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TESORO

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29 March 2013

Mr. Jerry Wickham
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

**Subject:** **Report Submittal**
**44 Lewelling Boulevard, San Lorenzo, California**
**Tesoro No. 67107 (Former Beacon 3721); ACEH Case No. RO0498**

Dear Mr. Wickham:

Enclosed please find a copy of the requested reports requested in your letter dated 31 December 2012 for the subject site located at 44 Lewelling Boulevard in San Lorenzo, California. The following reports are being submitted by Arctos Environmental on behalf of Tesoro Environmental Resources Company:

- Second Quarter 2011 Semiannual Groundwater Monitoring Report
- Fourth Quarter 2011 Semiannual Groundwater Monitoring Report
- Second Quarter 2012 Semiannual Groundwater Monitoring Report
- Request for Closure and Fourth Quarter 2012 Groundwater Monitoring Report

Based on my inquiry of the person or persons directly responsible for gathering the information contained in this report, I believe the information was prepared by qualified personnel who properly gathered and evaluated the information, and that the information submitted is, to the best of my knowledge and belief, true, correct, and complete. Please feel free to call me at 253/896-8700 or Michael Purchase of Arctos Environmental at 510/525-2180 with questions.

Sincerely,

Jeffrey M. Baker, P.E.
Supervisor, Environmental
Compliance & Remediation
Tesoro Companies, Inc.

Attachments

CC: Arctos – Michael Purchase

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ARCTOS

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29 March 2013
Project No. 01ZO

Jerry Wickham
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

**Subject:** **Request for Closure and**
**Fourth Quarter 2012 Semiannual Groundwater Monitoring Report**
**44 Lewelling Boulevard, San Lorenzo, California**
**Tesoro No. 67107 (Former Beacon 3721); ACEH Case No. RO0498**

Dear Mr. Wickham:

Arctos Environmental (Arctos), on behalf of Tesoro Environmental Resources Company (Tesoro), has prepared this case closure request for the subject site. The information presented below supports this request for closure and includes the site background, summary of investigations and remediation, and fourth quarter 2012 groundwater monitoring results.

## Executive Summary

Arctos has prepared this request for closure based on the results of semiannual groundwater monitoring conducted on 2 January 2013 and a review of State Water Resources Control Board (SWRCB) Low-Threat Underground Storage Tank (UST) Case Closure Policy. Total petroleum hydrocarbons as gasoline (TPHg), benzene, methyl tert-butyl ether (MTBE), and tert-butyl alcohol (TBA) concentrations continue to show decreasing concentrations for both onsite and offsite wells. Offsite benzene and MTBE concentrations have remained below the Environmental Screening Levels (ESLs) during the last 3 years of monitoring. A comparison of current and historical maximum hydrocarbon concentrations show a decrease of over 99 percent on site and 89 to 100 percent off site.

## Site Background

The site is currently an operating service station located on Lewelling Boulevard, near the southeast corner of the intersection of Via Granada and Lewelling Boulevard in San

Lorenzo, California (Figure 1). The site was owned by Conoco until it was purchased by Ultramar Inc. (Ultramar) in July 1990. On 17 May 2002, Tesoro purchased the site from Ultramar. The station contains three USTs with three dispenser islands. Figure 2 shows the site plan.

*Previous Investigations*

On 28 April 1987, two 10,000-gallon tanks and one 7,500-gallon tank were excavated and removed during tank replacement activities. Petroleum hydrocarbons were found in soil samples collected from the bottom of the tank pit at approximately 16 feet below ground surface (bgs). Three new 10,000-gallon tanks were installed in the western portion of the site. Following tank installation, Applied GeoSystems (AGS) installed three onsite groundwater monitoring wells (MW-1 through MW-3) near the USTs. Hydrocarbon-impacted soil and groundwater were encountered during monitoring well installation.

In December 1988, DuPont Environmental Services (DuPont) installed monitoring wells MW-4 through MW-7 on and off site, and drilled soil boring B-1 approximately 20 feet southwest of the tank pit to a depth of 37 feet bgs. Hydrocarbons were detected in soil at boring B-1. In September 1989, DuPont installed offsite monitoring wells MW-8 and MW-9, located south and west of the site.

In October 1991, RESNA Industries Inc. (RESNA) installed one boring (RW- 1) on site and two borings (MW-10 and MW-11) downgradient of the site. TPHg, and benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected at boring RW-1. Borings MW-10 and MW-11 were completed as groundwater monitoring wells and boring RW-1 was completed as a groundwater recovery well.

In September 2004, RDM replaced monitoring well MW-3 with recovery well MW-3R and installed recovery well RW-2 on site. Soil samples were collected during well installation and the maximum TPHg concentration of 11 milligrams per kilogram (mg/kg) was detected at RW-2. RDM also installed monitoring well MW-12 and three soil borings (DP-1 through DP-3) downgradient of the site in June 2007.

TPHg, BTEX, and MTBE were not detected in soil samples collected in 2008 during the installation of oxygen injection wells OS-1 through OS-4 by Arctos.

*Remediation Activities*

Soil and groundwater remediation systems were installed from April 1993 to December 1995 at the site. Groundwater extraction began in April 1993, soil vapor extraction (SVE) began in March 1994, and air sparging of groundwater began in December 1995. Approximately 1,184,000 gallons of groundwater were removed, treated, and discharged

using groundwater extraction, and approximately 103 gallons of TPHg were removed using vapor extraction before the systems were shut down in January 1997.

The remediation systems were restarted in 2000 to further remediate soil and groundwater at the site. From April 2000 to November 2003, the SVE system removed a total of approximately 211 pounds of TPHg. The SVE and air sparge systems reached the limit of their effectiveness and operation of the system was stopped in 2003 as no measurable concentrations of TPHg or BTEX were detected in the influent of the SVE system. From October 2000 to March 2008, the groundwater extraction system removed, treated, and discharged approximately 7,040,000 gallons of groundwater. Arctos conducted a constant rate pump test at well MW-3R to analyze the capture zone of the groundwater extraction wells at the site. Based on low transmissivity and low groundwater extraction rates, it was concluded that the groundwater extraction system was not sufficient for reducing concentrations on site and the system was shut down in March 2008.

In 2008, oxygen injection wells OS-1 through OS-4 were installed in the western portion of the site and the oxygen injection system was initiated on 5 March 2009. Dissolved oxygen (DO) concentrations were above 15 milligrams per liter (mg/l) in the injection wells and remained at baseline concentrations (at or less than 1 mg/l) at downgradient observations wells PT-1 and RW-2 through March 2010. On 3 March 2010, Arctos started injecting oxygen gas directly into the existing injection wells. After 10 months of operation, DO concentrations remained above 1 mg/l at downgradient well PT-1. Based on the monitoring results and significant concentration decreases, Arctos stopped oxygen injection on 15 May 2011.

**Groundwater Monitoring**

Arctos's subcontractor, Confluence Environmental, Inc. (Confluence), of Sacramento, California, performed the semiannual groundwater monitoring event on 2 January 2013 due to a delay in the field program. Samples were collected from wells MW-1, MW-3R, MW-10, MW-11, RW-1, RW-2, and PT-1 (Figure 2). Groundwater monitoring was performed in accordance with the approved monitoring plan, Regional Water Quality Control Board guidelines, and the quality assurance/quality control (QA/QC) procedures in Attachment A. Field data sheets are in Attachment B.

Quarterly groundwater monitoring was performed since 1987 and historical results are in Attachments C and D.

**Analytical Program**

The groundwater samples were analyzed in accordance with the analytical plan in Attachment A.

**Fourth Quarter 2012 Groundwater Monitoring Results**

Groundwater elevations were recorded at approximately 30.0 to 31.4 feet above mean sea level (13.4 to 17.7 feet below ground surface; Table 1). Water elevations decreased between 0.4 and 0.8 feet since June 2012. Water level data indicate that the general direction of water flow is toward the southwest with an estimated gradient of 0.004 (1 foot/250 feet; Figure 2). January 2013 groundwater elevations and gradient were generally consistent with historical data (Attachment C).

The highest TPHg concentration of 2,200 micrograms per liter (µg/l) was at offsite well MW-10. Well MW-3R had the highest onsite TPHg concentration of 240 µg/l. Only onsite well MW-3R had benzene and MTBE concentrations (15 and 6.1 µg/l, respectively) above the ESLs of 1 and 5 µg/l, respectively. Benzene, MTBE, and TBA were below the ESLs for offsite wells during the semiannual monitoring event and have been since July 2009.

Concentrations of TPHg, benzene, and MTBE on site have decreased over 99 percent following remediation activities, which began in 1993. Offsite hydrocarbon concentrations have decreased by 89 to 100 percent due to natural attenuation and reduced mass flux from site remediation. The following table compares the current sampling results with maximum historical concentrations reported on and off site.

| Well | Event | TPHg (µg/l) | Benzene (µg/l) | MTBE (µg/l) |
|---|---|---|---|---|
| Onsite Well | | | | |
| MW-3R | Maximum (date) | 160,000 (5/15/92) | 17,000 (12/14/94) | 2,800 (11/14/02) |
| | Current | 240 | 15 | 6.1 |
| | ***Reduction*** | ***99.9%*** | ***99.9%*** | ***99.8%*** |
| Offsite Well | | | | |
| MW-10 | Maximum (date) | 20,000 (3/31/98) | 100 (2/28/92) | 860 (2/26/01) |
| | Current | 2,200 | nondetect | nondetect |
| | ***Reduction*** | ***89.0%*** | ***100%*** | ***100%*** |

Groundwater analytical results are summarized in Table 2. Figures 3, 4, and 5 show isoconcentration contours for TPHg, benzene, and MTBE, respectively. Figures 6A through 6G illustrate the change in groundwater quality with time for TPHg, benzene, and MTBE at wells MW-1, MW-3R, RW-1, RW-2, PT-1, MW-10, and MW-11. Historical

analytical results are in Attachment D and the laboratory reports and chain-of-custody forms are in Attachment E.

**Low-Threat Case Evaluation**

Based on the current groundwater conditions and decreasing hydrocarbon trends, Arctos is recommending that the site be closed. The site meets the criteria established in the SWRCB Low-Threat UST Case Closure Policy Checklist. The criteria are listed below with the applicable information to provide justification for site closure. Attachment F is a SWRCB low-threat UST case closure policy checklist completed for the subject site.

General Criteria

1. *The unauthorized release is located within the service area of a public water system.*

   Criterion met – The site lies in the service area of the East Bay Municipal Utility District. Downgradient irrigation wells were identified and sampled in May 2007 and results were below detection levels for petroleum hydrocarbons (RDM, 2007).

2. *The unauthorized release consists only of petroleum.*

   Criterion met – The unauthorized release was the result of leaking petroleum-containing USTs and related piping at a former gasoline service station.

3. *The unauthorized ("primary") release from the UST system has been stopped.*

   Criterion met – On 28 April 1987, two 10,000-gallon tanks and one 7,500-gallon tank were excavated and removed during tank replacement activities. Petroleum hydrocarbons were found in soil samples collected from the bottom of the tank pit at approximately 16 feet below grade. The product piping, dispensers, and tank connections were upgraded in 2001.

4. *Free product has been removed to the maximum extent practicable.*

   Criterion met – Free product has not been detected at the site. In January 2013, the maximum onsite TPHg concentration was 240 µg/l at well MW-3R.

5. *A conceptual site model that assesses the nature, extent, and mobility of the release has been developed.*

   Criterion met – Tesoro's understanding of the nature, extent, and mobility of the release was developed during the previous 25 years of site investigation and remediation, and has been described in quarterly reports submitted to ACEH (RDM, 2006).

6. *Secondary source has been removed to the extent practicable.*

   Criterion met – Petroleum-impacted soil and groundwater located at or immediately beneath the point of release from the primary source have been removed over a 15-year period. As described above, Tesoro employed groundwater extraction, SVE, air sparge, and oxygen injection to reduce onsite groundwater concentrations by over 99 percent.

7. *Soil or groundwater has been tested for MTBE and results reported in accordance with Health and Safety Code section 25296.15.*

   Criterion met – Soil and groundwater at the site have been tested for MTBE; results have been submitted and are known to ACEH.

8. *Nuisance as defined by Water Code section 13050 does not exist at the site.*

   Criterion met – The condition at the site is not / does not (a) injurious to health, indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; (b) affect an entire community, neighborhood, or any considerable number of persons, and (c) occur during, or as a result of, the treatment or disposal of wastes.

Media-Specific Criteria

1. *Groundwater*

   Criterion met – The contaminant plume that exceeds water quality objectives is stable or decreasing in areal extent (refer to Figures 6A through 6G - dissolved hydrocarbons over time). In addition, the contaminant plume that exceeds water quality objectives meets all of the additional characteristics of site class 2: (a) the contaminant plume that exceeds water quality objectives is less than 250 feet in length; (b) there is no free product; (c) the nearest existing water supply well or surface water body is greater

than 1,000 feet from the defined plume boundary; and (d) the dissolved concentration of benzene is less than 3,000 µg/l and the dissolved concentration of MTBE is less than 1,000 µg/l. San Lorenzo Creek is located approximately 100 feet downgradient of the defined plume boundary; although, San Lorenzo Creek has a concrete lined channel downgradient of the site, limiting any connection to groundwater. In addition, the furthest downgradient monitoring well (MW-11) has shown decrease concentrations and has remained below water quality objectives since April 2011.

2. *Petroleum Vapor Intrusion to Indoor Air*

   Criterion met – The site is an active commercial fueling station. The current maximum benzene concentration is below 100 µg/l on site and not detected downgradient.

3. *Direct Contact and Outdoor Air Exposure*

   Criterion met – In 2008, Arctos collected soil samples at the former source area during installation of oxygen injection wells OS-2 through OS-4. TPHg and BTEX were not detected any samples collected from 6 to 10 feet below grade and indicate the maximum concentrations of petroleum constituents in soil are less than residential screening levels presented in SWRCB Resolution No. 2012-0016 Table 1 *Concentrations of Petroleum Constituents in Soil That Will Have No Significant Risk of Adversely Affecting Human Health*.

**Conclusions and Recommendations**

Results of the investigation and remediation activities and groundwater sampling indicate the following:

- Petroleum hydrocarbon impacts have been delineate
- Soil sampling in 2008 indicate no detectable hydrocarbon concentrations
- Offsite benzene and MTBE concentrations have remained below ESLs since the third quarter 2006 and second quarter 2009 sampling events, respectively
- Petroleum hydrocarbon compounds have decreased by over 99 percent on site and 89 to 100 percent off site.

Based on these results, Arctos concludes that the site meets the SWQCB's requirements for a low-threat groundwater case and is recommending site closure.

If you have questions or comments, please call Mike Purchase at 510/525-2180.

Very truly yours,

**ARCTOS ENVIRONMENTAL**


Michael P. Purchase, P.E.
Vice President

Copy: Jeffrey M. Baker – Tesoro Companies, Inc.

Attachments:
Table 1 – Well and Groundwater Elevations
Table 2 – Groundwater Monitoring Analytical Results
Figure 1 – Site Location Map
Figure 2 – Site Plan
Figure 3 – TPHg Concentration Contours in Groundwater
Figure 4 – Benzene Concentration Contours in Groundwater
Figure 5 – MTBE Concentration Contour in Groundwater
Figures 6A through 6G – TPHg, Benzene, and MTBE Concentrations with Groundwater Elevations for Wells MW-1, MW-3R, RW-1, RW-2, PT-1, MW-10, and MW-11
Attachment A – Groundwater Sampling QA/QC Procedures
Attachment B – Field Data Sheets
Attachment C – Historical Groundwater Elevations
Attachment D – Historical Groundwater Analytical Results
Attachment E – Laboratory Analytical Report and Chain-of-Custody Form
Attachment F – Completed State Water Resources Control Board Low-Threat Underground Storage Tank (UST) Case Closure Policy Checklist
Attachment G – Waste Manifests

**References**

RDM Environmental, Inc., 2006. *Fourth Quarter 2005 Groundwater Monitoring/Remediation Status Report and Site Conceptual Model Update, Tesoro Station No. 67107*. 31 March.

RDM Environmental, Inc., 2007. Second *Quarter 2007 Groundwater Monitoring/Remediation Status Report, Tesoro Station No. 67107,* 15 August.

