| | | | | | |
|---|---|---|---|---|---|
| Initial Measurement | | Recharge Measurement | | Calculated Purge | 7.56 |
| Time: | 0753 | Time: | | Actual Purge | 1.50 |
| Depth of Well | 28.45 | Depth to Water | | | |
| Depth to Water | 13.04 | | | | |

## Sample

Start Purge 0944 Sample Time 1000

| Time | Temperature | pH | E.C. | D.O. | ORP | Fe+2 | | Volume |
|---|---|---|---|---|---|---|---|---|
| 0944 | 65.4 | 6.95 | 712 | 1.36 | 79 | 0.0 | | .5g |
| 0952 | 65.5 | 6.94 | 727 | 1.36 | 80 | 0.0 | | 1g |
| 0956 | 65.3 | 6.97 | 768 | 1.42 | 82 | 0.0 | | 1.5g |
| | | | | | | | | |
| | | | | | | | | |

Sample Appearance Clear. Lock N/A

## Equipment Replacement

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lock | N/A | Well Cap | ok | Bolts | -4 | Box | ok |

Remarks: Engraved label on lid

RDM ENVIRONMENTAL

SAMPLE INFORMATION SHEET

| | | | |
|---|---|---|---|
| Client: | Tesoro | Sample Data: | 2/12/2007 |
| Site: | Tesoro Station 67106 | Project Number: | 02-67106 |
| | 1088 Marina Blvd., San Leandro, CA | **Well Designation:** | MW-6 |
| Signature: | | | |

## Well Box Condition/Traffic

| | | | |
|---|---|---|---|
| Traffic Control | (Yes) No | Time: | 0744 hours |
| Standing water | (Yes) No | | (above) or below casing |
| Top of well level | Yes (No) | Remark: | |
| Well cap & locked | (Yes) No | Remark: | |
| Height of Riser | 7" | | |
| Well Box | 8" (12") 24" | Type of well box | POMECO |

## Purging/Sampling Equipment

### Purging -

| | | | |
|---|---|---|---|
| 2" Disposable Bailer | | Submersible Pump | |
| 2" PVC Bailer | | Dedicated Bailer | |
| 4" PVC Bailers | | Centrifugal Pump | |
| | | Peristaltic Pump | X |

### Sampling -

| | | | | | |
|---|---|---|---|---|---|
| Disposable Bailer | | Teflon Bailer | | Disposable Tubing | X |

## Well Purging

| | | | | |
|---|---|---|---|---|
| Well Diameter: | 2" X | 4" | 6" | 8" |
| Purge Vol. Multiplier | 0.16 | 0.65 | 1.47 | 2.61 |

| | | | | | |
|---|---|---|---|---|---|
| Initial Measurement | | Recharge Measurement | | Calculated Purge | 1.75 |
| Time: | 0744 | Time: | | Actual Purge | 1.20 |
| Depth of Well | 14.46 | Depth to Water | | | |
| Depth to Water | 11.22 | | | | |

## Sample

Start Purge 0824 Sample Time 0841

| Time | Temperature | pH | E.C. | D.O. | ORP | Fe+2 | | Volume |
|---|---|---|---|---|---|---|---|---|
| 0829 | 63.4 | 6.81 | 1005 | 3.29 | 48 | 0.0 | | 1 |
| 0834 | 63.1 | 6.87 | 1025 | 3.84 | 44 | 0.0 | | 2 |
| 0839 | 65.2 | 6.97 | 1027 | 3.74 | 50 | 0.0 | | 1.2 |
| | | | | | | | | |
| | | | | | | | | |

Sample Appearance Clear. Lock ok

## Equipment Replacement

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lock | ok | Well Cap | ok | Bolts | -3 | Box | ok |

Remarks:

RDM ENVIRONMENTAL

SAMPLE INFORMATION SHEET

| | | | |
|---|---|---|---|
| Client: | Tesoro | Sample Data: | 2/12/2007 |
| Site: | Tesoro Station 67106 | Project Number: | 02-67106 |
| | 1088 Marina Blvd., San Leandro, CA | **Well Designation:** | MW-7 |
| Signature: | | | |

## Well Box Condition/Traffic

| | | | |
|---|---|---|---|
| Traffic Control | (Yes) No | Time: | 0747 hours |
| Standing water | Yes (No) | above or below casing | |
| Top of well level | (Yes) No | Remark: | |
| Well cap & locked | (Yes) No | Remark: | |
| Height of Riser | 4' | | |
| Well Box | 8" (12") 24" | Type of well box | Pamco |

## Purging/Sampling Equipment

### Purging -

| | | | |
|---|---|---|---|
| 2" Disposable Bailer | | Submersible Pump | |
| 2" PVC Bailer | | Dedicated Bailer | |
| 4" PVC Bailers | | Centrifugal Pump | |
| | | Peristaltic Pump | x |

### Sampling -

| | | | | | |
|---|---|---|---|---|---|
| Disposable Bailer | | Teflon Bailer | | Disposable Tubing | x |

## Well Purging

| | | | | |
|---|---|---|---|---|
| Well Diameter: 2" | x | 4" | 6" | 8" |
| Purge Vol. Multiplier | 0.16 | 0.65 | 1.47 | 2.61 |

| | | | | | |
|---|---|---|---|---|---|
| Initial Measurement | | Recharge Measurement | | Calculated Purge | 4.32 |
| Time: | 0747 | Time: | | Actual Purge | 1.25 |
| Depth of Well | 25.45 | Depth to Water | | | |
| Depth to Water | 12.21 | | | | |

## Sample

Start Purge 0852 Sample Time 0940

| Time | Temperature | pH | E.C. | D.O. | ORP | Fe+2 | | Volume |
|---|---|---|---|---|---|---|---|---|
| 0856 | 63.1 | 7.01 | 454 | 1.06 | 56 | 0.0 | | 1 3/4 |
| 0900 | 63.0 | 6.94 | 457 | 1.11 | 58 | 0.0 | | 2 3/4 |
| 0904 | 62.9 | 6.87 | 476 | 1.15 | 56 | 0.0 | | 1.25 |
| | | | | | | | | |
| | | | | | | | | |

Sample Appearance Clear Lock ok

## Equipment Replacement

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lock | ok | Well Cap | ok | Bolts | -3 | Box | ok |

Remarks:

RDM ENVIRONMENTAL

SAMPLE INFORMATION SHEET

| | | | |
|---|---|---|---|
| Client: | Tesoro | Sample Data: | 2/12/2007 |
| Site: | Tesoro Station 67106 | Project Number: | 02-67106 |
| | 1088 Marina Blvd., San Leandro, CA | **Well Designation:** | MW-8 |
| Signature: | | | |

## Well Box Condition/Traffic

| | | | |
|---|---|---|---|
| Traffic Control | (Yes) No | Time: | 0752 hours |
| Standing water | Yes (No) | above or below casing | |
| Top of well level | (Yes) No | Remark: | |
| Well cap & locked | (Yes) No | Remark: | |
| Height of Riser | 5" | | |
| Well Box | 8" (12") 24" | Type of well box | CNI |

## Purging/Sampling Equipment

### Purging -

| | | | |
|---|---|---|---|
| 2" Disposable Bailer | | Submersible Pump | |
| 2" PVC Bailer | | Dedicated Bailer | |
| 4" PVC Bailers | | Centrifugal Pump | |
| | | Peristaltic Pump | x |

### Sampling -

| | | | | | |
|---|---|---|---|---|---|
| Disposable Bailer | | Teflon Bailer | | Disposable Tubing | x |

## Well Purging

| | | | | |
|---|---|---|---|---|
| Well Diameter: | 2" x | 4" | 6" | 8" |
| Purge Vol. Multiplier | 0.16 | 0.65 | 1.47 | 2.61 |

| | | | | | |
|---|---|---|---|---|---|
| Initial Measurement | | Recharge Measurement | | Calculated Purge | 6.87 |
| Time: | 0752 | Time: | | Actual Purge | 1.50 |
| Depth of Well | 24.05 | Depth to Water | | | |
| Depth to Water | 13.73 | | | | |

## Sample

Start Purge 0916 Sample Time 0930

| Time | Temperature | pH | E.C. | D.O. | ORP | Fe+2 | | Volume |
|---|---|---|---|---|---|---|---|---|
| 0920 | 62.9 | 6.82 | 589 | 1.16 | 73 | 0.0 | | .5 |
| 0924 | 63.1 | 6.80 | 590 | 1.08 | 73 | 0.0 | | 1.0 |
| 0928 | 63.8 | 6.84 | 602 | 1.12 | 72 | 0.0 | | 1.5 |
| | | | | | | | | |
| | | | | | | | | |

Sample Appearance Clear Lock OK

## Equipment Replacement

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lock | ok | Well Cap | ok | Bolts | ok | Box | ok |

Remarks: Engraved label on l.d.