**TABLE 1**

**WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-1 | 4/5/11 | 13.96 | 46.36 | 32.40 |
| | 10/31/11 | 16.47 | | 29.89 |
| | 6/13/12 | 15.90 | | 30.46 |
| | 1/2/13 | 15.26 | | 31.10 |
| MW-2 | 4/5/11 | 12.85 | 45.61 | 32.76 |
| | 10/31/11 | 15.52 | | 30.09 |
| | 6/13/12 | 14.91 | | 30.70 |
| | 1/2/13 | 14.28 | | 31.33 |
| MW-3R | 4/5/11 | 12.72 | 45.16 | 32.44 |
| | 10/31/11 | 15.30 | | 29.86 |
| | 6/13/12 | 14.77 | | 30.39 |
| | 1/2/13 | 14.13 | | 31.03 |
| MW-4 | 4/5/11 | 14.95 | 47.36 | 32.41 |
| | 10/31/11 | 17.45 | | 29.91 |
| | 6/13/12 | 14.92 | | 32.44 |
| | 1/2/13 | 16.30 | | 31.06 |
| MW-5 | 4/5/11 | 13.84 | 46.50 | 32.66 |
| | 10/31/11 | 16.48 | | 30.02 |
| | 6/13/12 | 15.87 | | 30.63 |
| | 1/2/13 | 15.20 | | 31.30 |
| MW-6 | 4/5/11 | 12.25 | 45.17 | 32.92 |
| | 10/31/11 | 16.19 | | 28.98 |
| | 6/13/12 | 14.53 | | 30.64 |
| | 1/2/13 | 13.78 | | 31.39 |
| MW-7 | 4/5/11 | 11.96 | 44.24 | 32.28 |
| | 10/31/11 | 14.64 | | 29.60 |
| | 6/13/12 | 14.03 | | 30.21 |
| | 1/2/13 | 13.39 | | 30.85 |
| MW-8 | 4/5/11 | 13.02 | 44.95 | 31.93 |
| | 10/31/11 | 15.64 | | 29.31 |
| | 6/13/12 | 15.05 | | 29.90 |
| | 1/2/13 | 14.42 | | 30.53 |

**TABLE 1**

**WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-9 | 4/5/11 | 15.50 | 47.65 | 32.15 |
| | 10/31/11 | 17.87 | | 29.78 |
| | 6/13/12 | 17.29 | | 30.36 |
| | 1/2/13 | 16.75 | | 30.90 |
| MW-10 | 4/5/11 | 13.40 | 45.04 | 31.64 |
| | 10/31/11 | 15.70 | | 29.34 |
| | 6/13/12 | 15.13 | | 29.91 |
| | 1/2/13 | 14.62 | | 30.42 |
| MW-11 | 4/5/11 | 16.67 | 47.69 | 31.02 |
| | 10/31/11 | 18.62 | | 29.07 |
| | 6/13/12 | 18.11 | | 29.58 |
| | 1/2/13 | 17.67 | | 30.02 |
| MW-12 | 4/5/11 | 15.60 | 47.27 | 31.67 |
| | 10/31/11 | 17.75 | | 29.52 |
| | 6/13/12 | 17.29 | | 29.98 |
| | 1/2/13 | 16.74 | | 30.53 |
| RW-1 | 4/5/11 | 13.43 | 45.86 | 32.43 |
| | 10/31/11 | 16.02 | | 29.84 |
| | 6/13/12 | 15.49 | | 30.37 |
| | 1/2/13 | 14.85 | | 31.01 |
| RW-2 | 4/5/11 | 14.13 | 46.40 | 32.27 |
| | 10/31/11 | 16.59 | | 29.81 |
| | 6/13/12 | 16.02 | | 30.38 |
| | 1/2/13 | 15.43 | | 30.97 |
| OS-1 | 1/25/11 | 16.53 | 47.19 | 30.66 |
| OS-2 | 1/25/11 | 16.15 | 46.79 | 30.64 |
| OS-3 | 1/25/11 | 14.94 | 45.68 | 30.74 |
| OS-4 | 1/25/11 | 15.34 | 46.02 | 30.68 |

**TABLE 1**

**WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| PT-1 | 4/5/11 | 14.20 | 46.48 | 32.28 |
| | 10/31/11 | 16.69 | | 29.79 |
| | 6/13/12 | 16.09 | | 30.39 |
| | 1/2/13 | 15.73 | | 30.75 |

(a) Elevation of PVC well casting (north edge) surveyed relative to mean sea level (MSL).
Wells were surveyed by Cross Land Surveying, Inc., per AB 2886 requirements on 26 September 2008.

(b) Difference between "PVC Casing Elevation" and "Depth to Water."

**TABLE 2**

**GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| MW-1 | 4/5/11 | 63 | ND<0.5[e] | ND<0.5 | ND<0.5 | ND<0.5 | 0.59 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/31/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 3.0 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 6/13/12 | 260 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.98 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/2/13 | 100 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.3 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| MW-2 | 1/25/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/5/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 6/13/12 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| MW-3R | 4/6/11 | 980 | 71 | 1.2 | 43 | 14.0 | 14 | ND<0.5 | ND<0.5 | ND<0.5 | 11 |
| | 10/31/11 | 1,200 | 83 | 1.1 | 24 | 4.8 | 16 | ND<0.5 | ND<0.5 | ND<0.5 | 14 |
| | 6/13/12 | 1,300 | 70 | 1.4 | 23 | 4.4 | 14 | ND<0.5 | ND<0.5 | ND<0.5 | 16 |
| | 1/2/13 | 240 | 15 | ND<0.5 | 6.0 | 0.95 | 6.1 | ND<0.5 | ND<0.5 | ND<0.5 | 13 |
| MW-4 | 1/25/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/5/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 6/13/12 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| MW-5 | 10/27/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| MW-6 | 1/25/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/6/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 6/13/12 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| MW-7 | 10/27/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/5/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 6/13/12 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| MW-8 | 10/27/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| MW-9 | 10/27/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/25/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| MW-10 | 1/25/11 | 3,500 | ND<0.5 | ND<0.5 | 1.6 | 2.1 | 0.59 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/5/11 | 4,000 | ND<0.5 | 0.55 | 34.0 | 11 | 1.7 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 6/13/12 | 4,000 | ND<0.5 | ND<0.5 | 1.3 | 3.3 | 0.56 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/2/13 | 2,200 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| MW-11 | 1/25/11 | 240 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.77 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/5/11 | 250 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.2 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 6/13/12 | 76 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.1 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/2/13 | ND<5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.62 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| MW-12 | 1/25/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/5/11 | 53 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 6/13/12 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |

**TABLE 2**

**GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| RW-1 | 4/5/11 | 410 | 26 | 0.52 | 7.6 | 3.9 | 8.3 | ND<0.5 | ND<0.5 | ND<0.5 | 8.1 |
| | 10/31/11 | 100 | 1.3 | ND<0.5 | ND<0.5 | ND<0.5 | 8.5 | ND<0.5 | ND<0.5 | ND<0.5 | 9.2 |
| | 6/13/12 | 120 | 2.3 | ND<0.5 | 0.5 | ND<0.5 | 8 | ND<0.5 | ND<0.5 | ND<0.5 | 11 |
| | 1/2/13 | ND<50 | 0.79 | ND<0.5 | ND<0.5 | ND<0.5 | 2.6 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| RW-2 | 4/6/11 | 280 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/31/11 | 310 | ND<0.5 | ND<0.5 | 0.53 | 1.1 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 6/13/12 | 190 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/2/13 | 290 | ND<0.5 | ND<0.5 | 0.90 | 1.8 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| OS-1 | 1/25/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| OS-2 | 1/25/11 | 1,200 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.2 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| OS-3 | 1/25/11 | 140 | 13 | ND<0.5 | 3.1 | 0.64 | 25 | ND<0.5 | ND<0.5 | ND<0.5 | 6.7 |
| OS-4 | 1/25/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 7.8 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| PT-1 | 4/6/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 6.4 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/31/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 8.7 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 6/13/12 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 5.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/2/13 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 3.6 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |

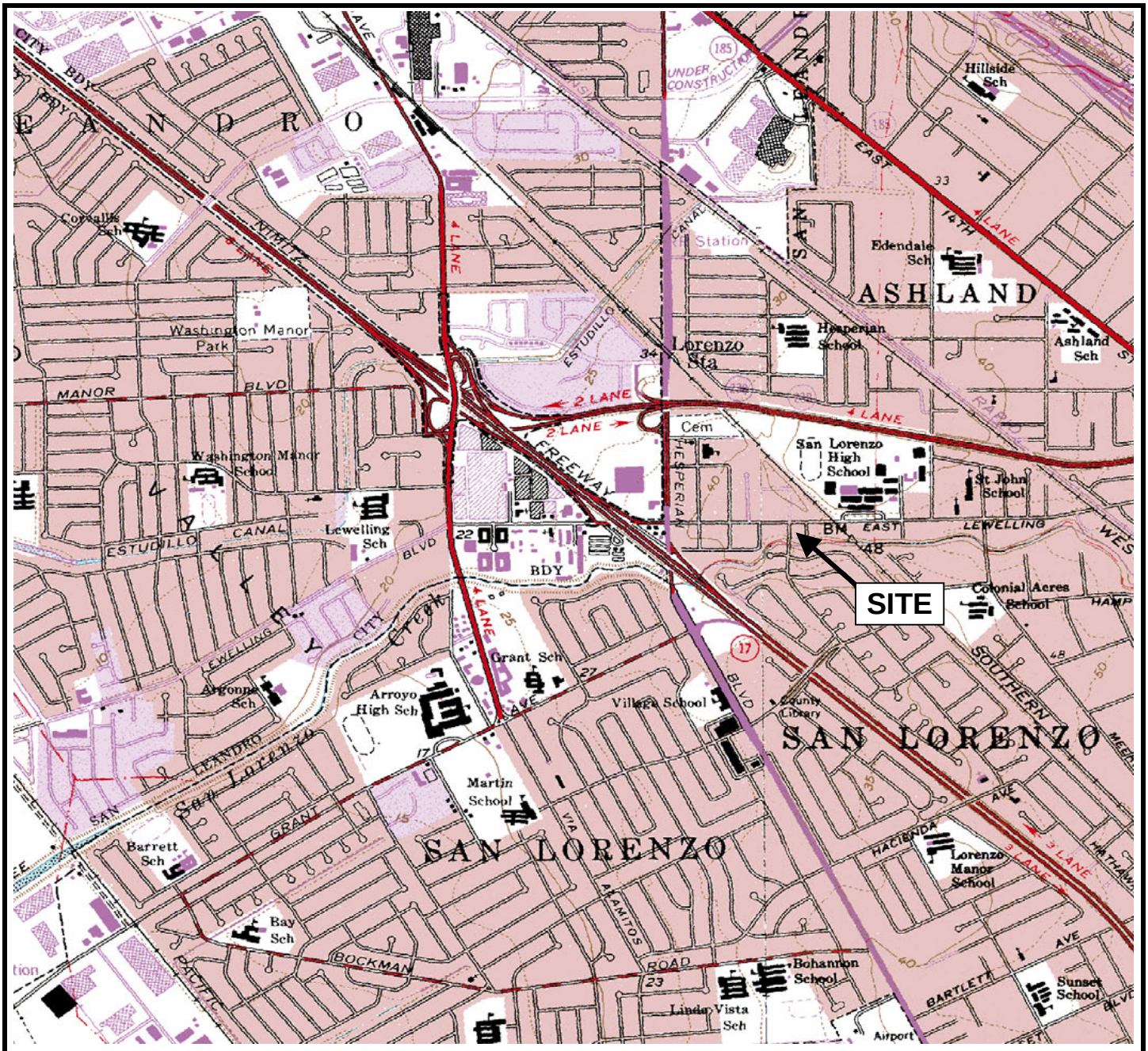
(a) Samples collected before January 2008 reported by others; data provided by RDM Environmental, Inc. (RDM), Fourth Quarter 2007 Groundwater Monitoring Report.

(b) Total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, xylenes, methyl tert-butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl tert-butyl ether (ETBE), tert-amyl methyl ether (TAME), tert-butyl alcohol (TBA), analyzed by EPA Method 8260; reported in micrograms per liter (mg/l).

(c) Environmental Screening Levels (ESLs) taken from Regional Water Quality Control Board, San Francisco Bay Region, Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Volume 1: Summary Tier 1 Lookup tables dated November 2007.

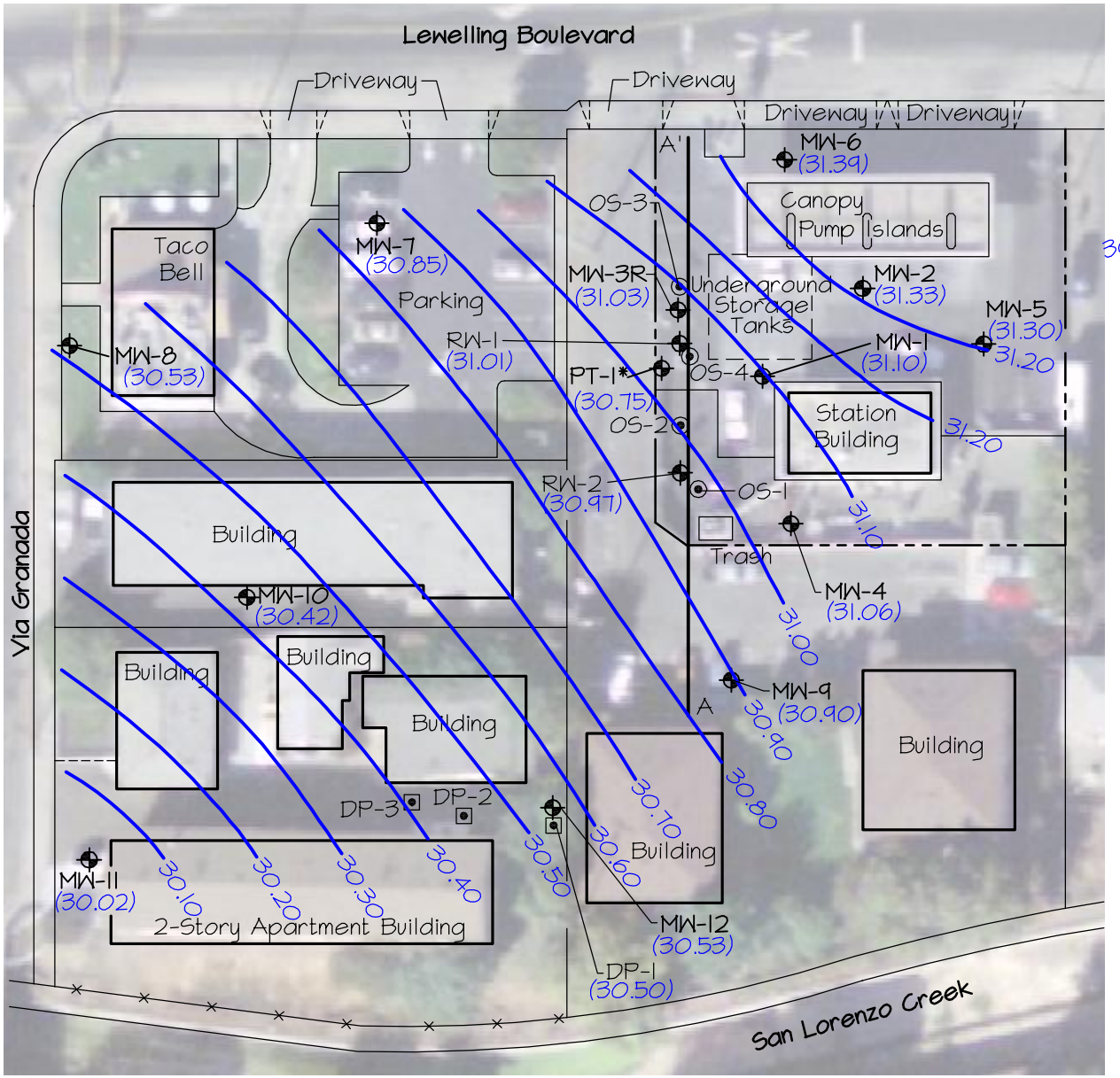
(d) NE - Not established.

(e) ND - Not detected at the reporting limit listed.