RDM ENVIRONMENTAL

SAMPLE INFORMATION SHEET

| | | | |
|---|---|---|---|
| Client: | Tesoro | Sample Data: | 2/12/2007 |
| Site: | Tesoro Station 67106 | Project Number: | 02-67106 |
| | 1088 Marina Blvd., San Leandro, CA | **Well Designation:** | MW-9 |
| Signature: | | | |

## Well Box Condition/Traffic

| | | | |
|---|---|---|---|
| Traffic Control | (Yes) No | Time: | 0755 hours |
| Standing water | Yes (No) | above or below casing | |
| Top of well level | (Yes) No | Remark: | |
| Well cap & locked | Yes (No) | Remark: | A/S loc |
| Height of Riser | 12" | | |
| Well Box | 8" 12" (24) | Type of well box | Not Marked |

## Purging/Sampling Equipment

### Purging -

| | | | |
|---|---|---|---|
| 2" Disposable Bailer | | Submersible Pump | |
| 2" PVC Bailer | | Dedicated Bailer | |
| 4" PVC Bailers | | Centrifugal Pump | |
| | | Peristaltic Pump | X |

### Sampling -

| | | | | | |
|---|---|---|---|---|---|
| Disposable Bailer | | Teflon Bailer | | Disposable Tubing | X |

## Well Purging

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Well Diameter: | 2" | | 4" | X | 6" | | 8" | |
| Purge Vol. Multiplier | | 0.16 | | 0.65 | | 1.47 | | 2.61 |

| | | | | | |
|---|---|---|---|---|---|
| Initial Measurement | | Recharge Measurement | | Calculated Purge | 23.15 |
| Time: | 0755 | Time: | | Actual Purge | 2.25 |
| Depth of Well | 24.40 | Depth to Water | | | |
| Depth to Water | 12.73 | | | | |

## Sample

Start Purge: 1006 Sample Time: 1020

| Time | Temperature | pH | E.C. | D.O. | ORP | Fe+2 | | Volume |
|---|---|---|---|---|---|---|---|---|
| 1010 | 67.1 | 7.03 | 271 | 0.85 | 34 | 0.2 | | 0.75 |
| 1014 | 67.1 | 7.04 | 267 | 0.83 | 34 | 0.2 | | 1.50 |
| 1018 | 67.2 | 7.04 | 272 | 0.79 | 33 | 0.2 | | 2.25 |
| | | | | | | | | |
| | | | | | | | | |

Sample Appearance: Clear. Lock: -1

## Equipment Replacement

Lock: -1 Well Cap: Replaced Bolts: -4 Box: ok

Remarks: Engraved label on l.d.

# Appendix B

Official Laboratory Analytical Results –
Quarterly Ground Water Samples

KIFF Analytical LLC

Report Number : 54815
Date : 2/16/2007

Richard Munsch
RDM Environmental
6280 Brookshire Drive
Rocklin, CA 95677

Subject : 9 Water Samples
Project Name : 67106
Project Number : 67106

Dear Mr. Munsch,

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 : 54815
Date : 2/16/2007

Subject : 9 Water Samples
Project Name : 67106
Project Number : 67106

# Case Narrative

The Method Reporting Limit for Ethanol has been increased due to the presence of an interfering compound for sample MW-2.

Matrix Spike/Matrix Spike Duplicate Results associated with samples MW-1, MW-2, MW-4, MW-5, MW-6, MW-7, MW-8 and MW-9 for the analyte Benzene were affected by the analyte concentrations already present in the un-spiked sample.

Approved By: Joel Kiff

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

KIFF Analytical LLC

Report Number : 54815
Date : 2/16/2007

Project Name : **67106**
Project Number : **67106**

Sample : **MW-1** Matrix : Water Lab Number : 54815-01

Sample Date :2/12/2007

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/13/2007 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/13/2007 |
| **Ethylbenzene** | **12** | 0.50 | ug/L | EPA 8260B | 2/13/2007 |
| **Total Xylenes** | **2.7** | 0.50 | ug/L | EPA 8260B | 2/13/2007 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/13/2007 |
| **Diisopropyl ether (DIPE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/13/2007 |
| **Ethyl-t-butyl ether (ETBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/13/2007 |
| **Tert-amyl methyl ether (TAME)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/13/2007 |
| **Tert-Butanol** | **< 5.0** | 5.0 | ug/L | EPA 8260B | 2/13/2007 |
| **Methanol** | **< 50** | 50 | ug/L | EPA 8260B | 2/13/2007 |
| **Ethanol** | **19** | 5.0 | ug/L | EPA 8260B | 2/13/2007 |
| **TPH as Gasoline** | **3500** | 50 | ug/L | EPA 8260B | 2/13/2007 |
| Toluene - d8 (Surr) | 98.6 | | % Recovery | EPA 8260B | 2/13/2007 |
| 4-Bromofluorobenzene (Surr) | 96.8 | | % Recovery | EPA 8260B | 2/13/2007 |

Approved By: Joel Kiff

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

KIFF Analytical LLC

Report Number : 54815
Date : 2/16/2007

Project Name : **67106**
Project Number : **67106**

Sample : **MW-2** Matrix : Water Lab Number : 54815-02

Sample Date :2/12/2007

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **24** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Toluene** | **8.5** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethylbenzene** | **450** | 2.0 | ug/L | EPA 8260B | 2/14/2007 |
| **Total Xylenes** | **110** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Methyl-t-butyl ether (MTBE)** | **2.5** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Diisopropyl ether (DIPE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethyl-t-butyl ether (ETBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Tert-amyl methyl ether (TAME)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Tert-Butanol** | **< 5.0** | 5.0 | ug/L | EPA 8260B | 2/14/2007 |
| **Methanol** | **< 50** | 50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethanol** | **< 20** | 20 | ug/L | EPA 8260B | 2/14/2007 |
| **TPH as Gasoline** | **7700** | 200 | ug/L | EPA 8260B | 2/14/2007 |
| Toluene - d8 (Surr) | 97.0 | | % Recovery | EPA 8260B | 2/14/2007 |
| 4-Bromofluorobenzene (Surr) | 98.4 | | % Recovery | EPA 8260B | 2/14/2007 |

Approved By: Joel Kiff

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

KIFF Analytical LLC

Report Number : 54815
Date : 2/16/2007

Project Name : **67106**
Project Number : **67106**

Sample : **MW-3** Matrix : Water Lab Number : 54815-03

Sample Date :2/12/2007

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Methyl-t-butyl ether (MTBE)** | **1.2** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Diisopropyl ether (DIPE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethyl-t-butyl ether (ETBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Tert-amyl methyl ether (TAME)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Tert-Butanol** | **5.5** | 5.0 | ug/L | EPA 8260B | 2/14/2007 |
| **Methanol** | **< 50** | 50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethanol** | **8.8** | 5.0 | ug/L | EPA 8260B | 2/14/2007 |
| **TPH as Gasoline** | **990** | 50 | ug/L | EPA 8260B | 2/14/2007 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 2/14/2007 |
| 4-Bromofluorobenzene (Surr) | 96.6 | | % Recovery | EPA 8260B | 2/14/2007 |