REFERENCE
7.5 MINUTE USGS TOPOGRAPHIC MAPS OF
SAN LEANDRO AND HAYWARD, CALIFORNIA QUADRANGLES
DATE: 1959, PHOTOREVISED 1980
SCALE = 1:24,000

| | | | |
|---|---|---|---|
| ARCTOS ENVIRONMENTAL | | | |
| TESORO - SAN LORENZO, 67107 | | | |
| **SITE LOCATION MAP** | | | |
| PROJECT NO. 01ZO | DRAWN BY MP | CHECKED BY MP | APPROVED BY JG |
| FILE NO. Site Map.xls | | **FIGURE 1** | |




Legend

- MW-1 (30.46) — Monitoring Well with 2 January 2013 Groundwater Elevation (Feet MSL)
- DP-1 — Soil Boring
- OS-1 — Oxygen Injection Well
- 30.60 — Groundwater Elevation Contour (Feet MSL)
- * — Elevation Not Used For Contours
- A — A' — Geologic Cross Section AA'

N

0 25 50

Scale in Feet

| REVISION | NO. | BY | DATE | DESCRIPTION |
|---|---|---|---|---|
| 16 | 13 | MY | 6/20/11 | Second Quarter 2011 Status Report |
| | 14 | MY | 12/15/11 | Fourth Quarter 2011 Status Report |
| | 15 | MY | 7/15/12 | 2Q12 Status Report and Request for Closure |
| | 16 | MY | 1/24/13 | Fourth Quarter 2012 Status Report |

ARCTOS ENVIRONMENTAL

TESORO - SAN LORENZO

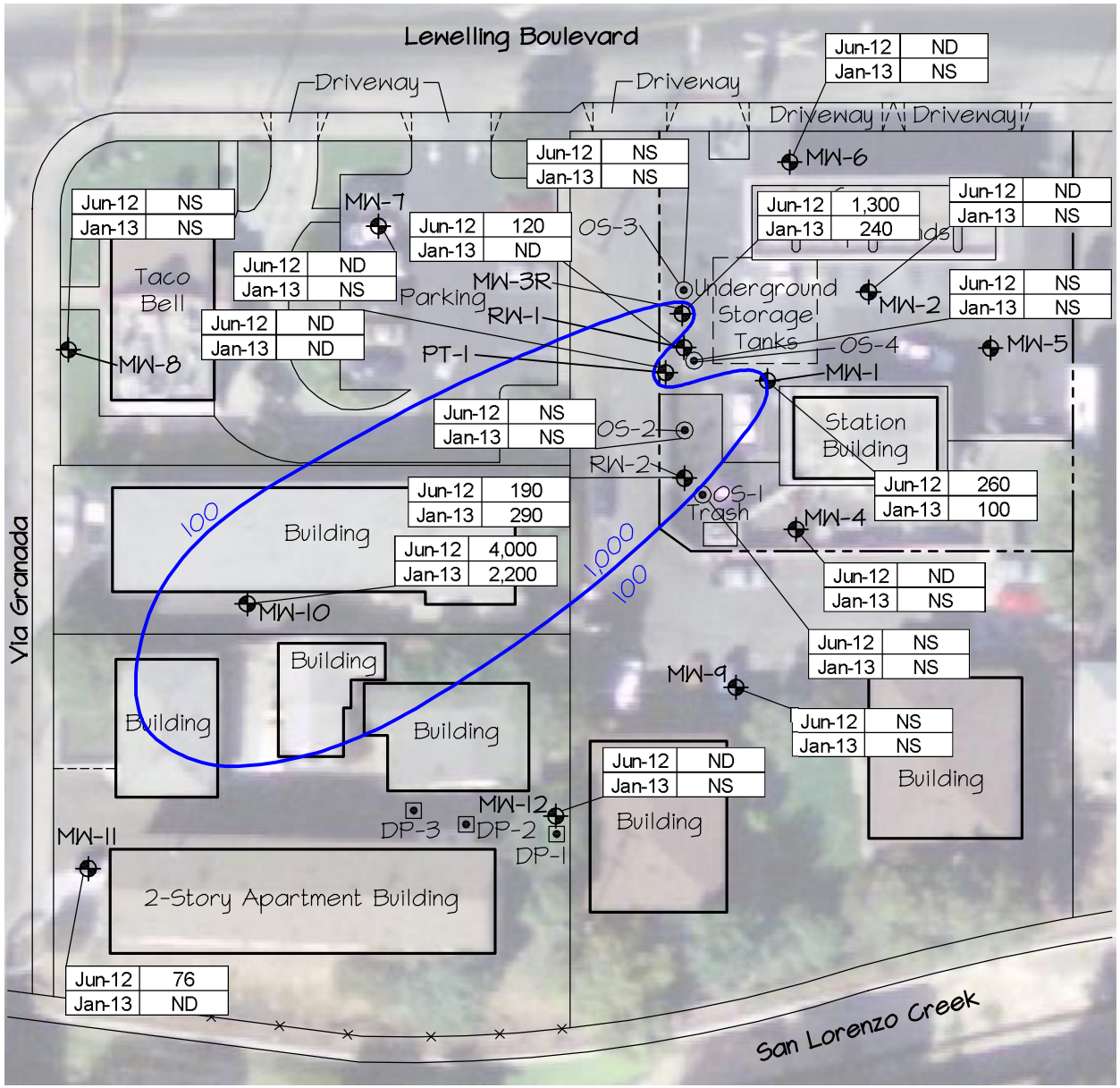
# SITE PLAN

| PROJECT NO. | DRAWN BY | CHECKED BY | APPROVED BY |
|---|---|---|---|
| 01Z0 | MY | MP | JPG |

FILE NO. 01Z011B0516.DWG

FIGURE 2

1/24/2013 1:04PM 01Z011B0516.dwg




Legend

MW-1 Monitoring Well with 13 June 2012 and 2 January 2013 Total Petroleum Hydrocarbons as Gasoline (TPHg) Results in µg/l

DP-1 Soil Boring

OS-1 Oxygen Injection Well

ND Not Detected

100 TPHg Concentration Contour (µg/l), Queried Where Uncertain

0 25 50

Scale In Feet

| REVISION | NO. | BY | DATE | DESCRIPTION |
|---|---|---|---|---|
| 16 | 13 | MY | 6/20/11 | Second Quarter 2011 Status Report |
| | 14 | MY | 12/15/11 | Fourth Quarter 2011 Status Report |
| | 15 | MY | 7/15/12 | Second Quarter 2012 Status Report |
| | 16 | MY | 1/24/13 | Fourth Quarter 2012 Status Report |

ARCTOS ENVIRONMENTAL

TESORO - SAN LORENZO

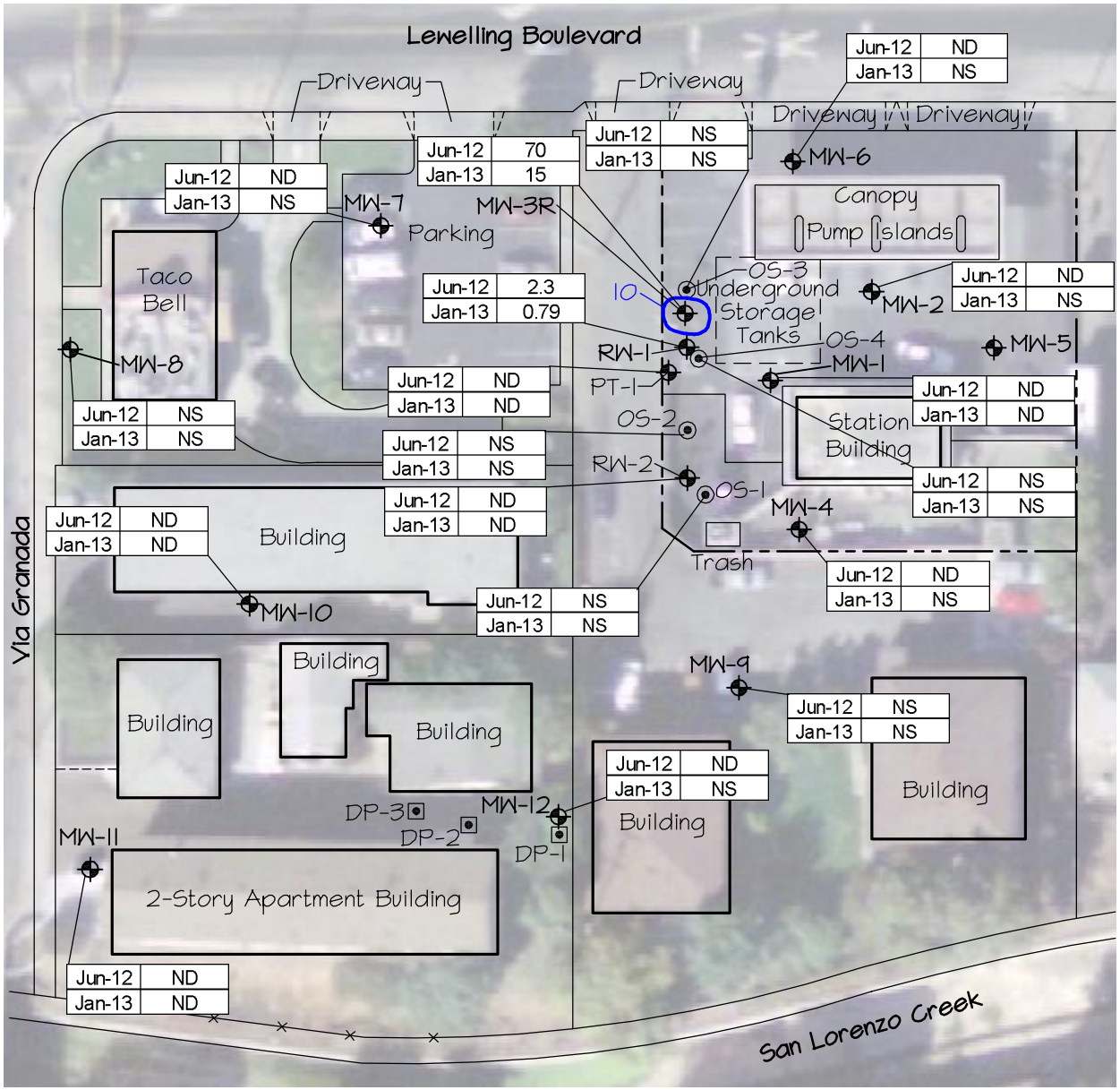
# TPHg CONCENTRATION CONTOURS IN GROUNDWATER

| PROJECT NO. | DRAWN BY | CHECKED BY | APPROVED BY |
|---|---|---|---|
| 01ZO | MY | MP | JPG |

FILE NO. 01ZO11B0216.DWG

FIGURE 3

1/24/2013 4:19PM 01ZO11B0216.dwg




Legend

MW-1 ⊕ Monitoring Well with 13 June 2012 and 2 January 2013 Benzene Results in µg/l

OS-1 ◉ Oxygen Injection Well

DP-1 ⊡ Soil Boring

ND Not Detected

10 Benzene Concentration Contour (µg/l), Queried Where Uncertain

0 25 50

Scale in Feet

| REVISION | REVISIONS | | | |
|---|---|---|---|---|
| | NO. | BY | DATE | DESCRIPTION |
| | 13 | MY | 6/20/11 | Second Quarter 2011 Status Report |
| | 14 | MY | 12/15/11 | Fourth Quarter 2011 Status Report |
| 16 | 15 | MY | 7/15/12 | Second Quarter 2012 Status Report |
| | 16 | MY | 1/24/13 | Fourth Quarter 2012 Status Report |

ARCTOS ENVIRONMENTAL

TESORO - SAN LORENZO

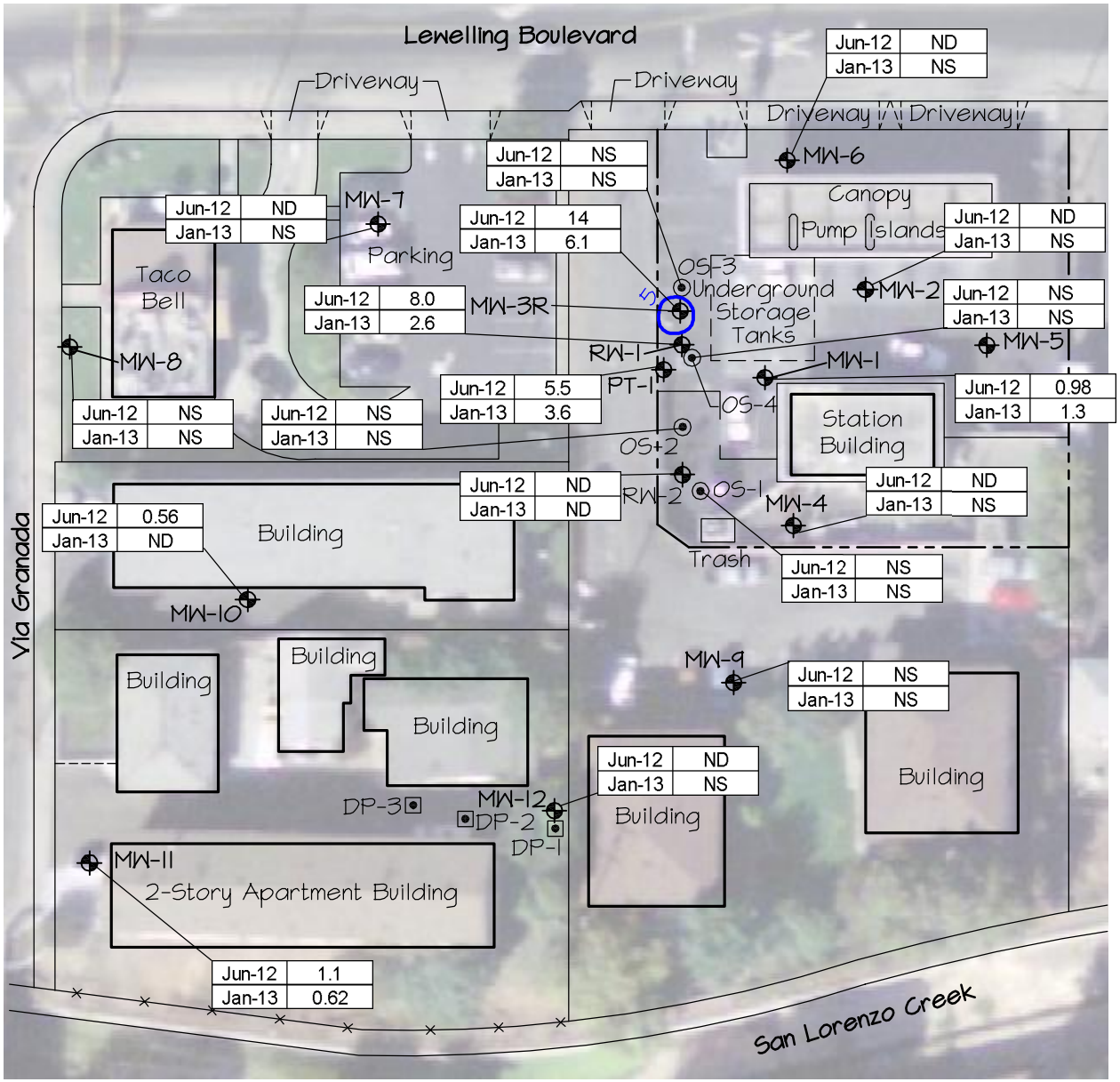
# BENZENE CONCENTRATION CONTOURS IN GROUNDWATER

| PROJECT NO. | DRAWN BY | CHECKED BY | APPROVED BY |
|---|---|---|---|
| 01ZO | MY | MP | JPG |

FILE NO. 01ZO11B0316.DWG

FIGURE 4

1/24/2013 4:24PM 01ZO11B0316.dwg




Legend

MW-1 ⊕ Monitoring Well with 13 June 2012 and 2 January 2013 Methyl Tert-Butyl Ether (MTBE) Results in µg/l

OS-1 ⊙ Oxygen Injection Well

DP-1 ⊡ Soil Boring

ND Not Detected

5 MTBE Concentration Contour (µg/l), Queried Where Uncertain

N

0 25 50

Scale In Feet

| REVISION | REVISIONS | | | |
|---|---|---|---|---|
| | NO. | BY | DATE | DESCRIPTION |
| | 13 | MY | 6/20/11 | Second Quarter 2011 Status Report |
| | 14 | MY | 12/15/11 | Fourth Quarter 2011 Status Report |
| 16 | 15 | MY | 7/15/12 | Second Quarter 2012 Status Report |
| | 16 | MY | 1/24/13 | Fourth Quarter 2012 Status Report |

ARCTOS ENVIRONMENTAL

TESORO - SAN LORENZO

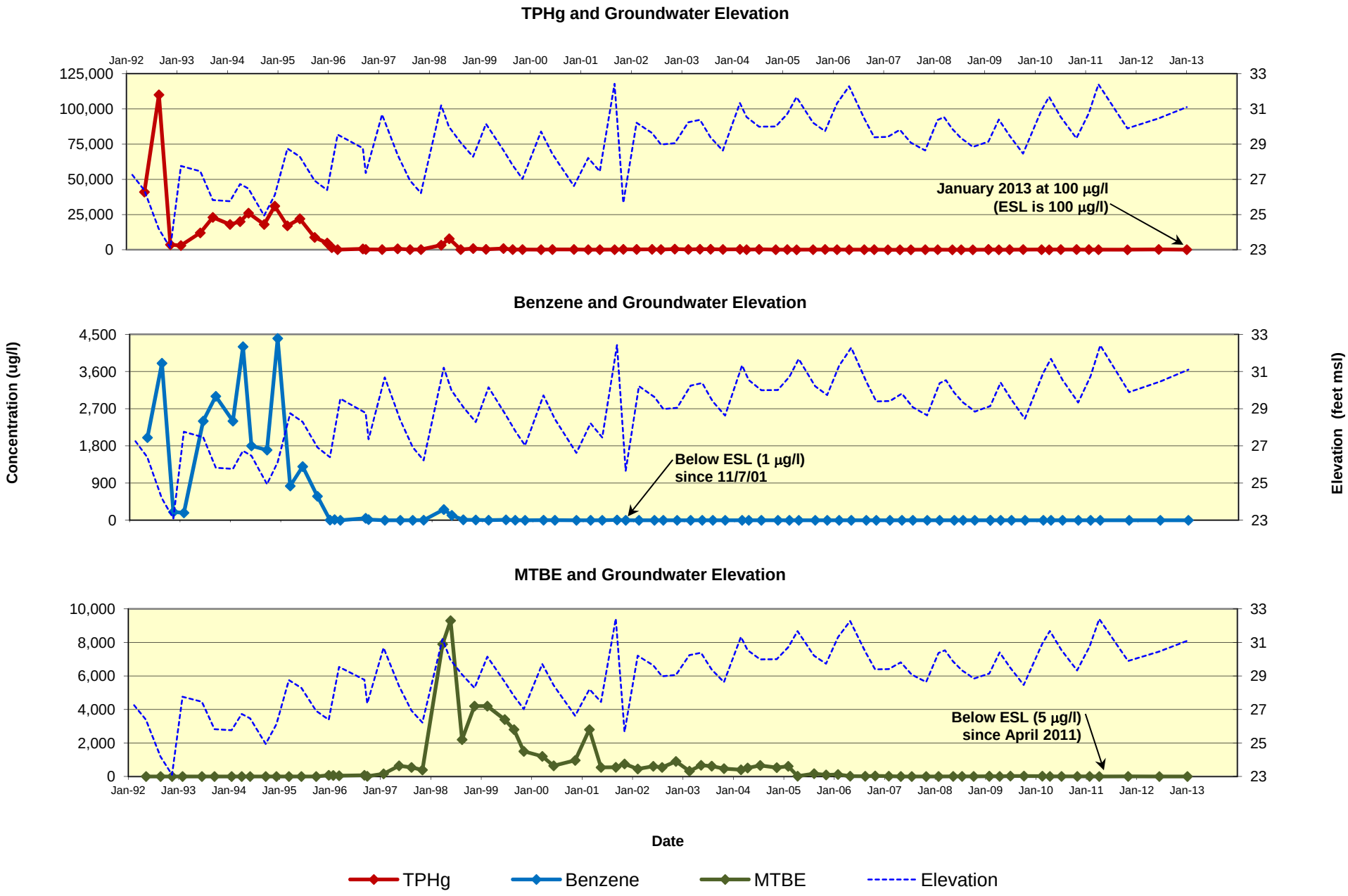
# MTBE CONCENTRATION CONTOUR IN GROUNDWATER

| PROJECT NO. | DRAWN BY | CHECKED BY | APPROVED BY |
|---|---|---|---|
| 01ZO | MY | MP | JPG |

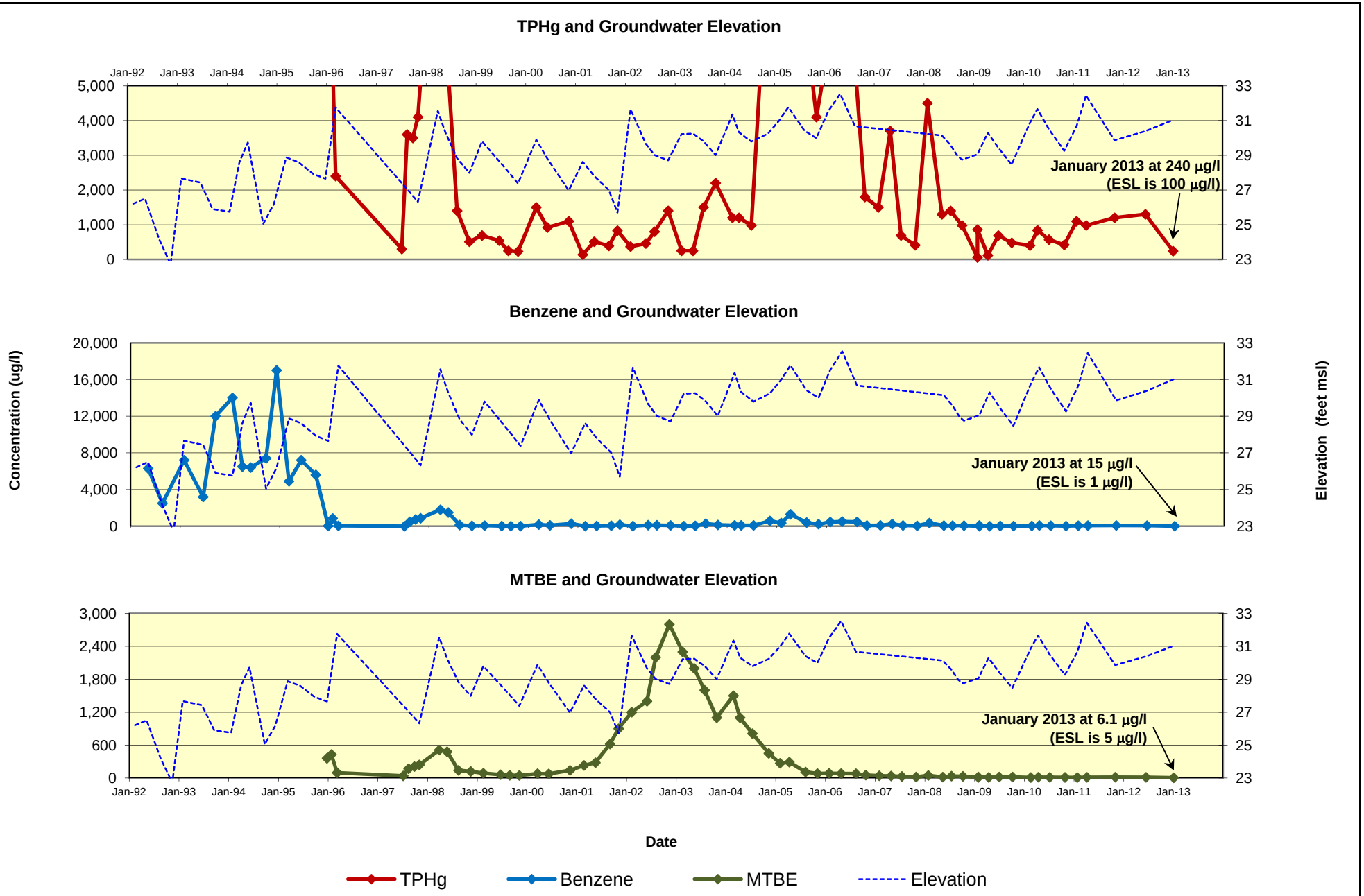
FILE NO. 01ZO11B0416.DWG

FIGURE 5

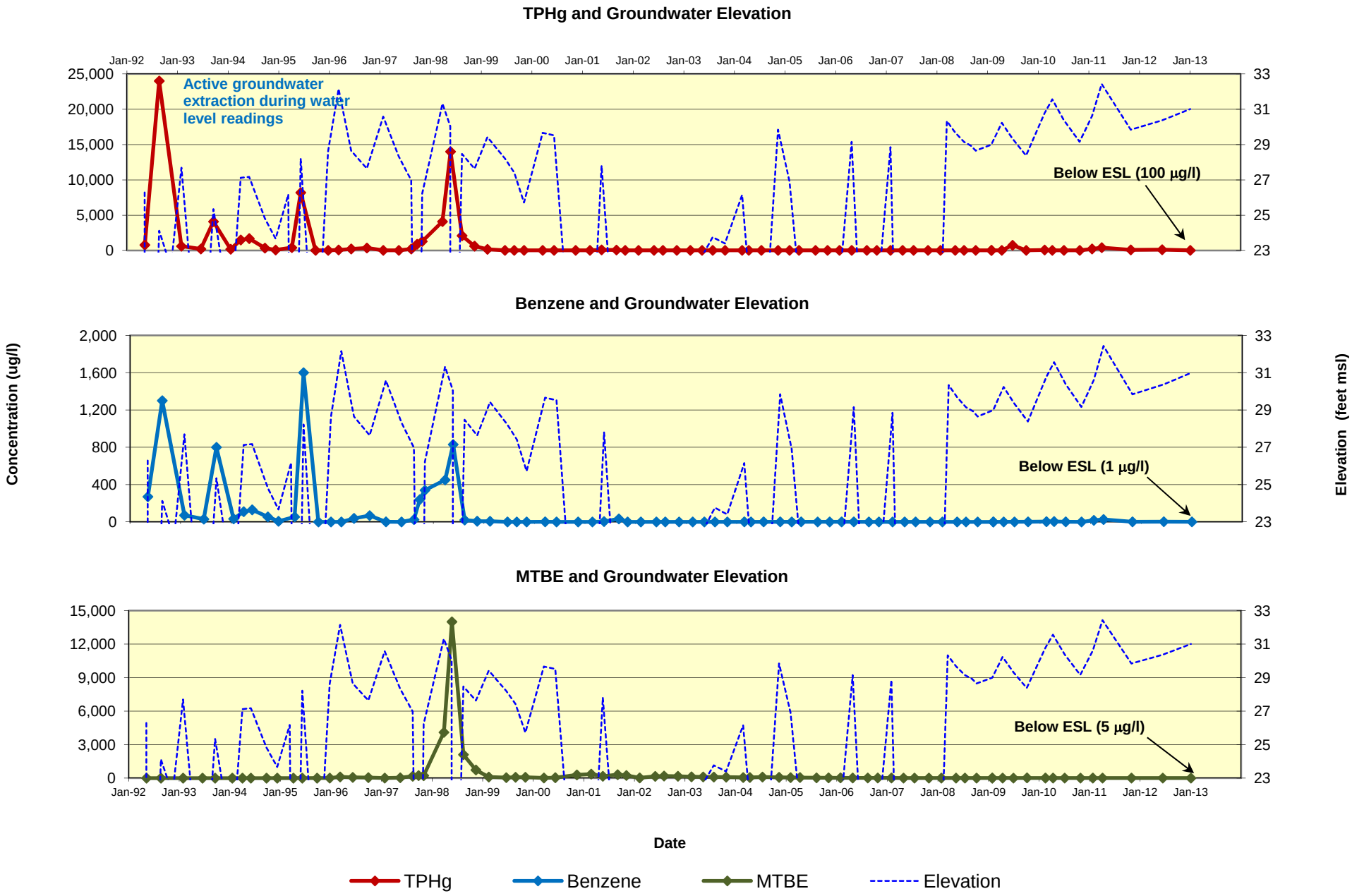
1/24/2013 4:30PM 01ZO11B0416.dwg



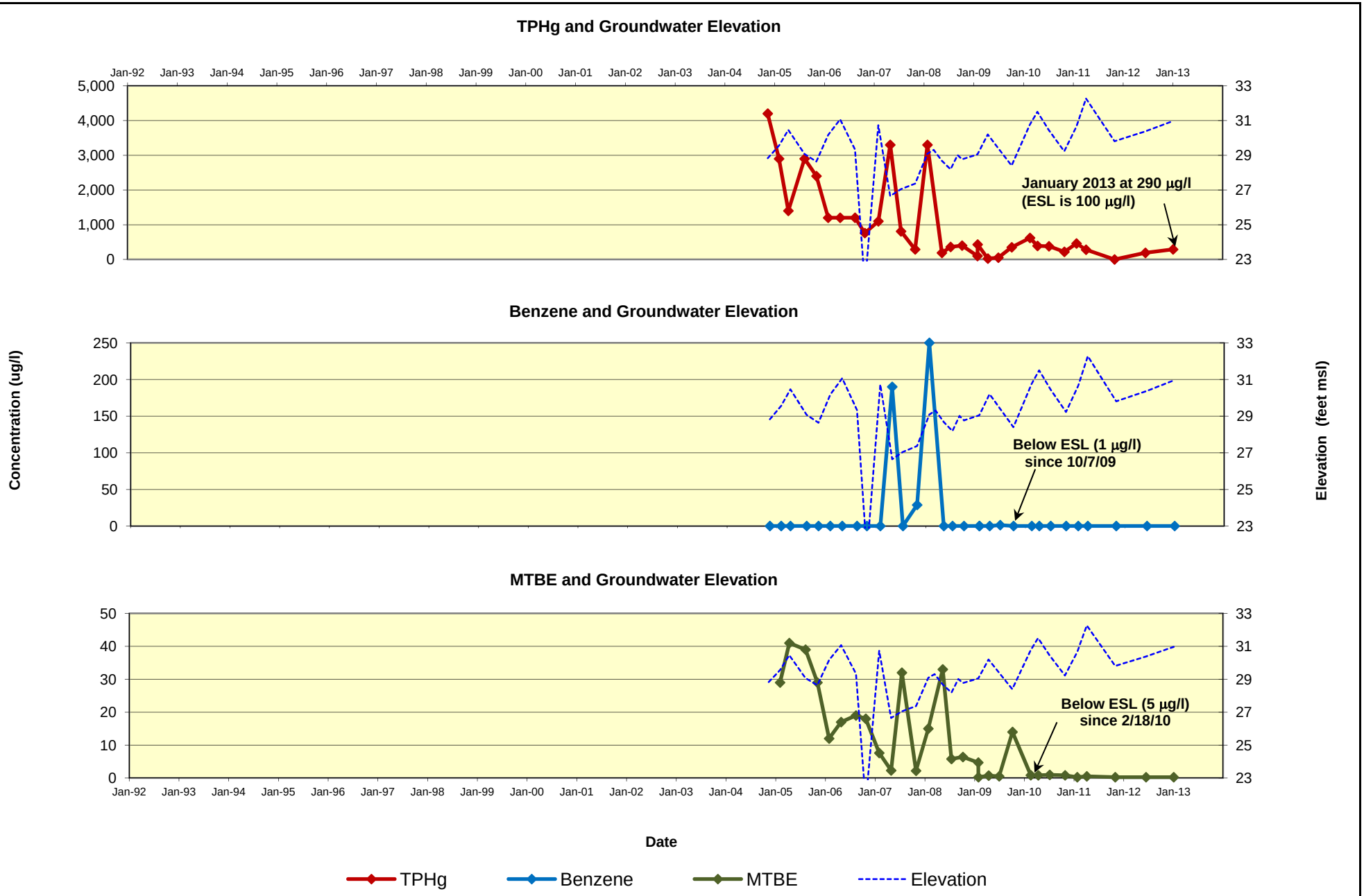

| | | | |
|---|---|---|---|
| ARCTOS Arctos Environmental | Tesoro - San Lorenzo | TPHG, BENZENE, AND MTBE CONCENTRATIONS WITH GROUNDWATER ELEVATIONS AT MW-1 | Figure 6A |
| TBL017.xls \| 1/24/2013 | | | |



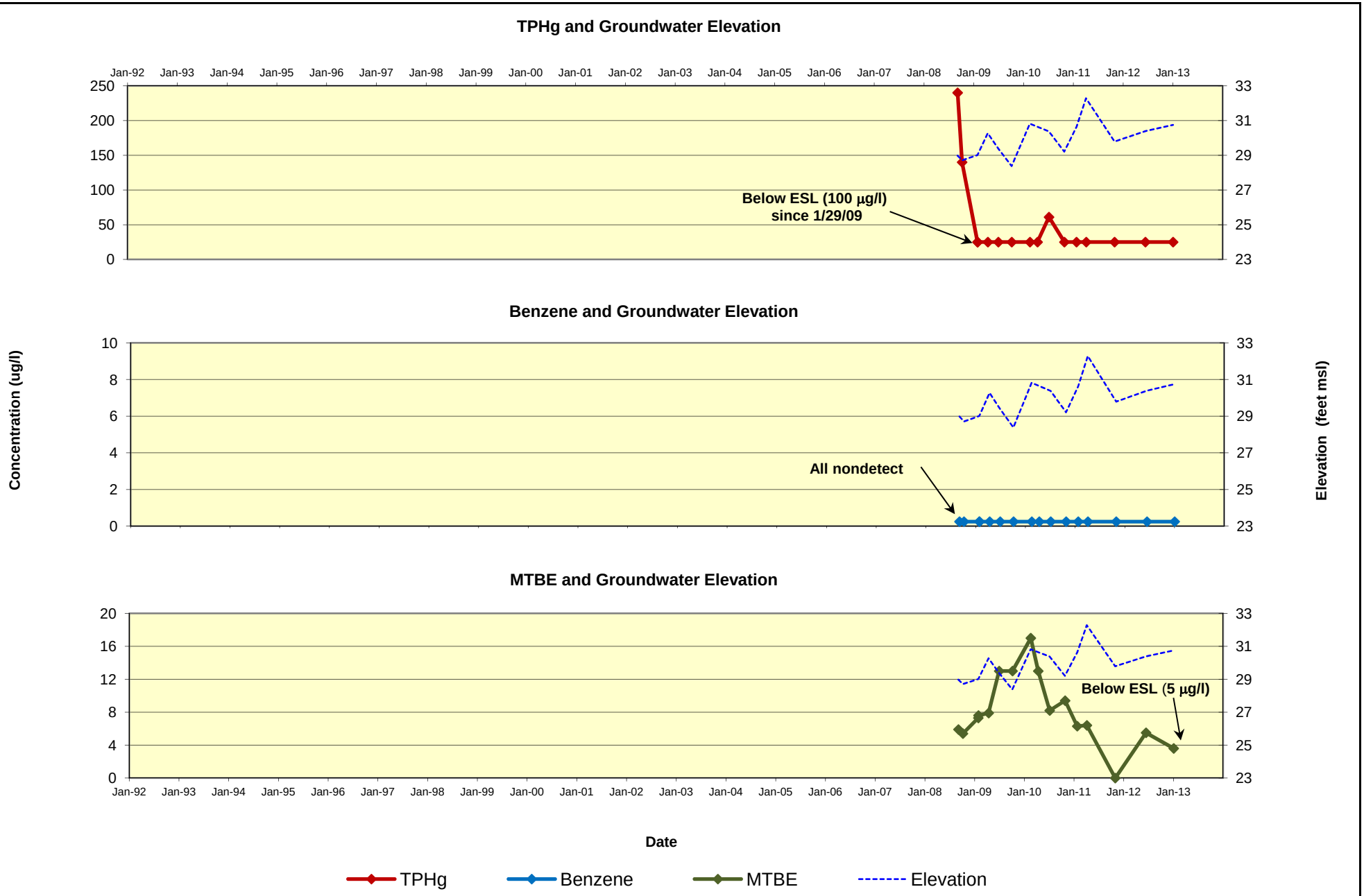

| | | | |
|---|---|---|---|
| ARCTOS Arctos Environmental | Tesoro - San Lorenzo | TPHG, BENZENE, AND MTBE CONCENTRATIONS WITH GROUNDWATER ELEVATIONS AT MW-3R | Figure 6B |
| TBL017.xls \| 1/24/2013 | | | |