Approved By: Joel Kiff

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

KIFF Analytical LLC

Report Number : 54815
Date : 2/16/2007

Project Name : **67106**
Project Number : **67106**

Sample : **MW-4** Matrix : Water Lab Number : 54815-04

Sample Date :2/12/2007

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Toluene** | **0.58** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethylbenzene** | **1.5** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Total Xylenes** | **3.3** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Methyl-t-butyl ether (MTBE)** | **3.1** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Diisopropyl ether (DIPE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethyl-t-butyl ether (ETBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Tert-amyl methyl ether (TAME)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Tert-Butanol** | **< 5.0** | 5.0 | ug/L | EPA 8260B | 2/14/2007 |
| **Methanol** | **< 50** | 50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethanol** | **9.7** | 5.0 | ug/L | EPA 8260B | 2/14/2007 |
| **TPH as Gasoline** | **150** | 50 | ug/L | EPA 8260B | 2/14/2007 |
| Toluene - d8 (Surr) | 101 | | % Recovery | EPA 8260B | 2/14/2007 |
| 4-Bromofluorobenzene (Surr) | 97.1 | | % Recovery | EPA 8260B | 2/14/2007 |

Approved By: Joel Kiff

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

KIFF Analytical LLC

Report Number : 54815
Date : 2/16/2007

Project Name : **67106**
Project Number : **67106**

Sample : **MW-5** Matrix : Water Lab Number : 54815-05

Sample Date :2/12/2007

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Methyl-t-butyl ether (MTBE)** | **2.8** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Diisopropyl ether (DIPE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethyl-t-butyl ether (ETBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Tert-amyl methyl ether (TAME)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Tert-Butanol** | **6.4** | 5.0 | ug/L | EPA 8260B | 2/14/2007 |
| **Methanol** | **< 50** | 50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethanol** | **< 5.0** | 5.0 | ug/L | EPA 8260B | 2/14/2007 |
| **TPH as Gasoline** | **210** | 50 | ug/L | EPA 8260B | 2/14/2007 |
| Toluene - d8 (Surr) | 101 | | % Recovery | EPA 8260B | 2/14/2007 |
| 4-Bromofluorobenzene (Surr) | 96.1 | | % Recovery | EPA 8260B | 2/14/2007 |

Approved By: Joel Kiff

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

KIFF Analytical LLC

Report Number : 54815
Date : 2/16/2007

Project Name : **67106**
Project Number : **67106**

Sample : **MW-6** Matrix : Water Lab Number : 54815-06

Sample Date :2/12/2007

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Diisopropyl ether (DIPE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethyl-t-butyl ether (ETBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Tert-amyl methyl ether (TAME)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Tert-Butanol** | **< 5.0** | 5.0 | ug/L | EPA 8260B | 2/14/2007 |
| **Methanol** | **< 50** | 50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethanol** | **9.3** | 5.0 | ug/L | EPA 8260B | 2/14/2007 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 2/14/2007 |
| Toluene - d8 (Surr) | 101 | | % Recovery | EPA 8260B | 2/14/2007 |
| 4-Bromofluorobenzene (Surr) | 97.2 | | % Recovery | EPA 8260B | 2/14/2007 |

Approved By: Joel Kiff

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

KIFF Analytical LLC

Report Number : 54815
Date : 2/16/2007

Project Name : **67106**
Project Number : **67106**

Sample : **MW-7** Matrix : Water Lab Number : 54815-07

Sample Date :2/12/2007

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Methyl-t-butyl ether (MTBE)** | **0.63** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Diisopropyl ether (DIPE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethyl-t-butyl ether (ETBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Tert-amyl methyl ether (TAME)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Tert-Butanol** | **< 5.0** | 5.0 | ug/L | EPA 8260B | 2/14/2007 |
| **Methanol** | **< 50** | 50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethanol** | **< 5.0** | 5.0 | ug/L | EPA 8260B | 2/14/2007 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 2/14/2007 |
| Toluene - d8 (Surr) | 101 | | % Recovery | EPA 8260B | 2/14/2007 |
| 4-Bromofluorobenzene (Surr) | 97.4 | | % Recovery | EPA 8260B | 2/14/2007 |

Approved By: Joel Kiff

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

KIFF Analytical LLC

Report Number : 54815
Date : 2/16/2007

Project Name : **67106**
Project Number : **67106**

Sample : **MW-8** Matrix : Water Lab Number : 54815-08

Sample Date :2/12/2007

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Total Xylenes** | **4.5** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Methyl-t-butyl ether (MTBE)** | **4.2** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Diisopropyl ether (DIPE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethyl-t-butyl ether (ETBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Tert-amyl methyl ether (TAME)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Tert-Butanol** | **< 5.0** | 5.0 | ug/L | EPA 8260B | 2/14/2007 |
| **Methanol** | **< 50** | 50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethanol** | **14** | 5.0 | ug/L | EPA 8260B | 2/14/2007 |
| **TPH as Gasoline** | **69** | 50 | ug/L | EPA 8260B | 2/14/2007 |
| Toluene - d8 (Surr) | 101 | | % Recovery | EPA 8260B | 2/14/2007 |
| 4-Bromofluorobenzene (Surr) | 96.2 | | % Recovery | EPA 8260B | 2/14/2007 |

Approved By: Joel Kiff

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

KIFF Analytical LLC

Report Number : 54815
Date : 2/16/2007

Project Name : **67106**
Project Number : **67106**

Sample : **MW-9** Matrix : Water Lab Number : 54815-09

Sample Date :2/12/2007

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Diisopropyl ether (DIPE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethyl-t-butyl ether (ETBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Tert-amyl methyl ether (TAME)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| **Tert-Butanol** | **< 5.0** | 5.0 | ug/L | EPA 8260B | 2/14/2007 |
| **Methanol** | **< 50** | 50 | ug/L | EPA 8260B | 2/14/2007 |
| **Ethanol** | **< 5.0** | 5.0 | ug/L | EPA 8260B | 2/14/2007 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 2/14/2007 |
| Toluene - d8 (Surr) | 101 | | % Recovery | EPA 8260B | 2/14/2007 |
| 4-Bromofluorobenzene (Surr) | 96.9 | | % Recovery | EPA 8260B | 2/14/2007 |

Approved By: Joel Kiff

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

Report Number : 54815

Date : 2/16/2007

**QC Report : Method Blank Data**

Project Name : **67106**

Project Number : **67106**

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 2/14/2007 |
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 2/13/2007 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 2/13/2007 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 2/13/2007 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 2/13/2007 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 2/13/2007 |
| Diisopropyl ether (DIPE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 2/13/2007 |
| Ethyl-t-butyl ether (ETBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 2/13/2007 |
| Tert-amyl methyl ether (TAME) | < 0.50 | 0.50 | ug/L | EPA 8260B | 2/13/2007 |
| Tert-Butanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 2/13/2007 |
| Methanol | < 50 | 50 | ug/L | EPA 8260B | 2/13/2007 |
| Ethanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 2/13/2007 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 2/13/2007 |
| Toluene - d8 (Surr) | 100 | | % | EPA 8260B | 2/13/2007 |
| 4-Bromofluorobenzene (Surr) | 93.5 | | % | EPA 8260B | 2/13/2007 |
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| Diisopropyl ether (DIPE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| Ethyl-t-butyl ether (ETBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| Tert-amyl methyl ether (TAME) | < 0.50 | 0.50 | ug/L | EPA 8260B | 2/14/2007 |
| Tert-Butanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 2/14/2007 |
| Methanol | < 50 | 50 | ug/L | EPA 8260B | 2/14/2007 |
| Ethanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 2/14/2007 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 2/14/2007 |
| Toluene - d8 (Surr) | 102 | | % | EPA 8260B | 2/14/2007 |
| 4-Bromofluorobenzene (Surr) | 96.2 | | % | EPA 8260B | 2/14/2007 |