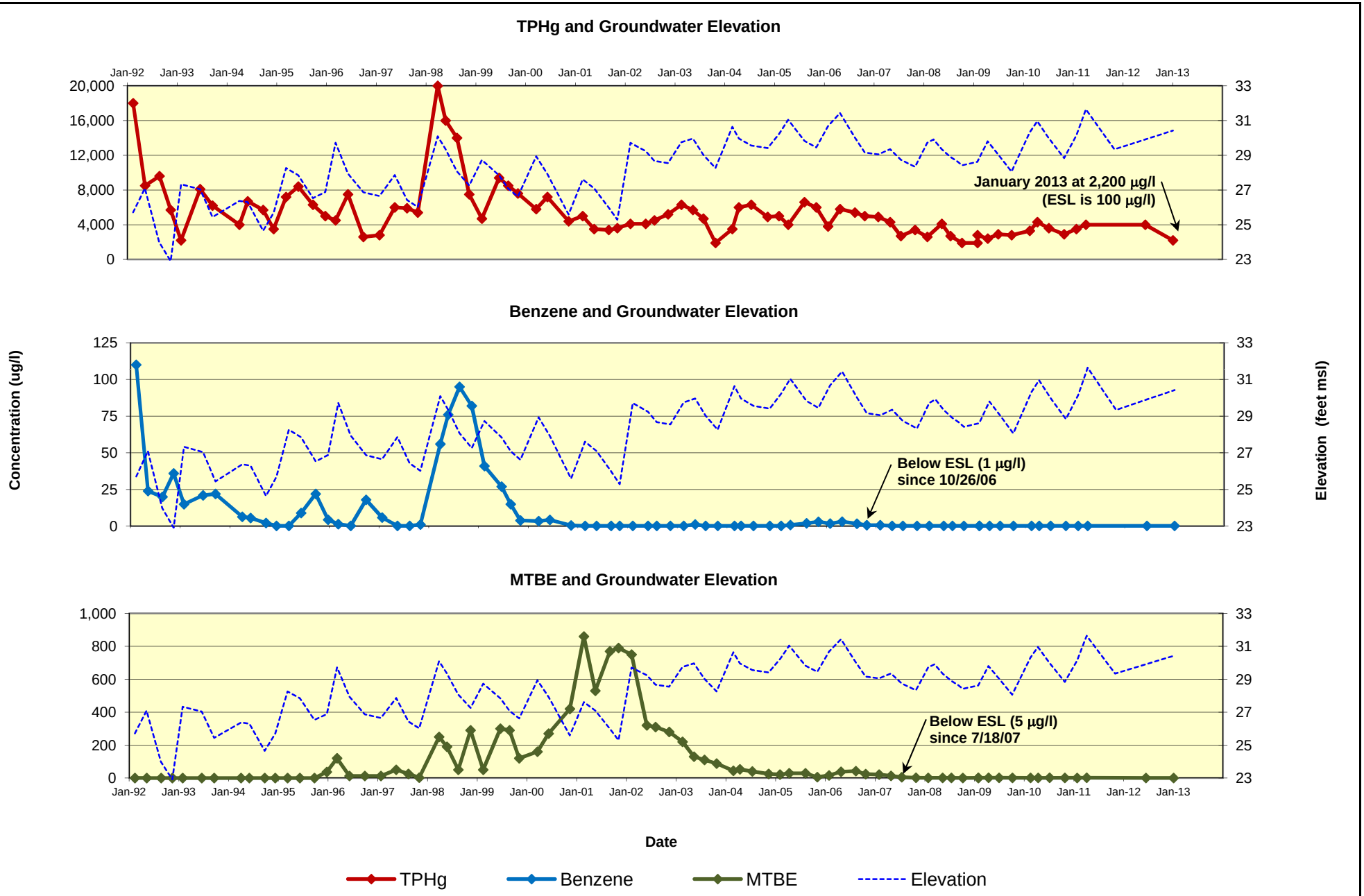

| | | | |
|---|---|---|---|
| ARCTOS Arctos Environmental | Tesoro - San Lorenzo | TPHG, BENZENE, AND MTBE CONCENTRATIONS WITH GROUNDWATER ELEVATIONS AT RW-1 | Figure 6C |
| TBL017.xls \| 1/24/2013 | | | |



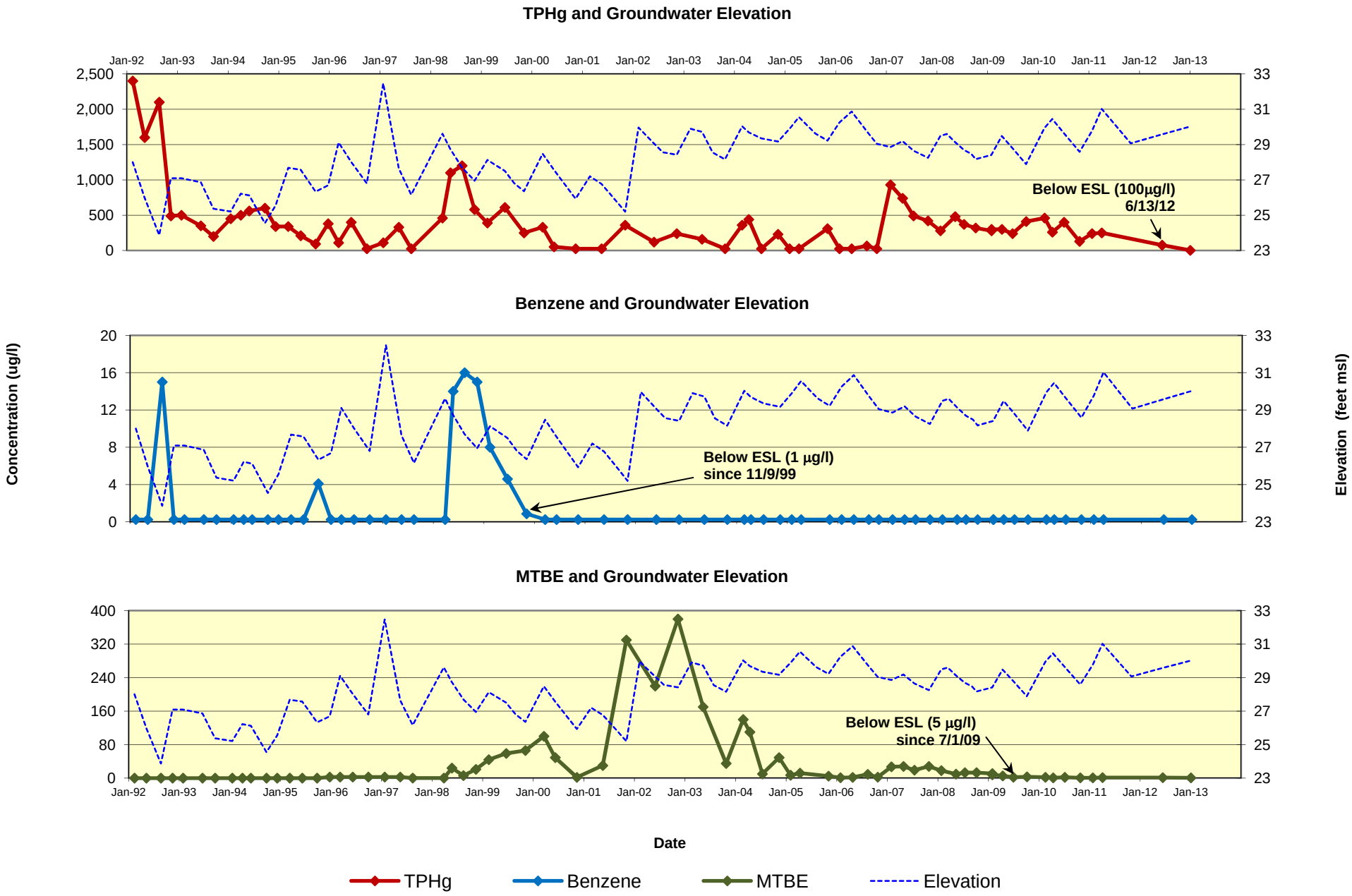

| | | | |
|---|---|---|---|
| ARCTOS Arctos Environmental | Tesoro - San Lorenzo | TPHG, BENZENE, AND MTBE CONCENTRATIONS WITH GROUNDWATER ELEVATIONS AT RW-2 | Figure 6D |
| TBL017.xls \| 1/24/2013 | | | |




| | | | |
|---|---|---|---|
| ARCTOS Arctos Environmental | Tesoro - San Lorenzo | TPHG, BENZENE, AND MTBE CONCENTRATIONS WITH GROUNDWATER ELEVATIONS AT PT-1 | Figure 6E |
| TBL017.xls \| 1/24/2013 | | | |




| | | | |
|---|---|---|---|
| ARCTOS Arctos Environmental | Tesoro - San Lorenzo | TPHG, BENZENE, AND MTBE CONCENTRATIONS WITH GROUNDWATER ELEVATIONS AT MW-10 | Figure 6F |
| TBL017.xls \| 1/24/2013 | | | |




| | | | |
|---|---|---|---|
| ARCTOS Arctos Environmental | Tesoro - San Lorenzo | TPHG, BENZENE, AND MTBE CONCENTRATIONS WITH GROUNDWATER ELEVATIONS AT MW-11 | Figure 6G |
| TBL017.xls \| 1/24/2013 | | | |

# ATTACHMENT A

# GROUNDWATER SAMPLING QA/QC PROCEDURES

## ATTACHMENT A
## GROUNDWATER SAMPLING QA/QC PROCEDURES

### Monitoring Plan

Arctos conducted groundwater monitoring in accordance with the following monitoring plan approved by Alameda County Environmental Health (ACEH) in a 28 April 2011 letter:

| Well Designation | Location | Sampling Frequency |
|---|---|---|
| MW-1 | Upgradient | Semiannual (2nd and 4th quarters) |
| MW-3R, RW-1, RW-2, and PT-1 | On site | |
| MW-10 and MW-11 | Downgradient | |
| MW-2, MW-4, and MW-6 | Upgradient and cross gradient | Annual (2nd quarter) |
| MW-7 and MW-12 | Downgradient | |

### Analytical Plan

Groundwater samples were analyzed by Kiff Analytical LLC (Kiff), a State-certified laboratory in Davis, California for total petroleum hydrocarbons as gasoline (TPHg); benzene, toluene, ethylbenzene, and total xylenes (BTEX); methyl tert-butyl ether (MTBE); and other oxygenates using EPA Method 8260B.

Arctos, as Tesoro's Authorized Responsible Party for the site, electronically submitted the groundwater monitoring results to the State Water Resources Control Board (SWRCB). The data were submitted in the State-mandated EDF format, in accordance with Assembly Bill 2886 requirements for underground storage tank (UST) sites in California. The EDFs including laboratory analytical data and quarterly groundwater elevations were transmitted through the Geotracker web portal

### Purge-and-Bail Sampling

The depth to groundwater and total well depth were measured before sampling using an electronic water well sounder. Before sampling, at least 3 casing volumes were purged from each monitoring well using a submersible pump. Throughout purging, pH, conductivity, turbidity, and temperature were measured and recorded for the evacuated groundwater. These measurements were used to confirm that the well was purged sufficiently. Water samples were generally collected after the measurements of pH, conductivity, and temperature had stabilized to within 10 percent of the previous readings. Copies of the well purging and sampling logs are provided in Attachment B.

Sampling was performed with a new 1-1/2-inch-diameter disposable polyethylene bailer suspended from new nylon line. The bailer was equipped with a bottom-release device. Groundwater was collected with the bailer from just below the water surface in each monitoring well. Water samples were collected from the bailers in new 40-milliliter glass bottles provided by the analytical laboratory. The samples were collected so that no headspace was present in each bottle. The preservatives necessary for the analyses performed were provided in the glass bottles by the analytical laboratory.

The collected water samples were placed in sealable plastic bags and packed on ice in a portable ice chest immediately after collection. Samples were delivered within 24 to 48 hours to the analytical laboratory. Additional field procedures, including the use of sample identification labels and chain-of-custody forms, were followed to track sample collection and delivery.

**General Field Quality Assurance/Control (QA/QC) Procedures**

*Chain-of-Custody Records*

Chain-of-custody records were completed before samples were packaged for shipment. One copy of these records was placed in the project file. A second copy accompanied samples during transportation to the laboratory. The individual in the analytical laboratory who accepted responsibility for samples signed and dated the chain-of-custody record.

*Equipment Decontamination Procedures*

Field equipment was decontaminated between sampling events using the following procedures:

1. Rinsed with water using a brush to remove soil and mud.
2. Washed with non-phosphate detergent and water using a brush.
3. Rinsed with deionized or distilled water.
4. Rinsed again with deionized or distilled water.
5. Air dried.

Additional decontamination procedures are presented below:

1. Personnel dressed in suitable personal protective equipment (PPE) to reduce personal exposure.
2. Equipment that would be damaged by water (such as the battery portion of water level indicator or the pH and conductivity meters) was carefully

wiped clean using a sponge and dried with new paper towels. Care was taken to prevent damage to the equipment.

3. When conducting a groundwater sampling event, evacuation and sampling equipment was decontaminated before sampling operations, between each well, and at the end of the sampling event. If dedicated equipment was used, it was rinsed with deionized water.

4. Detergent waters and rinse waters were replaced periodically depending on level of contamination. Used detergent and rinse waters were contained in 55-gallon drums approved by the Department of Transportation (DOT) or holding tanks for storage.

*Personal Decontamination Procedures*

At a minimum, field personnel followed the following decontamination procedures:

1. Wore appropriate gloves

2. Washed hands thoroughly with soap and water

3. Avoided unnecessary contact with groundwater.

The site health and safety plan was reviewed for site-specific personal decontamination procedures.

*Wastewater and Solid Waste Storage and Disposal*

Small volumes of used wash and rinse solutions were collected during field work and transported to a central decontamination area. This wastewater was containerized in labeled 55-gallon DOT drums or holding tanks and stored in a secured area at the site. At the completion of field investigation activities or a groundwater sampling event, samples from the 55-gallon drums or holding tanks were collected and analyzed in accordance with the work or sampling plans. Once the analytical results were obtained, the Project Manager determined the appropriate disposal method for this wastewater. Non-hazardous waste manifests are included in Attachment G.

Solid wastes such as used personal protective equipment, paper towels, trash bags, and any other solid debris were collected for disposal. Because the sampled groundwater was not a hazardous waste, the solid wastes were disposed with the onsite trash.

*Field Investigation Documentation Procedures*

Field personnel followed documentation procedures developed for site investigation work. The procedures served to (1) provide a record of the activities performed in the field and

(2) permit identification of samples and tracking of their status in the field, during shipment, and at the laboratory. All documentation was recorded with waterproof ink.

Groundwater sampling activities were documented on daily field reports and on the well purge and sample log.

*Health and Safety*

Arctos used a site-specific health and safety plan (HSP) with procedures that were followed by field personnel for equipment safety, medical surveillance, personal protection, air quality monitoring, exposure control, emergency response, and general work practices during field activities. Before beginning work at the site, a site safety meeting was conducted. Field personnel reviewed the HSP and signed the accompanying acknowledgment form before initiating field activities. Field personnel were required to comply with the HSP throughout performance of site assessment activities.

*Analytical QA/QC Procedures*

Laboratory analytical QA/QC procedures included (1) preparing and analyzing laboratory samples to assess the performance of the analytical laboratory and (2) conducting data validation in accordance with the protocols described below. QC samples prepared by the laboratory included method blanks, matrix spike and matrix spike duplicates, and laboratory control samples.

The laboratory results were reviewed in general accordance with EPA guidelines for data validation. The data validation process included reviewing laboratory results for the following parameters:

- Completeness of the data package
- Compliance with EPA-required holding times
- Agreement of dilution factors with reported detection limits
- Presence or absence of analytes in the method blanks
- Agreement of duplicate samples
- Percent recovery and relative percent difference results for matrix spike and matrix spike duplicate analyses
- Percent recovery results for laboratory control samples.

# ATTACHMENT B

# FIELD DATA SHEETS

**Confluence Environmental, Inc**

# Equipment Calibration Log

| Equipment make/model | Equipment ID/ serial number | Date | Time | Calibration Standards | Equipment Reading | Equipment Calibrated | Temp (°C/ °F) | Tech init. | Comments |
|---|---|---|---|---|---|---|---|---|---|
| YS Ultrameter II | 6216462 | 1/2/13 | 805 | P.H. 4.0 7.0 10.0 | 4,7,10 | ✓ | 11.0 | EM | |
| 〃 | 〃 | 〃 | 808 | Cond 1413 | 1413 | ✓ | 〃 | EM | |
| YSI ProPlus | 11B100249 | 〃 | 812 | DO. 100% | 100.2 | ✓ | 11.0 | EM | |
| 〃 | 〃 | 〃 | 814 | ORP 249.0 | 249.0 | ✓ | 11.0 | EM | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Notes/comments:

# Water Level Measurements

Job Number: E1-130102 Date: 1/2/13 Client: ORION

Site: Texaco #67107, San Lorenzo

| Well I.D. | Time | Dia | Depth to NAPL | Thickness of NAPL | Depth to water (DTW) | Total Depth (measured) | Total Depth (historical) | Ref Point (TOC/ TOB) | Pre DO | Pre ORP | order |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 822 | 2 | | | 15.26 | | 33.40 | TOC | 2.3 | 204 | 13 |
| MW-2 | 839 | 2 | | | 14.28 | | 33.90 | | | | |
| MW-3R | 832 | 6 | | | 14.13 | | 28.10 | | 0.75 | 187 | 17 |
| MW-4 | 829 | 2 | | | 16.30 | | 24.55 | | | | |
| MW-5 | 844 | 2 | | | 15.20 | | 29.30 | | | | |
| MW-6 | 848 | 2 | | | 13.78 | | 28.60 | | | | |
| MW-7 | 852 | 2 | | | 13.39 | | 24.20 | | | | |
| MW-8 | 856 | 2 | | | 14.42 | | 23.09 | | | | |
| MW-9 | 916 | 2 | | | 16.75 | | 27.70 | | | | |
| MW-10 | 901 | 2 | | | 14.62 | | 28.70 | | 1.1 | 228 | 18 |
| MW-11 | 905 | 2 | | | 17.67 | | 29.40 | | 1.4 | 218 | 15 |
| MW-12 | 911 | 2 | | | 16.74 | | 28.21 | | | | |
| PT-1 | 921 | 4 | | | 15.73 | | 29.71 | | 2.0 | 220 | 4 |
| RW-1 | 836 | 6 | | | 14.85 | | 35.51 | | 1.4 | 203 | 14 |
| RW-2 | 826 | 6 | | | 15.43 | | 26.55 | ↓ | 0.50 | 201 | 16 |
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# Purging And Sampling Data Sheet

| | | |
|---|---|---|
| **Job#:** E1-130102 | **Sampler:** E Morse | **Client:** Orion |
| **Well ID:** MW-1 | **Date:** 1/2/13 | **Site:** San Lorenzo |
| **Well diam:** 1/4" 1" (2") 3" 4" 6" Other: | | **DTW:** 15.26 **Total Depth:** 33.40 |
| **Purge equip:** (ES - diam): Bladder Peri Waterra Positive Air Displacement Ext. System | | |
| disp bailer teflon bailer other: | **Tubing:** OD: New Dedicated NA | |
| **Purge method:** (3-5 Case Volume) Micro/Low-Flow Extraction Other: | | |
| **Pump depth/ intake:** | **Multipliers:** 1"= 0.04 2"= 0.16 3"= 0.37 4"= 0.65 5"=1.02 6"= 1.47 Radius² X 0.163 | |
| (TD - DTW X Multiplier = 1 Volume | 80% Recovery (TD - DTW X 0.20 + DTW) | |

1 Volume = 2.9 X 3 = 8.70 (Total Purge) 80%= 18.89

| Time | Temp (°C / °F) | pH | Cond (mS / µS) | Turbidity (NTU) | Purge Rate (gal or mL/ min) | Volume Removed (gal / L) | Notes |
|---|---|---|---|---|---|---|---|
| 955 | 19.4 | 7.8 | 660 | 135 | 1.5 | 3.0 | |
| 957 | 19.9 | 7.6 | 702 | 144 | ↓ | 6.0 | |
| 959 | 20.0 | 7.5 | 712 | 130 | ↓ | 9.0 | |
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|---|---|---|
| Did well dewater? YES (NO) | Total volume removed: 9.0 (gal / L) | |
| Sample method: (Disp Bailer) Ded. Tubing New Tubing Ext. Port Other: | | |
| Sample date: 1/2/13 | Sample time: 1005 | DTW at sample: 17.00 |
| Sample ID: MW-1 | Lab: Kiff | Number of bottles: 3 |
| Analysis: See COC | | |
| Equipment blank ID @ | Field blank ID @ | |
| Duplicate ID: | Pre-purge DO: 2.3 | Post purge DO: |
| $Fe2^+$: | Pre-purge ORP: 204 | Post purge ORP: |
| NAPL depth: | Volume of NAPL: | Volume removed: ml |

# Purging And Sampling Data Sheet

| | | |
|---|---|---|
| **Job#:** E1-130102 | **Sampler:** E Morse | **Client:** Orion |
| **Well ID:** MW-3R | **Date:** 1/2/13 | **Site:** San Lorenzo |
| **Well diam:** 1/4" 1" 2" 3" 4" (6") Other: | | **DTW:** 14.13 **Total Depth:** 28.10 |
| **Purge equip:** (ES - diam:) Bladder Peri Waterra Positive Air Displacement Ext. System | | |
| disp bailer teflon bailer other: | **Tubing:** OD: New Dedicated NA | |
| **Purge method:** (3-5 Case Volume) Micro/Low-Flow Extraction Other: | | |
| **Pump depth/ intake:** | **Multipliers:** 1"= 0.04 2"= 0.16 3"= 0.37 4"= 0.65 5"=1.02 6"= 1.47 Radius² X 0.163 | |
| (TD - DTW X Multiplier = 1 Volume | 80% Recovery (TD - DTW X 0.20 + DTW) | |

1 Volume = 20.54 X 3 = 61.61 (Total Purge) 80%= 16.92

| Time | Temp (°C / °F) | pH | Cond (mS / µS) | Turbidity (NTU) | Purge Rate (gal or mL/ min) | Volume Removed (gal / L) | Notes |
|---|---|---|---|---|---|---|---|
| 1125 | 21.5 | 7.45 | 860 | 80 | 4.0 | 21.0 | odor |
| 1130 | 21.0 | 7.4 | 865 | 101 | 1 | 42.0 | |
| 1135 | 21.0 | 7.4 | 855 | 109 | 1 | 63.0 | |
| | waited | for | 80% | | | | |
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|---|---|---|
| Did well dewater? YES (NO) | Total volume removed: 63.0 (gal / L) | |
| Sample method: (Disp Bailer) Ded. Tubing New Tubing Ext. Port Other: | | |
| Sample date: 1/2/13 | Sample time: 1140 | DTW at sample: 16.90 |
| Sample ID: MW-3R | Lab: Kiff | Number of bottles: 10 |
| Analysis: See COC | | |
| Equipment blank ID @ | Field blank ID @ | |
| Duplicate ID: | Pre-purge DO: 0.75 | Post purge DO: |
| $Fe2^+$: | Pre-purge ORP: 187 | Post purge ORP: |
| NAPL depth: | Volume of NAPL: | Volume removed: ml |

# Purging And Sampling Data Sheet

| | | |
|---|---|---|
| **Job#:** E1-130102 | **Sampler:** E Morse | **Client:** Orion |
| **Well ID:** MW-10 | **Date:** 1/2/13 | **Site:** San Lorenzo |
| **Well diam:** 1/4" 1" (2") 3" 4" 6" Other: | | **DTW:** 14.62 **Total Depth:** 28.70 |
| **Purge equip:** (ES - diam:) Bladder Peri Waterra Positive Air Displacement Ext. System | | |
| disp bailer teflon bailer other: | **Tubing:** OD: New Dedicated NA | |
| **Purge method:** (3-5 Case Volume) Micro/Low-Flow Extraction Other: | | |
| **Pump depth/ intake:** | **Multipliers:** 1"= 0.04 2"= 0.16 3"= 0.37 4"= 0.65 5"=1.02 6"= 1.47 Radius² X 0.163 | |
| (TD - DTW X Multiplier = 1 Volume | 80% Recovery (TD - DTW X 0.20 + DTW) | |

1 Volume = 2.25 X 3 = 6.75 (Total Purge) 80%= 17.44

| Time | Temp (°C/°F) | pH | Cond (mS/µS) | Turbidity (NTU) | Purge Rate (gal/ or mL/ min) | Volume Removed (gal/ L) | Notes |
|---|---|---|---|---|---|---|---|
| 1210 | 19.3 | 7.9 | 620 | 80 | 1.0 | 2.25 | odor |
| 1212 | 19.8 | 7.6 | 617 | 54 | 1 | 4.5 | 1 |
| 1214 | 19.9 | 7.5 | 623 | 49 | 1 | 6.75 | 1 |
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| | wayted | for | 80% | | | | |
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|---|---|---|
| Did well dewater? YES (NO) | Total volume removed: 6.75 ((gal)/ L) | |
| Sample method: (Disp Bailer) Ded. Tubing New Tubing Ext. Port Other: | | |
| Sample date: 1/2/13 | Sample time: 1220 | DTW at sample: 17.15 |
| Sample ID: MW-10 | Lab: Kiff | Number of bottles: 3 |
| Analysis: See COC | | |
| Equipment blank ID @ | Field blank ID @ | |
| Duplicate ID: | Pre-purge DO: 1.1 | Post purge DO: |
| $Fe2^+$: | Pre-purge ORP: 228 | Post purge ORP: |
| NAPL depth: | Volume of NAPL: | Volume removed: ml |

# Purging And Sampling Data Sheet

| | | |
|---|---|---|
| **Job#:** E1-130102 | **Sampler:** E Morse | **Client:** Orion |
| **Well ID:** MW-11 | **Date:** 1/2/13 | **Site:** San Lorenzo |
| **Well diam:** 1/4" 1" (2") 3" 4" 6" Other: | | **DTW:** 17.67 **Total Depth:** 29.40 |
| **Purge equip:** (ES - diam:) Bladder Peri Waterra Positive Air Displacement Ext. System | | |
| disp bailer teflon bailer other: | **Tubing:** OD: New Dedicated NA | |
| **Purge method:** (3-5 Case Volume) Micro/Low-Flow Extraction Other: | | |
| **Pump depth/ intake:** | **Multipliers:** 1"= 0.04 2"= 0.16 3"= 0.37 4"= 0.65 5"=1.02 6"= 1.47 Radius² X 0.163 | |
| (TD - DTW X Multiplier = 1 Volume | 80% Recovery (TD - DTW X 0.20 + DTW) | |

1 Volume = 1.88 X 3 = 5.63 (Total Purge) 80%=20.02

| Time | Temp (°C/ °F) | pH | Cond (mS (µS) | Turbidity (NTU) | Purge Rate (gal or mL/ min) | Volume Removed (gal / L) | Notes |
|---|---|---|---|---|---|---|---|
| 1045 | 17.9 | 8.8 | 643 | 80 | 1.0 | 2.0 | |
| 1047 | 18.8 | 8.6 | 633 | 50 | 1 | 4.0 | |
| 1049 | 18.7 | 8.5 | 632 | 46 | 1 | 6.0 | |
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|---|---|
| Did well dewater? YES (NO) | Total volume removed: 6.0 (gal / L) |
| Sample method: (Disp Bailer) Ded. Tubing New Tubing Ext. Port Other: | |
| Sample date: 1/2/13 Sample time: 1055 | DTW at sample: 17.78 |
| Sample ID: MW-11 Lab: Kiff | Number of bottles: 3 |
| Analysis: See COC | |
| Equipment blank ID @ | Field blank ID @ |
| Duplicate ID: | Pre-purge DO: 1.4 Post purge DO: |
| $Fe2^+$: | Pre-purge ORP: 218 Post purge ORP: |
| NAPL depth: Volume of NAPL: | Volume removed: ml |

# Purging And Sampling Data Sheet

| | | |
|---|---|---|
| **Job#:** E1-130102 | **Sampler:** E Morse | **Client:** Orion |
| **Well ID:** PT-1 | **Date:** 1/2/13 | **Site:** San Lorenzo |
| **Well diam:** 1/4" 1" 2" 3" (4") 6" Other: | | **DTW:** 15.73 **Total Depth:** 29.78 |
| **Purge equip:** (ES - diam) Bladder Peri Waterra Positive Air Displacement Ext. System | | |
| disp bailer teflon bailer other: | **Tubing:** OD: New Dedicated NA | |
| **Purge method:** (3-5 Case Volume) Micro/Low-Flow Extraction Other: | | |
| **Pump depth/ intake:** | **Multipliers:** 1"= 0.04 2"= 0.16 3"= 0.37 4"= 0.65 5"=1.02 6"= 1.47 Radius² X 0.163 | |
| (TD - DTW X Multiplier = 1 Volume | 80% Recovery (TD - DTW X 0.20 + DTW) | |

1 Volume = 9.08 X 3 = 27.26 (Total Purge) 80%= 18.53

| Time | Temp (°C/ °F) | pH | Cond (mS / µS) | Turbidity (NTU) | Purge Rate (gal or mL/ min) | Volume Removed (gal / L) | Notes |
|---|---|---|---|---|---|---|---|
| 932 | 20.2 | 7.0 | 841 | 33 | 30 | 9.25 | |
| 935 | 20.5 | 7.0 | 845 | 30 | 1 | 18.5 | |
| 938 | 20.5 | 7.0 | 843 | 29 | 1 | 28.0 | |
| | | unstbl for 80% | | | | | |
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|---|---|
| Did well dewater? YES (NO) | Total volume removed: 28.0 (gal / L) |
| Sample method: (Disp Bailer) Ded. Tubing New Tubing Ext. Port Other: | |
| Sample date: 1/2/13 | Sample time: 942 945 DTW at sample: 18.50 |
| Sample ID: PT-1 Lab: Kiff | Number of bottles: 10 |
| Analysis: See COC | |
| Equipment blank ID @ | Field blank ID @ |
| Duplicate ID: | Pre-purge DO: 2.05 Post purge DO: |
| $Fe2^+$: | Pre-purge ORP: 220.0 Post purge ORP: |
| NAPL depth: Volume of NAPL: | Volume removed: ml |

# Purging And Sampling Data Sheet

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|---|---|---|
| **Job#:** E1-130102 | **Sampler:** E Morse | **Client:** Orion |
| **Well ID:** RW-1 | **Date:** 1/2/13 | **Site:** San Lorenzo |
| **Well diam:** 1/4" 1" 2" 3" 4" (6") Other: | | **DTW:** 14.85 **Total Depth:** 35.51 |
| **Purge equip:** (ES - diam:) Bladder Peri Waterra Positive Air Displacement Ext. System | | |
| disp bailer teflon bailer other: | **Tubing:** OD: New Dedicated NA | |
| **Purge method:** (3-5 Case Volume) Micro/Low-Flow Extraction Other: | | |
| **Pump depth/ intake:** | **Multipliers:** 1"= 0.04 2"= 0.16 3"= 0.37 4"= 0.65 5"=1.02 6"= 1.47 Radius² X 0.163 | |
| (TD - DTW X Multiplier = 1 Volume | 80% Recovery (TD - DTW X 0.20 + DTW) | |

1 Volume = 30.37 X 3 = 91.11 (Total Purge) 80%= 18.91

| Time | Temp (°C / °F) | pH | Cond (mS / µS) | Turbidity (NTU) | Purge Rate (gpm or mL/ min) | Volume Removed (gal / L) | Notes |
|---|---|---|---|---|---|---|---|
| 1014 | 19.1 | 7.4 | 830 | 25 | 4.0 | 30.5 | |
| 1021 | 19.7 | 7.4 | 831 | 23 | 1 | 61.0 | odor |
| 1029 | 19.6 | 7.4 | 833 | 23 | 1 | 92.0 | |
| | | | | | | | |
| | | waited for 80% | | | | | |
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|---|---|---|
| Did well dewater? YES (NO) | Total volume removed: 92.0 (gal/ L) | |
| Sample method: (Disp Bailer) Ded. Tubing New Tubing Ext. Port Other: | | |
| Sample date: 1/2/13 | Sample time: 1035 | DTW at sample: 18.90 |
| Sample ID: RW-1 | Lab: Kiff | Number of bottles: 3 |
| Analysis: See COC | | |
| Equipment blank ID @ | Field blank ID @ | |
| Duplicate ID: | Pre-purge DO: 1.4 | Post purge DO: |
| $Fe2^+$: | Pre-purge ORP: 203 | Post purge ORP: |
| NAPL depth: | Volume of NAPL: | Volume removed: ml |

# Purging And Sampling Data Sheet

| | | |
|---|---|---|
| **Job#:** E1-130102 | **Sampler:** E Morse | **Client:** Orion |
| **Well ID:** RW-2 | **Date:** 1/2/13 | **Site:** San Lorenzo |
| **Well diam:** 1/4" 1" 2" 3" 4" (6") Other: | | **DTW:** 15.43 **Total Depth:** 26.55 |
| **Purge equip:** (ES - diam:) Bladder Peri Waterra Positive Air Displacement Ext. System | | |
| disp bailer teflon bailer other: | **Tubing:** OD: New Dedicated NA | |
| **Purge method:** (3-5 Case Volume) Micro/Low-Flow Extraction Other: | | |
| **Pump depth/ intake:** | **Multipliers:** 1"= 0.04 2"= 0.16 3"= 0.37 4"= 0.65 5"=1.02 6"= 1.47 Radius² X 0.163 | |
| (TD - DTW X Multiplier = 1 Volume | 80% Recovery (TD - DTW X 0.20 + DTW) | |

1 Volume = 16.34 X 3 = 49.01 (Total Purge) 80%= 17.65

| Time | Temp (°C / °F) | pH | Cond (mS / µS) | Turbidity (NTU) | Purge Rate (gpm or mL/ min) | Volume Removed (gal / L) | Notes |
|---|---|---|---|---|---|---|---|
| 1100 | 19.7 | 7.8 | 708 | 205 | 4.0 | 16.5 | |
| 1104 | 20.2 | 7.6 | 695 | 235 | 1 | 33.0 | |
| 1109 | 20.2 | 7.5 | 698 | 227 | 1 | 50.0 | |
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|---|---|---|
| Did well dewater? YES (NO) | Total volume removed: 50.0 (gal) / L) | |
| Sample method: (Disp Bailer) Ded. Tubing New Tubing Ext. Port Other: | | |
| Sample date: 1/2/13 | Sample time: 1115 | DTW at sample: 17.60 |
| Sample ID: RW-2 | Lab: Kiff | Number of bottles: 10 |
| Analysis: See COC | | |
| Equipment blank ID @ | Field blank ID @ | |
| Duplicate ID: | Pre-purge DO: 0.50 | Post purge DO: |
| $Fe2^+$: | Pre-purge ORP: 201 | Post purge ORP: |
| NAPL depth: | Volume of NAPL: | Volume removed: ml |