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 54815

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

Date : 2/16/2007

Project Name : **67106**

Project Number : **67106**

| 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 | 54832-01 | <0.50 | 39.8 | 39.6 | 42.3 | 42.0 | ug/L | EPA 8260B | 2/14/07 | 106 | 106 | 0.268 | 70-130 | 25 |
| Toluene | 54832-01 | <0.50 | 39.8 | 39.6 | 40.8 | 40.7 | ug/L | EPA 8260B | 2/14/07 | 102 | 103 | 0.355 | 70-130 | 25 |
| Tert-Butanol | 54832-01 | 370 | 199 | 198 | 566 | 570 | ug/L | EPA 8260B | 2/14/07 | 97.5 | 99.9 | 2.43 | 70-130 | 25 |
| Methyl-t-Butyl Ether | 54832-01 | 1.6 | 39.8 | 39.6 | 44.0 | 40.7 | ug/L | EPA 8260B | 2/14/07 | 106 | 98.6 | 7.54 | 70-130 | 25 |
| Benzene | 54823-01 | 410 | 40.0 | 40.0 | 451 | 441 | ug/L | EPA 8260B | 2/13/07 | 96.6 | 73.6 | 27.1 | 70-130 | 25 |
| Toluene | 54823-01 | 1.6 | 40.0 | 40.0 | 43.0 | 42.1 | ug/L | EPA 8260B | 2/13/07 | 104 | 101 | 2.35 | 70-130 | 25 |
| Tert-Butanol | 54823-01 | 14 | 200 | 200 | 205 | 202 | ug/L | EPA 8260B | 2/13/07 | 95.2 | 94.1 | 1.15 | 70-130 | 25 |
| Methyl-t-Butyl Ether | 54823-01 | <0.50 | 40.0 | 40.0 | 40.3 | 40.5 | ug/L | EPA 8260B | 2/13/07 | 101 | 101 | 0.468 | 70-130 | 25 |
| Benzene | 54840-08 | <0.50 | 40.0 | 40.0 | 41.3 | 40.8 | ug/L | EPA 8260B | 2/14/07 | 103 | 102 | 1.32 | 70-130 | 25 |
| Toluene | 54840-08 | <0.50 | 40.0 | 40.0 | 42.0 | 41.2 | ug/L | EPA 8260B | 2/14/07 | 105 | 103 | 1.93 | 70-130 | 25 |
| Tert-Butanol | 54840-08 | <5.0 | 200 | 200 | 194 | 196 | ug/L | EPA 8260B | 2/14/07 | 97.0 | 97.8 | 0.865 | 70-130 | 25 |
| Methyl-t-Butyl Ether | 54840-08 | <0.50 | 40.0 | 40.0 | 40.4 | 39.6 | ug/L | EPA 8260B | 2/14/07 | 101 | 99.0 | 2.15 | 70-130 | 25 |

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 54815

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

Date : 2/16/2007

Project Name : **67106**

Project Number : **67106**

| Parameter | Spike Level | Units | Analysis Method | Date Analyzed | LCS Percent Recov. | LCS Percent Recov. Limit |
|---|---|---|---|---|---|---|
| Benzene | 40.0 | ug/L | EPA 8260B | 2/14/07 | 106 | 70-130 |
| Toluene | 40.0 | ug/L | EPA 8260B | 2/14/07 | 101 | 70-130 |
| Tert-Butanol | 200 | ug/L | EPA 8260B | 2/14/07 | 95.3 | 70-130 |
| Methyl-t-Butyl Ether | 40.0 | ug/L | EPA 8260B | 2/14/07 | 110 | 70-130 |
| Benzene | 40.0 | ug/L | EPA 8260B | 2/13/07 | 97.9 | 70-130 |
| Toluene | 40.0 | ug/L | EPA 8260B | 2/13/07 | 99.2 | 70-130 |
| Tert-Butanol | 200 | ug/L | EPA 8260B | 2/13/07 | 90.2 | 70-130 |
| Methyl-t-Butyl Ether | 40.0 | ug/L | EPA 8260B | 2/13/07 | 100 | 70-130 |
| Benzene | 40.0 | ug/L | EPA 8260B | 2/14/07 | 95.1 | 70-130 |
| Toluene | 40.0 | ug/L | EPA 8260B | 2/14/07 | 96.1 | 70-130 |
| Tert-Butanol | 200 | ug/L | EPA 8260B | 2/14/07 | 88.1 | 70-130 |
| Methyl-t-Butyl Ether | 40.0 | ug/L | EPA 8260B | 2/14/07 | 89.4 | 70-130 |

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

# Analysis Summary

Report Number : 54815

Date : 2/16/2007

Attention : Richard Munsch
RDM Environmental
6280 Brookshire Drive
Rocklin, CA 95677

Project Name :67106
Project Number : 67106

| | | | Sample Name | MW-1 | | MW-2 | | MW-3 | | MW-4 | | MW-5 | | MW-6 | | MW-7 | | MW-8 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Date | 2/12/2007 | | 2/12/2007 | | 2/12/2007 | | 2/12/2007 | | 2/12/2007 | | 2/12/2007 | | 2/12/2007 | | 2/12/2007 | |
| Analyte | Method | Units | | MRL | Results | MRL | Results | MRL | Results | MRL | Results | MRL | Results | MRL | Results | MRL | Results | MRL | Results |
| Benzene | EPA 8260B | ug/L | | 0.50 | ND | 0.50 | **24** | 0.50 | ND | 0.50 | ND | 0.50 | ND | 0.50 | ND | 0.50 | ND | 0.50 | ND |
| Toluene | EPA 8260B | ug/L | | 0.50 | ND | 0.50 | **8.5** | 0.50 | ND | 0.50 | **0.58** | 0.50 | ND | 0.50 | ND | 0.50 | ND | 0.50 | ND |
| Ethylbenzene | EPA 8260B | ug/L | | 0.50 | **12** | 2.0 | **450** | 0.50 | ND | 0.50 | **1.5** | 0.50 | ND | 0.50 | ND | 0.50 | ND | 0.50 | ND |
| Total Xylenes | EPA 8260B | ug/L | | 0.50 | **2.7** | 0.50 | **110** | 0.50 | ND | 0.50 | **3.3** | 0.50 | ND | 0.50 | ND | 0.50 | ND | 0.50 | **4.5** |
| Methyl-t-butyl ether (MTBE) | EPA 8260B | ug/L | | 0.50 | ND | 0.50 | **2.5** | 0.50 | **1.2** | 0.50 | **3.1** | 0.50 | **2.8** | 0.50 | ND | 0.50 | **0.63** | 0.50 | **4.2** |
| Diisopropyl ether (DIPE) | EPA 8260B | ug/L | | 0.50 | ND | 0.50 | ND | 0.50 | ND | 0.50 | ND | 0.50 | ND | 0.50 | ND | 0.50 | ND | 0.50 | ND |
| Ethyl-t-butyl ether (ETBE) | EPA 8260B | ug/L | | 0.50 | ND | 0.50 | ND | 0.50 | ND | 0.50 | ND | 0.50 | ND | 0.50 | ND | 0.50 | ND | 0.50 | ND |
| Tert-amyl methyl ether (TAME) | EPA 8260B | ug/L | | 0.50 | ND | 0.50 | ND | 0.50 | ND | 0.50 | ND | 0.50 | ND | 0.50 | ND | 0.50 | ND | 0.50 | ND |
| Tert-Butanol | EPA 8260B | ug/L | | 5.0 | ND | 5.0 | ND | 5.0 | **5.5** | 5.0 | ND | 5.0 | **6.4** | 5.0 | ND | 5.0 | ND | 5.0 | ND |
| Methanol | EPA 8260B | ug/L | | 50 | ND | 50 | ND | 50 | ND | 50 | ND | 50 | ND | 50 | ND | 50 | ND | 50 | ND |
| Ethanol | EPA 8260B | ug/L | | 5.0 | **19** | 20 | ND | 5.0 | **8.8** | 5.0 | **9.7** | 5.0 | ND | 5.0 | **9.3** | 5.0 | ND | 5.0 | **14** |
| TPH as Gasoline | EPA 8260B | ug/L | | 50 | **3500** | 200 | **7700** | 50 | **990** | 50 | **150** | 50 | **210** | 50 | ND | 50 | ND | 50 | **69** |
| Toluene - d8 (Surr) | EPA 8260B | % | | | 98.6 | | 97.0 | | 100 | | 101 | | 101 | | 101 | | 101 | | 101 |
| 4-Bromofluorobenzene (Surr) | EPA 8260B | % | | | 96.8 | | 98.4 | | 96.6 | | 97.1 | | 96.1 | | 97.2 | | 97.4 | | 96.2 |