# ATTACHMENT C

# HISTORICAL GROUNDWATER ELEVATIONS

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[a] (feet MSL) | Water Table Elevation[b] (feet MSL) |
|---|---|---|---|---|
| MW-1 | 2/18/92 | 16.42 | 43.67 | 27.25 |
| | 5/14/92 | 17.28 | | 26.39 |
| | 5/15/92 | NM[c] | | --[d] |
| | 8/27/92 | 19.48 | | 24.19 |
| | 8/28/92 | NM | | -- |
| | 11/19/92 | 20.57 | | 23.10 |
| | 2/3/93 | 15.91 | | 27.76 |
| | 6/23/93 | 16.21 | | 27.46 |
| | 9/22/93 | 17.85 | | 25.82 |
| | 1/24/94 | 17.91 | | 25.76 |
| | 4/7/94 | 16.94 | | 26.73 |
| | 6/7/94 | 17.20 | | 26.47 |
| | 9/28/94 | 18.73 | | 24.94 |
| | 12/14/94 | 17.56 | | 26.11 |
| | 3/15/95 | 14.92 | | 28.75 |
| | 6/13/95 | 15.38 | | 28.29 |
| | 9/28/95 | 16.75 | | 26.92 |
| | 12/28/95 | 17.28 | | 26.39 |
| | 1/30/96 | NM | | -- |
| | 3/12/96 | 14.13 | | 29.54 |
| | 9/11/96 | 14.90 | | 28.77 |
| | 10/2/96 | 16.31 | | 27.36 |
| | 1/28/97 | 12.99 | | 30.68 |
| | 5/20/97 | 15.28 | | 28.39 |
| | 8/18/97 | 16.74 | | 26.93 |
| | 9/29/97 | NM | | -- |
| | 11/5/97 | 17.45 | | 26.22 |
| | 3/31/98 | 12.47 | | 31.20 |
| | 5/26/98 | 13.69 | | 29.98 |
| | 5/28/98 | NM | | -- |
| | 8/19/98 | 14.58 | | 29.09 |
| | 11/17/98 | 15.39 | | 28.28 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-1 | 2/18/99 | 13.52 | 43.67 | 30.15 |
| (cont.) | 6/24/99 | 15.02 | | 28.65 |
| | 8/30/99 | 15.87 | | 27.80 |
| | 11/9/99 | 16.65 | | 27.02 |
| | 3/22/00 | 13.96 | | 29.71 |
| | 6/12/00 | 15.23 | | 28.44 |
| | 11/15/00 | 17.05 | | 26.62 |
| | 2/26/01 | 15.46 | | 28.21 |
| | 5/21/01 | 16.22 | | 27.45 |
| | 9/5/01 | 11.25 | | 32.42 |
| | 11/7/01 | 18.01 | | 25.66 |
| | 2/11/02 | 15.77 | 45.98 | 30.21 |
| | 6/3/02 | 16.35 | | 29.63 |
| | 8/6/02 | 17.00 | | 28.98 |
| | 11/14/02 | 16.93 | | 29.05 |
| | 2/20/03 | 15.74 | | 30.24 |
| | 5/15/03 | 15.60 | | 30.38 |
| | 7/31/03 | 16.60 | | 29.38 |
| | 10/28/03 | 17.35 | | 28.63 |
| | 2/28/04 | 14.65 | | 31.33 |
| | 4/16/04 | 15.44 | | 30.54 |
| | 7/16/04 | 15.99 | | 29.99 |
| | 11/13/04 | 15.98 | | 30.00 |
| | 2/4/05 | 15.27 | | 30.71 |
| | 4/13/05 | 14.31 | | 31.67 |
| | 8/10/05 | 15.77 | | 30.21 |
| | 11/5/05 | 16.25 | | 29.73 |
| | 1/30/06 | 14.67 | | 31.31 |
| | 4/28/06 | 13.70 | | 32.28 |
| | 8/15/06 | 15.52 | | 30.46 |
| | 10/26/06 | 16.59 | | 29.39 |
| | 2/2/07 | 16.57 | | 29.41 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-1 | 4/30/07 | 16.17 | 45.98 | 29.81 |
| (cont.) | 7/18/07 | 16.90 | | 29.08 |
| | 10/30/07 | 17.34 | | 28.64 |
| | 1/28/08 | 15.61 | | 30.37 |
| | 3/14/08 | 15.45 | | 30.53 |
| | 5/13/08 | 16.12 | | 29.86 |
| | 7/16/08 | 16.65 | | 29.33 |
| | 9/5/08 | 17.31 | 46.36 | 29.05 |
| | 10/8/08 | 17.52 | | 28.84 |
| | 1/29/09 | 17.22 | | 29.14 |
| | 4/14/09 | 15.96 | | 30.40 |
| | 7/1/09 | 16.88 | | 29.48 |
| | 10/6/09 | 17.90 | | 28.46 |
| | 2/17/10 | 15.43 | | 30.93 |
| | 4/13/10 | 14.68 | | 31.68 |
| | 7/6/10 | 15.82 | | 30.54 |
| | 10/27/10 | 17.03 | | 29.33 |
| | 1/25/11 | 15.61 | | 30.75 |
| | 4/5/11 | 13.96 | | 32.40 |
| | 10/31/11 | 16.47 | | 29.89 |
| | 6/13/12 | 15.90 | | 30.46 |
| | 1/2/13 | 15.26 | | 31.10 |
| MW-2 | 2/18/92 | 16.65 | 43.09 | 26.44 |
| | 5/14/92 | 16.64 | | 26.45 |
| | 8/27/92 | 16.61 | | 26.48 |
| | 11/19/92 | 19.91 | | 23.18 |
| | 2/3/93 | 15.23 | | 27.86 |
| | 6/23/93 | 15.55 | | 27.54 |
| | 9/22/93 | 17.22 | | 25.87 |
| | 1/24/94 | 17.20 | | 25.89 |
| | 4/7/94 | 16.26 | | 26.83 |
| | 6/7/94 | 16.46 | | 26.63 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-2 | 9/28/94 | 18.06 | 43.09 | 25.03 |
| (cont.) | 12/14/94 | 16.86 | | 26.23 |
| | 3/15/95 | 14.08 | | 29.01 |
| | 6/13/95 | 14.67 | | 28.42 |
| | 9/28/95 | 16.07 | | 27.02 |
| | 12/28/95 | 16.46 | | 26.63 |
| | 3/12/96 | 13.11 | | 29.98 |
| | 6/13/96 | 14.14 | | 28.95 |
| | 10/2/96 | 15.71 | | 27.38 |
| | 1/28/97 | 12.05 | | 31.04 |
| | 5/20/97 | 14.65 | | 28.44 |
| | 8/18/97 | 16.00 | | 27.09 |
| | 9/29/97 | NM | | -- |
| | 11/5/97 | 16.75 | | 26.34 |
| | 3/31/98 | 11.54 | | 31.55 |
| | 5/26/98 | 12.78 | | 30.31 |
| | 5/28/98 | NM | | -- |
| | 8/19/98 | 14.40 | | 28.39 |
| | 11/17/98 | 15.18 | | 27.63 |
| | 2/18/99 | 14.07 | | 27.06 |
| | 6/24/99 | 14.70 | | 30.04 |
| | 8/30/99 | 15.46 | | 28.59 |
| | 11/9/99 | 16.03 | | 26.81 |
| | 3/22/00 | 13.05 | | 28.11 |
| | 6/12/00 | 14.50 | | 27.64 |
| | 11/15/00 | 16.28 | | 27.92 |
| | 2/26/01 | 14.98 | | 26.04 |
| | 5/21/01 | 15.45 | | 29.80 |
| | 9/5/01 | 15.17 | | 28.25 |
| | 11/7/01 | 17.05 | | 28.24 |
| | 2/11/02 | 13.29 | 45.23 | 31.94 |
| | 6/3/02 | 14.84 | | 30.39 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-2 | 8/6/02 | 14.85 | 45.23 | 30.38 |
| (cont.) | 11/14/02 | 15.35 | | 29.88 |
| | 2/20/03 | 14.08 | | 31.15 |
| | 5/15/03 | 14.55 | | 30.68 |
| | 7/31/03 | 15.30 | | 29.93 |
| | 10/28/03 | 14.93 | | 30.30 |
| | 2/28/04 | 13.56 | | 31.67 |
| | 4/16/04 | 14.40 | | 30.83 |
| | 7/16/04 | 15.03 | | 30.20 |
| | 11/13/04 | 15.00 | | 30.23 |
| | 2/4/05 | 14.26 | | 30.97 |
| | 4/13/05 | 13.19 | | 32.04 |
| | 8/10/05 | 14.84 | | 30.39 |
| | 11/5/05 | 15.39 | | 29.84 |
| | 1/30/06 | 13.54 | | 31.69 |
| | 4/28/06 | 12.55 | | 32.68 |
| | 8/15/06 | 14.57 | | 30.66 |
| | 10/26/06 | 15.54 | | 29.69 |
| | 2/2/07 | 15.60 | | 29.63 |
| | 4/30/07 | 15.19 | | 30.04 |
| | 7/18/07 | 15.96 | | 29.27 |
| | 10/30/07 | 16.41 | | 28.82 |
| | 1/28/08 | 14.63 | | 30.60 |
| | 3/14/08 | 14.57 | | 30.66 |
| | 5/13/08 | 15.12 | | 30.11 |
| | 7/16/08 | 15.89 | | 29.34 |
| | 9/5/08 | 16.44 | 45.61 | 29.17 |
| | 10/8/08 | 16.75 | | 28.86 |
| | 1/29/09 | 16.35 | | 29.26 |
| | 4/14/09 | 15.05 | | 30.56 |
| | 7/1/09 | 16.02 | | 29.59 |
| | 10/6/09 | 17.10 | | 28.51 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-2 | 2/17/10 | 14.50 | 45.61 | 31.11 |
| (cont.) | 4/13/10 | 13.55 | | 32.06 |
| | 7/6/10 | 14.96 | | 30.65 |
| | 10/27/10 | 16.18 | | 29.43 |
| | 1/25/11 | 14.73 | | 30.88 |
| | 4/5/11 | 12.85 | | 32.76 |
| | 10/31/11 | 15.52 | | 30.09 |
| | 6/13/12 | 14.91 | | 30.70 |
| | 1/2/13 | 14.28 | | 31.33 |
| MW-3 | 2/18/92 | 16.89 | 43.10 | 26.21 |
| | 5/14/92 | 16.60 | | 26.50 |
| | 5/15/92 | NM | | -- |
| | 8/27/92 | 18.96 | | 24.14 |
| | 8/28/92 | NM | | -- |
| | 11/18/92 | 20.38 | | 22.72 |
| | 11/19/92 | NM | | -- |
| | 2/3/93 | 15.43 | | 27.67 |
| | 6/23/93 | 15.67 | | 27.43 |
| | 9/22/93 | 17.20 | | 25.90 |
| | 1/24/94 | 17.35 | | 25.75 |
| | 4/7/94 | 14.48 | | 28.62 |
| | 6/7/94 | 13.37 | | 29.73 |
| | 9/28/94 | 18.05 | | 25.05 |
| | 12/14/94 | 16.92 | | 26.18 |
| | 3/15/95 | 14.22 | | 28.88 |
| | 6/13/95 | 14.49 | | 28.61 |
| | 9/28/95 | 15.17 | | 27.93 |
| | 12/28/95 | 15.45 | | 27.65 |
| | 1/30/96 | NM | | -- |
| | 3/12/96 | 11.35 | | 31.75 |
| | 6/11/96 | Dry[(e)] | | -- |
| | 10/2/96 | Dry[(e)] | | -- |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-3 | 1/28/97 | Dry[(e)] | 43.10 | -- |
| (cont.) | 5/20/97 | Dry[(e)] | | -- |
| | 7/10/97 | NM | | -- |
| | 8/18/97 | 16.05 | | 27.05 |
| | 9/29/97 | NM | | -- |
| | 11/5/97 | 16.78 | | 26.32 |
| | 3/31/98 | 11.55 | | 31.55 |
| | 5/26/98 | 12.80 | | 30.30 |
| | 5/28/98 | NM | | -- |
| | 8/19/98 | 14.27 | | 28.83 |
| | 11/17/98 | 15.11 | | 27.99 |
| | 2/18/99 | 13.30 | | 29.80 |
| | 6/24/99 | 14.44 | | 28.66 |
| | 8/30/99 | 15.05 | | 28.05 |
| | 11/9/99 | 15.72 | | 27.38 |
| | 3/22/00 | 13.21 | | 29.89 |
| | 6/12/00 | 14.31 | | 28.79 |
| | 11/15/00 | 16.13 | | 26.97 |
| | 2/26/01 | 14.48 | | 28.62 |
| | 5/21/01 | 15.30 | | 27.80 |
| | 9/5/01 | 16.10 | | 27.00 |
| | 11/7/01 | 17.40 | | 25.70 |
| | 2/11/02 | 13.56 | 45.21 | 31.65 |
| | 6/3/02 | 15.54 | | 29.67 |
| | 8/6/02 | 16.20 | | 29.01 |
| | 11/14/02 | 16.50 | | 28.71 |
| | 2/20/03 | 14.99 | | 30.22 |
| | 5/15/03 | 14.96 | | 30.25 |
| | 7/31/03 | 15.40 | | 29.81 |
| | 10/28/03 | 16.20 | | 29.01 |
| | 2/28/04 | 13.86 | | 31.35 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-3 | 4/16/04 | 14.89 | 45.21 | 30.32 |
| (cont.) | 7/16/04 | 15.42 | | 29.79 |
| MW-3R | 11/13/04 | 14.97 | 45.21 | 30.24 |
| | 2/4/05 | 14.22 | | 30.99 |
| | 4/13/05 | 13.44 | | 31.77 |
| | 8/10/05 | 14.80 | | 30.41 |
| | 11/5/05 | 15.22 | | 29.99 |
| | 1/30/06 | 13.69 | | 31.52 |
| | 4/28/06 | 12.68 | | 32.53 |
| | 8/15/06 | 14.54 | | 30.67 |
| | 10/26/06 | 23.85 | | 21.36 |
| | 2/2/07 | 21.96 | | 23.25 |
| | 4/30/07 | 19.40 | | 25.81 |
| | 7/18/07 | 23.11 | | 22.10 |
| | 10/30/07 | 22.71 | | 22.50 |
| | 1/28/08 | 16.78 | | 28.43 |
| | 3/14/08 | 14.38 | | 30.83 |
| | 5/13/08 | 15.07 | | 30.14 |
| | 7/16/08 | 15.63 | | 29.58 |
| | 9/5/08 | 16.20 | | 28.96 |
| | 10/8/08 | 16.41 | | 28.75 |
| | 1/29/09 | 16.11 | | 29.05 |
| | 4/14/09 | 14.86 | | 30.30 |
| | 7/1/09 | 15.73 | | 29.43 |
| | 10/6/09 | 16.69 | | 28.47 |
| | 2/17/10 | 14.30 | | 30.86 |
| | 4/13/10 | 13.50 | | 31.66 |
| | 7/6/10 | 14.70 | | 30.51 |
| | 10/27/10 | 15.90 | | 29.26 |
| | 1/25/11 | 14.50 | | 30.66 |
| | 4/5/11 | 12.72 | | 32.44 |
| | 10/31/11 | 15.30 | | 29.86 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-3R | 6/13/12 | 14.77 | 45.21 | 30.39 |
| (cont.) | 1/2/13 | 14.13 | | 31.03 |
| MW-4 | 2/18/92 | 18.51 | 44.66 | 26.15 |
| | 5/14/92 | 18.22 | | 26.44 |
| | 8/27/92 | 20.47 | | 24.19 |
| | 8/28/92 | NM | | -- |
| | 11/19/92 | 21.58 | | 23.08 |
| | 2/3/93 | 16.98 | | 27.68 |
| | 6/23/93 | 17.23 | | 27.43 |
| | 9/22/93 | 18.83 | | 25.83 |
| | 1/24/94 | 18.86 | | 25.80 |
| | 4/7/94 | 17.90 | | 26.76 |
| | 6/7/94 | 18.08 | | 26.58 |
| | 9/28/94 | 19.70 | | 24.96 |
| | 12/14/94 | 18.55 | | 26.11 |
| | 3/15/95 | 16.14 | | 28.52 |
| | 6/13/95 | 16.41 | | 28.25 |
| | 9/28/95 | 17.88 | | 26.78 |
| | 12/28/95 | 17.81 | | 26.85 |
| | 3/12/96 | 14.77 | | 29.89 |
| | 6/11/96 | 15.88 | | 28.78 |
| | 10/2/96 | 17.40 | | 27.26 |
| | 1/28/97 | 14.11 | | 30.55 |
| | 5/20/97 | 16.24 | | 28.42 |
| | 8/18/97 | 17.59 | | 27.07 |
| | 9/29/97 | NM | | -- |
| | 11/5/97 | 18.24 | | 26.42 |
| | 3/31/98 | 13.61 | | 31.05 |
| | 5/26/98 | 14.78 | | 29.88 |
| | 5/28/98 | NM | | -- |
| | 8/19/98 | 16.15 | | 28.51 |
| | 11/17/98 | 16.93 | | 27.73 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-4 | 2/18/99 | 15.30 | 46.98 | 29.36 |