MRL = Method Reporting Limit
ND = Not Detected

Approved By,

Joel Kiff

KIFF Analytical LLC

# Analysis Summary

Report Number : 54815

Date : 2/16/2007

Attention : Richard Munsch
RDM Environmental
6280 Brookshire Drive
Rocklin, CA 95677

Project Name :67106
Project Number : 67106

| | | | Sample Name | MW-9 |
|---|---|---|---|---|
| | | | Sample Date | 2/12/2007 |
| Analyte | Method | Units | MRL | Results |
| Benzene | EPA 8260B | ug/L | 0.50 | ND |
| Toluene | EPA 8260B | ug/L | 0.50 | ND |
| Ethylbenzene | EPA 8260B | ug/L | 0.50 | ND |
| Total Xylenes | EPA 8260B | ug/L | 0.50 | ND |
| Methyl-t-butyl ether (MTBE) | EPA 8260B | ug/L | 0.50 | ND |
| Diisopropyl ether (DIPE) | EPA 8260B | ug/L | 0.50 | ND |
| Ethyl-t-butyl ether (ETBE) | EPA 8260B | ug/L | 0.50 | ND |
| Tert-amyl methyl ether (TAME) | EPA 8260B | ug/L | 0.50 | ND |
| Tert-Butanol | EPA 8260B | ug/L | 5.0 | ND |
| Methanol | EPA 8260B | ug/L | 50 | ND |
| Ethanol | EPA 8260B | ug/L | 5.0 | ND |
| TPH as Gasoline | EPA 8260B | ug/L | 50 | ND |
| Toluene - d8 (Surr) | EPA 8260B | % | | 101 |
| 4-Bromofluorobenzene (Surr) | EPA 8260B | % | | 96.9 |

MRL = Method Reporting Limit
ND = Not Detected

Approved By,

Joel Kiff

Calscience
Environmental
Laboratories, Inc.

February 21, 2007

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.: 07-02-0864**
**Client Reference: 67106**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/14/2007 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Stephen Nowak
Project Manager

Calscience Environmental Laboratories, Inc.

# Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/14/07
Work Order No: 07-02-0864
Preparation: EPA 3010A Total
Method: EPA 6010B

Project: 67106



| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Instrument | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|---|
| **MW-1** | **07-02-0864-1** | **02/12/07** | **Aqueous** | **ICP 3300** | **02/15/07** | **02/16/07** | **070215L03** |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Iron | 0.258 | 0.100 | 1 | | mg/L |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Instrument | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|---|
| **MW-2** | **07-02-0864-2** | **02/12/07** | **Aqueous** | **ICP 3300** | **02/15/07** | **02/16/07** | **070215L03** |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Iron | 1.11 | 0.100 | 1 | | mg/L |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Instrument | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|---|
| **MW-3** | **07-02-0864-3** | **02/12/07** | **Aqueous** | **ICP 3300** | **02/15/07** | **02/16/07** | **070215L03** |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Iron | 0.959 | 0.100 | 1 | | mg/L |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Instrument | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|---|
| **MW-4** | **07-02-0864-4** | **02/12/07** | **Aqueous** | **ICP 3300** | **02/15/07** | **02/16/07** | **070215L03** |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Iron | 0.689 | 0.100 | 1 | | mg/L |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Instrument | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|---|
| **MW-5** | **07-02-0864-5** | **02/12/07** | **Aqueous** | **ICP 3300** | **02/15/07** | **02/16/07** | **070215L03** |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Iron | 0.158 | 0.100 | 1 | | mg/L |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Instrument | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|---|
| **MW-6** | **07-02-0864-6** | **02/12/07** | **Aqueous** | **ICP 3300** | **02/15/07** | **02/16/07** | **070215L03** |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Iron | ND | 0.100 | 1 | | mg/L |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

**Analytical Report**

| | |
|---|---|
| Kiff Analytical | Date Received: 02/14/07 |
| 2795 2nd Street, Suite 300 | Work Order No: 07-02-0864 |
| Davis, CA 95616-6593 | Preparation: EPA 3010A Total |
| | Method: EPA 6010B |

Project: 67106 

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Instrument | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|---|
| **MW-7** | **07-02-0864-7** | **02/12/07** | **Aqueous** | **ICP 3300** | **02/15/07** | **02/16/07** | **070215L03** |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Iron | 0.143 | 0.100 | 1 | | mg/L |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Instrument | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|---|
| **MW-8** | **07-02-0864-8** | **02/12/07** | **Aqueous** | **ICP 3300** | **02/15/07** | **02/16/07** | **070215L03** |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Iron | 0.256 | 0.100 | 1 | | mg/L |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Instrument | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|---|
| **MW-9** | **07-02-0864-9** | **02/12/07** | **Aqueous** | **ICP 3300** | **02/15/07** | **02/16/07** | **070215L03** |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Iron | 0.232 | 0.100 | 1 | | mg/L |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Instrument | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|---|
| **Method Blank** | **097-01-003-6,895** | **N/A** | **Aqueous** | **ICP 3300** | **02/15/07** | **02/16/07** | **070215L03** |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Iron | ND | 0.100 | 1 | | mg/L |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

**Analytical Report**

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/14/07
Work Order No: 07-02-0864

Project: 67106



| Client Sample Number | Lab Sample Number | Date Collected | Matrix |
|---|---|---|---|
| **MW-1** | **07-02-0864-1** | **02/12/07** | **Aqueous** |

| Parameter | Result | RL | DF | Qual | Units | Date Prepared | Date Analyzed | Method |
|---|---|---|---|---|---|---|---|---|
| Carbon, Total Organic | 2.1 | 0.50 | 1 | | mg/L | N/A | 02/15/07 | EPA 415.1 |
| Alkalinity, Total (as CaCO3) | 102 | 5.0 | 1 | | mg/L | N/A | 02/15/07 | SM 2320B |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix |
|---|---|---|---|
| **MW-2** | **07-02-0864-2** | **02/12/07** | **Aqueous** |

| Parameter | Result | RL | DF | Qual | Units | Date Prepared | Date Analyzed | Method |
|---|---|---|---|---|---|---|---|---|
| Carbon, Total Organic | 3.7 | 0.50 | 1 | | mg/L | N/A | 02/15/07 | EPA 415.1 |
| Alkalinity, Total (as CaCO3) | 122 | 5.0 | 1 | | mg/L | N/A | 02/15/07 | SM 2320B |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix |
|---|---|---|---|
| **MW-3** | **07-02-0864-3** | **02/12/07** | **Aqueous** |

| Parameter | Result | RL | DF | Qual | Units | Date Prepared | Date Analyzed | Method |
|---|---|---|---|---|---|---|---|---|
| Carbon, Total Organic | 2.4 | 0.50 | 1 | | mg/L | N/A | 02/15/07 | EPA 415.1 |
| Alkalinity, Total (as CaCO3) | 144 | 5.0 | 1 | | mg/L | N/A | 02/15/07 | SM 2320B |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix |
|---|---|---|---|
| **MW-4** | **07-02-0864-4** | **02/12/07** | **Aqueous** |

| Parameter | Result | RL | DF | Qual | Units | Date Prepared | Date Analyzed | Method |
|---|---|---|---|---|---|---|---|---|
| Carbon, Total Organic | 3.8 | 0.50 | 1 | | mg/L | N/A | 02/15/07 | EPA 415.1 |
| Alkalinity, Total (as CaCO3) | 334 | 5.0 | 1 | | mg/L | N/A | 02/15/07 | SM 2320B |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

**Analytical Report**

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/14/07
Work Order No: 07-02-0864

Project: 67106



| Client Sample Number | Lab Sample Number | Date Collected | Matrix |
|---|---|---|---|
| **MW-5** | **07-02-0864-5** | **02/12/07** | **Aqueous** |

| Parameter | Result | RL | DF | Qual | Units | Date Prepared | Date Analyzed | Method |
|---|---|---|---|---|---|---|---|---|
| Carbon, Total Organic | 3.2 | 0.50 | 1 | | mg/L | N/A | 02/15/07 | EPA 415.1 |
| Alkalinity, Total (as CaCO3) | 438 | 5.0 | 1 | | mg/L | N/A | 02/15/07 | SM 2320B |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix |
|---|---|---|---|
| **MW-6** | **07-02-0864-6** | **02/12/07** | **Aqueous** |

| Parameter | Result | RL | DF | Qual | Units | Date Prepared | Date Analyzed | Method |
|---|---|---|---|---|---|---|---|---|
| Carbon, Total Organic | 4.9 | 0.50 | 1 | | mg/L | N/A | 02/15/07 | EPA 415.1 |
| Alkalinity, Total (as CaCO3) | 496 | 5.0 | 1 | | mg/L | N/A | 02/15/07 | SM 2320B |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix |
|---|---|---|---|
| **MW-7** | **07-02-0864-7** | **02/12/07** | **Aqueous** |

| Parameter | Result | RL | DF | Qual | Units | Date Prepared | Date Analyzed | Method |
|---|---|---|---|---|---|---|---|---|
| Carbon, Total Organic | 2.3 | 0.50 | 1 | | mg/L | N/A | 02/15/07 | EPA 415.1 |
| Alkalinity, Total (as CaCO3) | 178 | 5.0 | 1 | | mg/L | N/A | 02/15/07 | SM 2320B |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix |
|---|---|---|---|
| **MW-8** | **07-02-0864-8** | **02/12/07** | **Aqueous** |

| Parameter | Result | RL | DF | Qual | Units | Date Prepared | Date Analyzed | Method |
|---|---|---|---|---|---|---|---|---|
| Carbon, Total Organic | 2.8 | 0.50 | 1 | | mg/L | N/A | 02/15/07 | EPA 415.1 |
| Alkalinity, Total (as CaCO3) | 306 | 5.0 | 1 | | mg/L | N/A | 02/15/07 | SM 2320B |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

**Analytical Report**

| | | |
|---|---|---|
| Kiff Analytical | Date Received: | 02/14/07 |
| 2795 2nd Street, Suite 300 | Work Order No: | 07-02-0864 |
| Davis, CA 95616-6593 | | |

Project: 67106 

| Client Sample Number | Lab Sample Number | Date Collected | Matrix |
|---|---|---|---|
| **MW-9** | **07-02-0864-9** | **02/12/07** | **Aqueous** |

| Parameter | Result | RL | DF | Qual | Units | Date Prepared | Date Analyzed | Method |
|---|---|---|---|---|---|---|---|---|
| Carbon, Total Organic | 3.0 | 0.50 | 1 | | mg/L | N/A | 02/15/07 | EPA 415.1 |
| Alkalinity, Total (as CaCO3) | 116 | 5.0 | 1 | | mg/L | N/A | 02/15/07 | SM 2320B |

| **Method Blank** | **N/A** | **Aqueous** |
|---|---|---|

| Parameter | Result | RL | DF | Qual | Units | Date Prepared | Date Analyzed | Method |
|---|---|---|---|---|---|---|---|---|
| Carbon, Total Organic | ND | 0.50 | 1 | | mg/L | N/A | 02/15/07 | EPA 415.1 |
| Alkalinity, Total (as CaCO3) | ND | 1.0 | 1 | | mg/L | N/A | 02/15/07 | SM 2320B |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

## Quality Control - Spike/Spike Duplicate



Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/14/07
Work Order No: 07-02-0864
Preparation: EPA 3010A Total
Method: EPA 6010B

Project 67106

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | MS/MSD Batch Number |
|---|---|---|---|---|---|
| **07-02-0951-1** | **Aqueous** | **ICP 3300** | **02/15/07** | **02/16/07** | **070215S03** |

| Parameter | MS %REC | MSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|
| Iron | 97 | 98 | 65-149 | 0 | 0-21 | |

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

## Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 07-02-0864

Project: 67106

**Matrix: Aqueous**

| Parameter | Method | Quality Control Sample ID | Date Analyzed | Date Extracted | MS% REC | MSD % REC | %REC CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| Carbon, Total Organic | EPA 415.1 | MW-2 | 02/15/07 | N/A | 119 | 119 | 70-130 | 0 | 0-25 | |

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

## Quality Control - Duplicate



Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 07-02-0864

Project: 67106

**Matrix: Aqueous**

| Parameter | Method | QC Sample ID | Date Analyzed | Sample Conc | DUP Conc | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (as CaCO3) | SM 2320B | MW-1 | 02/15/07 | 102 | 104 | 2 | 0-25 | |

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

## Quality Control - Laboratory Control Sample

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 07-02-0864
Preparation: EPA 3010A Total
Method: EPA 6010B

Project: 67106

| Quality Control Sample ID | Matrix | Instrument | Date Analyzed | Lab File ID | LCS Batch Number |
|---|---|---|---|---|---|
| **097-01-003-6,895** | **Aqueous** | **ICP 3300** | **02/16/07** | **070215-I-03** | **070215L03** |

| Parameter | Conc Added | Conc Recovered | LCS %Rec | %Rec CL | Qualifiers |
|---|---|---|---|---|---|
| Iron | 0.500 | 0.509 | 102 | 80-120 | |

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

## Quality Control - Laboratory Control Sample

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 07-02-0864

Project: 67106

**Matrix : Aqueous**

| Parameter | Method | Quality Control Sample ID | Date Analyzed | Date Extracted | Conc Added | Conc Recovered | LCS %Rec | %Rec CL | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| Carbon, Total Organic | EPA 415.1 | 099-05-097-2,529 | 02/15/07 | N/A | 5.00 | 4.91 | 98 | 80-120 | |

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

## Glossary of Terms and Qualifiers

Work Order Number: 07-02-0864

| Qualifier | Definition |
|---|---|
| * | See applicable analysis comment. |
| 1 | Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification. |
| 2 | Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification. |
| 3 | Recovery of the Matrix Spike or Matrix Spike Duplicate compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification. |
| 4 | The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification. |
| 5 | The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required. |
| A | Result is the average of all dilutions, as defined by the method. |
| B | Analyte was present in the associated method blank. |
| C | Analyte presence was not confirmed on primary column. |
| E | Concentration exceeds the calibration range. |
| H | Sample received and/or analyzed past the recommended holding time. |
| J | Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated. |
| N | Nontarget Analyte. |
| ND | Parameter not detected at the indicated reporting limit. |
| Q | Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater. |
| U | Undetected at the laboratory method detection limit. |
| X | % Recovery and/or RPD out-of-range. |
| Z | Analyte presence was not confirmed by second column or GC/MS analysis. |

**KIFF Analytical LLC**

2795 Second Street, Suite 300
Davis, CA 95616
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. 0864



# Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? _X_ Yes __ No

Company/Address: Kiff Analytical, LLC

Recommended but not mandatory to complete this section:

Sampling Company Log Code: RDMR

Global ID: T0600101409

Phone No.: | FAX No.:

Project Number: 67106 | P.O. No.: 54815

EDF Deliverable to (Email Address): inbox@kiffanalytical.com

Project Name: 67106

E-mail address: inbox@kiffanalytical.com

Project Address:

| Sample Designation | Sampling | | Container | | | | | Preservative | | | | | Matrix | | | Analysis Request | | | | | | | | Date due: | For Lab Use Only |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Date | Time | VOA | Poly | Sleeve | Amber | Glass | $HNO_3$ | $H_2SO_4$ | $Na_2S_2O_3$ | $ZnAc_2$ & NaOH | NONE | WATER | SOIL | Air | Alkalinity (SM 2320B) | Total Organic Carbon (EPA 415.1) | Total Iron (EPA 6010) | | | | | | February 21, 2007 | |
| MW-1 | 02/12/07 | 11:05 | | 2 | | | 1 | 1 | 1 | | | 1 | X | | | X | X | X | | | | | | X | |
| MW-2 | 02/12/07 | 11:50 | | 2 | | | 1 | 1 | 1 | | | 1 | X | | | X | X | X | | | | | | X | |
| MW-3 | 02/12/07 | 10:43 | | 2 | | | 1 | 1 | 1 | | | 1 | X | | | X | X | X | | | | | | X | |
| MW-4 | 02/12/07 | 11:28 | | 2 | | | 1 | 1 | 1 | | | 1 | X | | | X | X | X | | | | | | X | |
| MW-5 | 02/12/07 | 10:00 | | 2 | | | 1 | 1 | 1 | | | 1 | X | | | X | X | X | | | | | | X | |
| MW-6 | 02/12/07 | 08:41 | | 2 | | | 1 | 1 | 1 | | | 1 | X | | | X | X | X | | | | | | X | |
| MW-7 | 02/12/07 | 09:06 | | 2 | | | 1 | 1 | 1 | | | 1 | X | | | X | X | X | | | | | | X | |
| MW-8 | 02/12/07 | 9:30 | | 2 | | | 1 | 1 | 1 | | | 1 | X | | | X | X | X | | | | | | X | |
| MW-9 | 02/12/07 | 10:20 | | 2 | | | 1 | 1 | 1 | | | 1 | X | | | X | X | X | | | | | | X | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | |
|---|---|---|---|---|
| Relinquished by: [signature] Kiff Analytical | Date 02137 | Time 1900 | Received by: | Remarks: |
| Relinquished by: | Date | Time | Received by: | |
| Relinquished by: [signature] | Date 2-14-07 | Time 0815 | Received by Laboratory: [signature] | Bill to: Accounts Payable |

Calscience Environmental Laboratories, Inc.

**WORK ORDER #: 07 - 02 - 0864**

**Cooler 1 of 1**

# SAMPLE RECEIPT FORM

**CLIENT:** KIFF ANALYTICAL **DATE:** 2-14-07

## TEMPERATURE – SAMPLES RECEIVED BY:

**CALSCIENCE COURIER:**

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.
_____ °C Temperature blank.

**LABORATORY (Other than Calscience Courier):**

3.0 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: WB

## CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Present: _____

Initial: WB

## SAMPLE CONDITION:

| | Yes | No | N/A |
|---|---|---|---|
| Chain-Of-Custody document(s) received with samples | ✓ | | |
| Sampler's name indicated on COC | | | ✓ |
| Sample container label(s) consistent with custody papers | ✓ | | |
| Sample container(s) intact and good condition | ✓ | | |
| Correct containers and volume for analyses requested | ✓ | | |
| Proper preservation noted on sample label(s) | ✓ | | |
| VOA vial(s) free of headspace | | | ✓ |
| Tedlar bag(s) free of condensation | | | ✓ |

Initial: WB

## COMMENTS:

# CALIFORNIA LABORATORY SERVICES

**3249 Fitzgerald Road Rancho Cordova, CA 95742**


February 20, 2007

**CLS Work Order #: CQB0439**
**COC #: 54815**

Troy Turpen
KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

**Project Name: 67106**

Enclosed are the results of analyses for samples received by the laboratory on 02/13/07 10:35. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

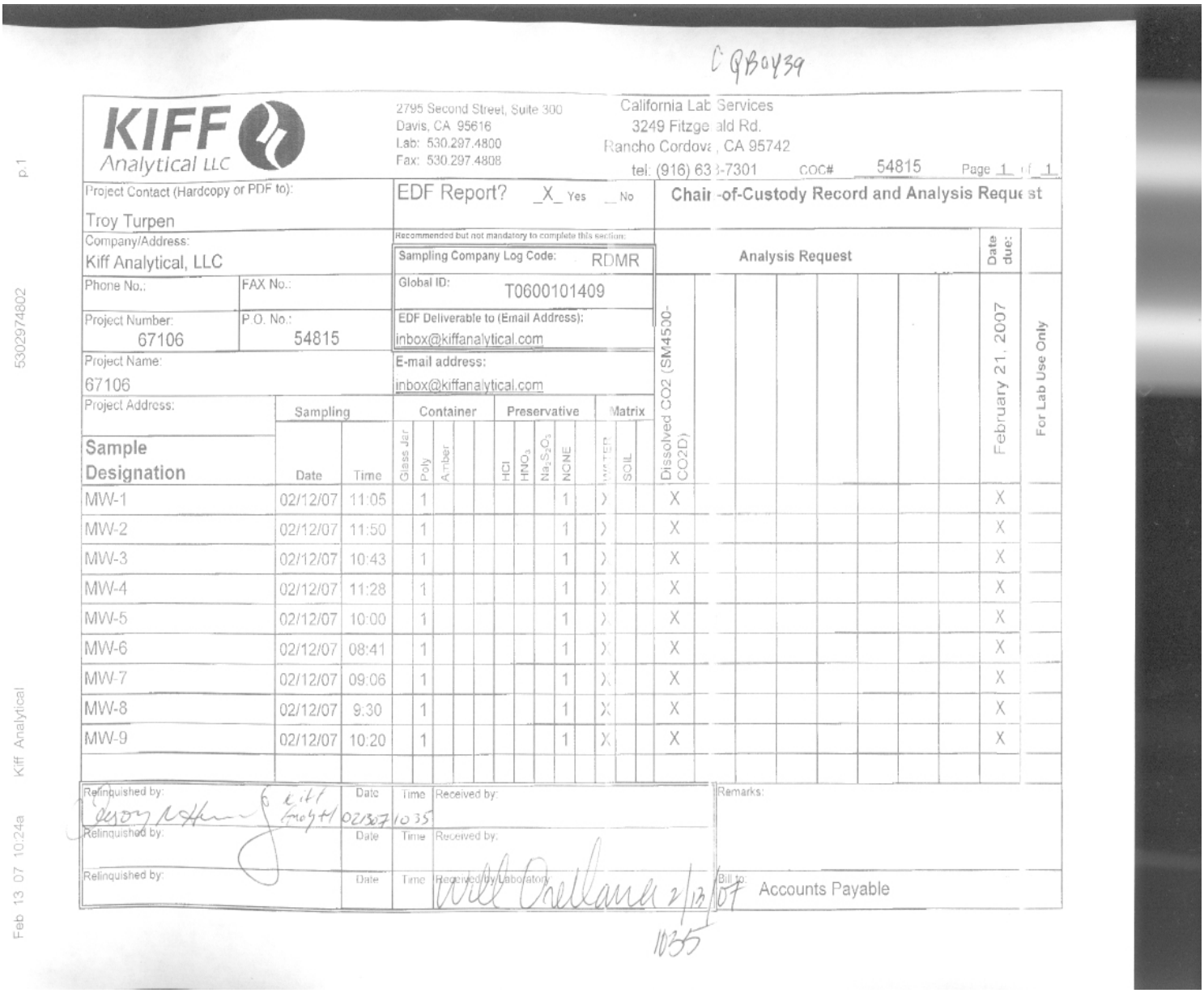
James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

# CALIFORNIA LABORATORY SERVICES



| | | |
|---|---|---|
| KIFF Analytical | Project: 67106 | |
| 2795 Second St. Suite 300 | Project Number: 67106 | **CLS Work Order #: CQB0439** |
| Davis, CA 95616 | Project Manager: Troy Turpen | COC #: 54815 |



CQB0439

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95616
Lab: 530.297.4800
Fax: 530.297.4808

California Lab Services
3249 Fitzgerald Rd.
Rancho Cordova, CA 95742
tel: (916) 638-7301 COC# 54815 Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen
Company/Address: Kiff Analytical, LLC
Phone No.: FAX No.:
Project Number: 67106 P.O. No.: 54815
Project Name: 67106
Project Address:

EDF Report? _X_ Yes __ No
Recommended but not mandatory to complete this section:
Sampling Company Log Code: RDMR
Global ID: T0600101409
EDF Deliverable to (Email Address): inbox@kiffanalytical.com
E-mail address: inbox@kiffanalytical.com

Analysis Request

| Sample Designation | Sampling Date | Sampling Time | Container: Glass Jar | Container: Poly | Container: Amber | Preservative: HCl | Preservative: $HNO_3$ | Preservative: $Na_2S_2O_3$ | Preservative: NONE | Matrix: WATER | Matrix: SOIL | Dissolved CO2 (SM4500-CO2D) | Date due: February 21, 2007 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 02/12/07 | 11:05 | | 1 | | | | | 1 | X | | X | X |
| MW-2 | 02/12/07 | 11:50 | | 1 | | | | | 1 | X | | X | X |
| MW-3 | 02/12/07 | 10:43 | | 1 | | | | | 1 | X | | X | X |
| MW-4 | 02/12/07 | 11:28 | | 1 | | | | | 1 | X | | X | X |
| MW-5 | 02/12/07 | 10:00 | | 1 | | | | | 1 | X | | X | X |
| MW-6 | 02/12/07 | 08:41 | | 1 | | | | | 1 | X | | X | X |
| MW-7 | 02/12/07 | 09:06 | | 1 | | | | | 1 | X | | X | X |
| MW-8 | 02/12/07 | 9:30 | | 1 | | | | | 1 | X | | X | X |
| MW-9 | 02/12/07 | 10:20 | | 1 | | | | | 1 | X | | X | X |

| | Date | Time | Received by: |
|---|---|---|---|
| Relinquished by: Jason Kiff Enright | 02/13/07 | 1035 | |
| Relinquished by: | Date | Time | Received by: |
| Relinquished by: | Date | Time | Received by/Laboratory: Will Orellana 2/12/07 1035 |

Remarks:

Bill to: Accounts Payable

For Lab Use Only

p.1 5302974802 Feb 13 07 10:24a Kiff Analytical

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: 67106
Project Number: 67106
Project Manager: Troy Turpen

**CLS Work Order #: CQB0439**
COC #: 54815

## Conventional Chemistry Parameters by APHA/EPA Methods

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW-1 (CQB0439-01) Water** | **Sampled: 02/12/07 11:05** | **Received: 02/13/07 10:35** | | | | | | | |
| **Carbon Dioxide as CO2** | **18** | 5.0 | mg/L | 1 | CQ01239 | 02/13/07 | 02/13/07 | SM 4500C | |
| **MW-2 (CQB0439-02) Water** | **Sampled: 02/12/07 11:50** | **Received: 02/13/07 10:35** | | | | | | | |
| **Carbon Dioxide as CO2** | **18** | 5.0 | mg/L | 1 | CQ01239 | 02/13/07 | 02/13/07 | SM 4500C | |
| **MW-3 (CQB0439-03) Water** | **Sampled: 02/12/07 10:43** | **Received: 02/13/07 10:35** | | | | | | | |
| **Carbon Dioxide as CO2** | **22** | 5.0 | mg/L | 1 | CQ01239 | 02/13/07 | 02/13/07 | SM 4500C | |
| **MW-4 (CQB0439-04) Water** | **Sampled: 02/12/07 11:28** | **Received: 02/13/07 10:35** | | | | | | | |
| **Carbon Dioxide as CO2** | **31** | 5.0 | mg/L | 1 | CQ01239 | 02/13/07 | 02/13/07 | SM 4500C | |
| **MW-5 (CQB0439-05) Water** | **Sampled: 02/12/07 10:00** | **Received: 02/13/07 10:35** | | | | | | | |
| **Carbon Dioxide as CO2** | **51** | 5.0 | mg/L | 1 | CQ01239 | 02/13/07 | 02/13/07 | SM 4500C | |
| **MW-6 (CQB0439-06) Water** | **Sampled: 02/12/07 08:41** | **Received: 02/13/07 10:35** | | | | | | | |
| **Carbon Dioxide as CO2** | **78** | 5.0 | mg/L | 1 | CQ01239 | 02/13/07 | 02/13/07 | SM 4500C | |
| **MW-7 (CQB0439-07) Water** | **Sampled: 02/12/07 09:06** | **Received: 02/13/07 10:35** | | | | | | | |
| **Carbon Dioxide as CO2** | **36** | 5.0 | mg/L | 1 | CQ01239 | 02/13/07 | 02/13/07 | SM 4500C | |
| **MW-8 (CQB0439-08) Water** | **Sampled: 02/12/07 09:30** | **Received: 02/13/07 10:35** | | | | | | | |
| **Carbon Dioxide as CO2** | **81** | 5.0 | mg/L | 1 | CQ01239 | 02/13/07 | 02/13/07 | SM 4500C | |
| **MW-9 (CQB0439-09) Water** | **Sampled: 02/12/07 10:20** | **Received: 02/13/07 10:35** | | | | | | | |
| **Carbon Dioxide as CO2** | **16** | 5.0 | mg/L | 1 | CQ01239 | 02/13/07 | 02/13/07 | SM 4500C | |

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: 67106
Project Number: 67106
Project Manager: Troy Turpen

**CLS Work Order #: CQB0439**
COC #: 54815

## Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch CQ01239 - General Preparation** | | | | | | | | | | |
| **Blank (CQ01239-BLK1)** | | | | Prepared & Analyzed: 02/13/07 | | | | | | |
| Carbon Dioxide as CO2 | ND | 5.0 | mg/L | | | | | | | |

# CALIFORNIA LABORATORY SERVICES



02/20/07 12:04

| | | |
|---|---|---|
| KIFF Analytical | Project: 67106 | |
| 2795 Second St. Suite 300 | Project Number: 67106 | **CLS Work Order #: CQB0439** |
| Davis, CA 95616 | Project Manager: Troy Turpen | COC #: 54815 |

## Notes and Definitions

| | |
|---|---|
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

**KIFF Analytical LLC**

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

SRG # / Lab No. 54815

Page 1 of 1

# Chain-of-Custody Record and Analysis Request

| | |
|---|---|
| Project Contact (Hardcopy or PDF To): RICHARD MUNSCH | California EDF Report? ☐ Yes ☐ No |
| Company / Address: RDM ENV. | Sampling Company Log Code: |
| Phone #: (916) 415-1134 / Fax #: (916) 415-1154 | Global ID: |
| Project #: 67106 / P.O. #: | EDF Deliverable To (Email Address): |
| Project Name: 67106 | Sampler Signature: |
| Project Address: 1088 MARINA BLVD, SAN LEANDRO, CA. | |

| Sample Designation | Sampling: Date | Sampling: Time | Container: 40 ml VOA | Container: Sleeve | Container: Poly | Container: Glass | Container: Tedlar | Preservative: HCl | Preservative: $HNO_3$ | Preservative: None | Preservative: $H_2SO_4$ | Matrix: Water | Matrix: Soil | Matrix: 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) | ALKALINITY | T.O.C. | IRON | DISS. CO2 | TAT | For Lab Use Only |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 2/12/07 | 1105 | 3 | | 3 | 1 | | 3 | 1 | 2 | 1 | X | | | | | X | X | | X | | | | | | | | X | X | X | X | | 01 |
| MW-2 | | 1150 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 02 |
| MW-3 | | 1043 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 03 |
| MW-4 | | 1128 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 04 |
| MW-5 | | 1000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 05 |
| MW-6 | | 0841 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 06 |
| MW-7 | | 0906 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 07 |
| MW-8 | | 0930 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 08 |
| MW-9 | ↓ | 1020 | ↓ | | ↓ | ↓ | | ↓ | ↓ | ↓ | ↓ | ↓ | | | | | ↓ | ↓ | | ↓ | | | | | | | | ↓ | ↓ | ↓ | ↓ | | 09 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished by: | Date | Time | Received by: |
|---|---|---|---|
| DAVE KOLLHOFF. | | | |
| | | | |
| | | | |
| Relinquished by: | Date | Time | Received by: |
| | | | |
| | | | |
| Relinquished by: | Date | Time | Received by Laboratory: |
| | 021307 | 0845 | |

Remarks:
STAT
EMAIL COPY TO RDM

Bill to:

For Lab Use Only: Sample Receipt

| Temp °C | Initials | Date | Time | Therm. ID # | Coolant Present |
|---|---|---|---|---|---|
| 3.8 | | 021307 | 1527 | IR-5 | (Yes) / No |

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