| (cont.) | 6/24/99 | 16.35 | | 28.31 |
| | 8/30/99 | 17.12 | | 27.54 |
| | 11/9/99 | 17.60 | | 27.06 |
| | 3/22/00 | 14.98 | | 29.68 |
| | 6/12/00 | 16.26 | | 28.40 |
| | 11/15/00 | 17.98 | | 26.68 |
| | 2/26/01 | 16.31 | | 28.35 |
| | 5/21/01 | 17.15 | | 27.51 |
| | 9/5/01 | 18.22 | | 26.44 |
| | 11/7/01 | 19.01 | | 25.65 |
| | 2/11/02 | 16.68 | | 30.30 |
| | 6/3/02 | 17.29 | | 29.69 |
| | 8/6/02 | 17.92 | | 29.06 |
| | 11/14/02 | 17.92 | | 29.06 |
| | 2/20/03 | 16.72 | | 30.26 |
| | 5/15/03 | 16.51 | | 30.47 |
| | 7/31/03 | 17.41 | | 29.57 |
| | 10/28/03 | 18.30 | | 28.68 |
| | 2/28/04 | 15.82 | | 31.16 |
| | 4/16/04 | 16.42 | | 30.56 |
| | 7/16/04 | 16.94 | | 30.04 |
| | 11/13/04 | 17.00 | | 29.98 |
| | 2/4/05 | 16.25 | | 30.73 |
| | 4/13/05 | 15.33 | | 31.65 |
| | 8/10/05 | 16.74 | | 30.24 |
| | 11/5/05 | 17.23 | | 29.75 |
| | 1/30/06 | 15.62 | | 31.36 |
| | 4/28/06 | 14.71 | | 32.27 |
| | 8/15/06 | 16.46 | | 30.52 |
| | 10/26/06 | 17.45 | | 29.53 |
| | 2/2/07 | 17.52 | | 29.46 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-4 | 4/30/07 | 17.10 | 46.98 | 29.88 |
| (cont.) | 7/18/07 | 17.81 | | 29.17 |
| | 10/30/07 | 18.25 | | 28.73 |
| | 1/28/08 | 16.65 | | 30.33 |
| | 3/14/08 | 16.48 | | 30.50 |
| | 5/13/08 | 17.11 | | 29.87 |
| | 7/16/08 | 17.63 | | 29.35 |
| | 9/5/08 | 18.29 | 47.36 | 29.07 |
| | 10/8/08 | 18.50 | | 28.86 |
| | 1/29/09 | 18.20 | | 29.16 |
| | 4/14/09 | 17.02 | | 30.34 |
| | 7/1/09 | 17.86 | | 29.50 |
| | 10/6/09 | 18.90 | | 28.46 |
| | 2/17/10 | 16.49 | | 30.87 |
| | 4/13/10 | 15.80 | | 31.56 |
| | 7/6/10 | 16.82 | | 30.54 |
| | 10/27/10 | 18.02 | | 29.34 |
| | 1/25/11 | 16.64 | | 30.72 |
| | 4/5/11 | 14.95 | | 32.41 |
| | 10/31/11 | 17.45 | | 29.91 |
| | 6/13/12 | 14.92 | | 32.44 |
| | 1/2/13 | 16.30 | | 31.06 |
| MW-5 | 2/18/92 | 17.37 | 43.79 | 26.42 |
| | 5/14/92 | 17.29 | | 26.50 |
| | 8/27/92 | 22.18 | | 21.61 |
| | 11/19/92 | 20.68 | | 23.11 |
| | 2/3/93 | 15.91 | | 27.88 |
| | 6/23/93 | 16.24 | | 27.55 |
| | 9/22/93 | 17.93 | | 25.86 |
| | 1/24/94 | 17.82 | | 25.97 |
| | 4/7/94 | 16.91 | | 26.88 |
| | 6/7/94 | 17.10 | | 26.69 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-5 | 9/28/94 | 18.73 | 43.79 | 25.06 |
| (cont.) | 12/14/94 | 17.53 | | 26.26 |
| | 3/15/95 | 14.96 | | 28.83 |
| | 6/13/95 | 15.30 | | 28.49 |
| | 9/28/95 | 16.74 | | 27.05 |
| | 12/28/95 | 15.10 | | 28.69 |
| | 3/12/96 | 13.67 | | 30.12 |
| | 6/11/96 | 14.88 | | 28.91 |
| | 10/2/96 | 16.42 | | 27.37 |
| | 1/28/97 | 12.83 | | 30.96 |
| | 5/20/97 | 15.33 | | 28.46 |
| | 8/18/97 | 16.69 | | 27.10 |
| | 9/29/97 | NM | | -- |
| | 11/5/97 | 17.37 | | 26.42 |
| | 3/31/98 | 12.40 | | 31.39 |
| | 5/26/98 | 13.62 | | 30.17 |
| | 5/28/98 | NM | | -- |
| | 8/19/98 | 15.19 | | 28.60 |
| | 11/17/98 | 15.89 | | 27.90 |
| | 2/18/99 | 14.23 | | 29.56 |
| | 6/24/99 | 15.29 | | 28.50 |
| | 8/30/99 | 16.07 | | 27.72 |
| | 11/9/99 | 16.61 | | 27.18 |
| | 3/22/00 | 13.81 | | 29.98 |
| | 6/12/00 | 15.08 | | 28.71 |
| | 11/15/00 | 16.71 | | 27.08 |
| | 2/26/01 | 15.05 | | 28.74 |
| | 5/21/01 | 15.91 | | 27.88 |
| | 9/5/01 | 16.99 | | 26.80 |
| | 11/7/01 | 17.51 | | 26.28 |
| | 2/11/02 | 14.31 | 46.12 | 31.81 |
| | 6/3/02 | 14.96 | | 31.16 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-5 | 8/6/02 | 15.65 | 46.12 | 30.47 |
| (cont.) | 11/14/02 | 15.69 | | 30.43 |
| | 2/20/03 | 14.19 | | 31.93 |
| | 5/15/03 | 15.44 | | 30.68 |
| | 7/31/03 | 16.48 | | 29.64 |
| | 10/28/03 | 16.92 | | 29.20 |
| | 2/28/04 | 14.64 | | 31.48 |
| | 4/16/04 | 15.28 | | 30.84 |
| | 7/16/04 | 15.88 | | 30.24 |
| | 11/13/04 | 15.98 | | 30.14 |
| | 2/4/05 | 15.17 | | 30.95 |
| | 4/13/05 | 14.12 | | 32.00 |
| | 8/10/05 | 15.69 | | 30.43 |
| | 11/5/05 | 16.32 | | 29.80 |
| | 1/30/06 | 14.49 | | 31.63 |
| | 4/28/06 | 13.51 | | 32.61 |
| | 8/15/06 | 15.46 | | 30.66 |
| | 10/26/06 | 16.42 | | 29.70 |
| | 2/2/07 | 16.49 | | 29.63 |
| | 4/30/07 | 16.10 | | 30.02 |
| | 7/18/07 | 16.80 | | 29.32 |
| | 10/30/07 | 17.25 | | 28.87 |
| | 1/28/08 | 15.47 | | 30.65 |
| | 3/14/08 | 15.46 | | 30.66 |
| | 5/13/08 | 16.15 | | 29.97 |
| | 7/16/08 | 16.71 | | 29.41 |
| | 9/5/08 | 17.34 | 46.50 | 29.16 |
| | 10/8/08 | 17.60 | | 28.90 |
| | 1/29/09 | 17.23 | | 29.27 |
| | 4/14/09 | 15.95 | | 30.55 |
| | 7/1/09 | 16.89 | | 29.61 |
| | 10/6/09 | 18.00 | | 28.50 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-5 | 2/17/10 | 15.40 | 46.50 | 31.10 |
| (cont.) | 4/13/10 | 14.60 | | 31.90 |
| | 7/6/10 | 15.83 | | 30.67 |
| | 10/27/10 | 17.08 | | 29.42 |
| | 1/25/11 | 15.56 | | 30.94 |
| | 4/5/11 | 13.84 | | 32.66 |
| | 10/31/11 | 16.48 | | 30.02 |
| | 6/13/12 | 15.87 | | 30.63 |
| | 1/2/13 | 15.20 | | 31.30 |
| MW-6 | 2/18/92 | 15.87 | 42.47 | 26.60 |
| | 5/14/92 | 16.04 | | 26.43 |
| | 8/27/92 | 18.17 | | 24.30 |
| | 11/19/92 | 19.30 | | 23.17 |
| | 2/3/93 | 14.60 | | 27.87 |
| | 6/23/93 | 15.00 | | 27.47 |
| | 9/22/93 | 16.66 | | 25.81 |
| | 1/24/94 | 16.52 | | 25.95 |
| | 4/7/94 | 15.70 | | 26.77 |
| | 6/7/94 | 15.88 | | 26.59 |
| | 9/28/94 | 17.51 | | 24.96 |
| | 12/14/94 | 16.27 | | 26.20 |
| | 3/15/95 | 13.52 | | 28.95 |
| | 6/13/95 | 13.96 | | 28.51 |
| | 9/28/95 | 15.61 | | 26.86 |
| | 12/28/95 | 15.54 | | 26.93 |
| | 1/30/96 | NM | | -- |
| | 3/12/96 | 11.88 | | 30.59 |
| | 6/11/96 | 13.52 | | 28.95 |
| | 10/2/96 | 15.10 | | 27.37 |
| | 1/28/97 | 11.18 | | 31.29 |
| | 5/20/97 | 14.00 | | 28.47 |
| | 8/18/97 | 15.54 | | 26.93 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-6 | 9/29/97 | NM | 42.47 | -- |
| (cont.) | 11/5/97 | 16.25 | | 26.22 |
| | 3/31/98 | 10.60 | | 31.87 |
| | 5/26/98 | 12.01 | | 30.46 |
| | 5/28/98 | NM | | -- |
| | 8/19/98 | 13.60 | | 28.87 |
| | 11/17/98 | 14.53 | | 27.94 |
| | 2/18/99 | 12.39 | | 30.08 |
| | 6/24/99 | 13.89 | | 28.58 |
| | 8/30/99 | 14.75 | | 27.72 |
| | 11/9/99 | 15.18 | | 27.29 |
| | 3/22/00 | 12.30 | | 30.17 |
| | 6/12/00 | 13.69 | | 28.78 |
| | 11/15/00 | 15.73 | 44.79 | 26.74 |
| | 2/26/01 | 14.42 | | 28.05 |
| | 5/21/01 | 15.23 | | 27.24 |
| | 9/5/01 | 16.31 | | 26.16 |
| | 11/7/01 | 17.01 | | 25.46 |
| | 2/11/02 | 15.72 | | 29.07 |
| | 6/3/02 | 16.39 | | 28.40 |
| | 8/6/02 | 18.90 | | 25.89 |
| | 11/14/02 | 18.93 | | 25.86 |
| | 2/20/03 | 15.64 | | 29.15 |
| | 5/15/03 | 14.07 | | 30.72 |
| | 7/31/03 | 15.21 | | 29.58 |
| | 10/28/03 | 15.73 | | 29.06 |
| | 2/28/04 | 13.12 | | 31.67 |
| | 4/16/04 | 13.92 | | 30.87 |
| | 7/16/04 | 14.53 | | 30.26 |
| | 11/13/04 | 14.62 | | 30.17 |
| | 2/4/05 | 13.74 | | 31.05 |
| | 4/13/05 | 15.59 | | 29.20 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-6 | 8/10/05 | 14.33 | 44.79 | 30.46 |
| (cont.) | 11/5/05 | 14.98 | | 29.81 |
| | 1/30/06 | 12.99 | | 31.80 |
| | 4/28/06 | 11.90 | | 32.89 |
| | 8/15/06 | 14.13 | | 30.66 |
| | 10/26/06 | 15.08 | | 29.71 |
| | 2/2/07 | 15.16 | | 29.63 |
| | 4/30/07 | 14.76 | | 30.03 |
| | 7/18/07 | 15.53 | | 29.26 |
| | 10/30/07 | 16.00 | | 28.79 |
| | 1/28/08 | 14.09 | | 30.70 |
| | 3/14/08 | 14.12 | | 30.67 |
| | 5/13/08 | 14.89 | | 29.90 |
| | 7/16/08 | 15.51 | | 29.28 |
| | 9/5/08 | 16.08 | | 29.09 |
| | 10/8/08 | 16.34 | | 28.83 |
| | 1/29/09 | 15.98 | | 29.19 |
| | 4/14/09 | 14.62 | | 30.55 |
| | 7/1/09 | 15.60 | | 29.57 |
| | 10/6/09 | 16.70 | | 28.47 |
| | 2/17/10 | 14.03 | | 31.14 |
| | 4/13/10 | 9.57 | | 35.60 |
| | 7/6/10 | 14.50 | | 30.29 |
| | 10/27/10 | 15.78 | | 29.39 |
| | 1/25/11 | 14.19 | | 30.98 |
| | 4/5/11 | 12.25 | | 32.92 |
| | 10/31/11 | 16.19 | | 28.98 |
| | 6/13/12 | 14.53 | | 30.64 |
| | 1/2/13 | 13.78 | | 31.39 |
| MW-7 | 2/18/92 | 15.51 | 41.54 | 26.03 |
| | 5/14/92 | 15.41 | | 26.13 |
| | 8/27/92 | 17.45 | | 24.09 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-7 | 11/19/92 | 18.54 | 41.54 | 23.00 |
| (cont.) | 2/3/93 | 14.10 | | 27.44 |
| | 6/23/93 | 14.33 | | 27.21 |
| | 9/22/93 | 15.92 | | 25.62 |
| | 1/24/94 | 16.07 | | 25.47 |
| | 4/7/94 | 15.10 | | 26.44 |
| | 6/7/94 | 15.16 | | 26.38 |
| | 9/28/94 | 16.82 | | 24.72 |
| | 12/14/94 | 15.75 | | 25.79 |
| | 3/15/95 | 14.00 | | 27.54 |
| | 6/13/95 | 13.44 | | 28.10 |
| | 9/28/95 | 14.84 | | 26.70 |
| | 12/28/95 | 14.55 | | 26.99 |
| | 3/12/96 | 11.88 | | 29.66 |
| | 6/11/96 | 13.52 | | 28.02 |
| | 10/2/96 | 14.50 | | 27.04 |
| | 1/28/97 | 11.08 | | 30.46 |
| | 5/20/97 | 13.46 | | 28.08 |
| | 8/18/97 | 14.95 | | 26.59 |
| | 9/29/97 | NM | | -- |
| | 11/5/97 | 15.43 | | 26.11 |
| | 3/31/98 | 10.25 | | 31.29 |
| | 5/26/98 | 11.45 | | 30.09 |
| | 5/28/98 | NM | | -- |
| | 8/19/98 | 13.08 | | 28.46 |
| | 11/17/98 | 13.93 | | 27.61 |
| | 2/18/99 | 12.16 | | 29.38 |
| | 6/24/99 | 13.35 | | 28.19 |
| | 8/30/99 | 14.23 | | 27.31 |
| | 11/9/99 | 14.60 | | 26.94 |
| | 3/22/00 | 11.91 | | 29.63 |
| | 6/12/00 | 13.28 | | 28.26 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-7 | 11/15/00 | 15.12 | 41.54 | 26.42 |
| (cont.) | 2/26/01 | 13.46 | | 28.08 |
| | 5/21/01 | 14.31 | | 27.23 |
| | 9/5/01 | 15.42 | | 26.12 |
| | 11/7/01 | 16.18 | | 25.36 |
| | 2/11/02 | 13.76 | 43.85 | 30.09 |
| | 6/3/02 | 14.33 | | 29.52 |
| | 8/6/02 | 15.04 | | 28.81 |
| | 11/14/02 | 15.05 | | 28.80 |
| | 2/20/03 | 14.01 | | 29.84 |
| | 5/15/03 | 13.81 | | 30.04 |
| | 7/31/03 | 14.99 | | 28.86 |
| | 10/28/03 | 15.48 | | 28.37 |
| | 2/28/04 | 12.87 | | 30.98 |
| | 4/16/04 | 13.54 | | 30.31 |
| | 7/16/04 | 13.96 | | 29.89 |
| | 11/13/04 | 14.13 | | 29.72 |
| | 2/4/05 | 13.22 | | 30.63 |
| | 4/13/05 | 12.15 | | 31.70 |
| | 8/10/05 | 13.69 | | 30.16 |
| | 11/5/05 | 14.25 | | 29.60 |
| | 1/30/06 | 12.59 | | 31.26 |
| | 4/28/06 | 11.50 | | 32.35 |
| | 8/15/06 | 13.51 | | 30.34 |
| | 10/26/06 | 14.48 | | 29.37 |
| | 2/2/07 | 14.62 | | 29.23 |
| | 4/30/07 | 14.26 | | 29.59 |
| | 7/18/07 | 14.92 | | 28.93 |
| | 10/30/07 | 15.40 | | 28.45 |
| | 1/28/08 | 13.47 | | 30.38 |
| | 3/14/08 | 13.65 | | 30.20 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-7 | 5/13/08 | 14.31 | 43.85 | 29.54 |
| (cont.) | 7/16/08 | 14.91 | | 28.94 |
| | 9/5/08 | 15.47 | 44.24 | 28.77 |
| | 10/8/08 | 15.83 | | 28.41 |
| | 1/29/09 | 15.46 | | 28.78 |
| | 4/14/09 | 14.16 | | 30.08 |
| | 7/1/09 | 15.06 | | 29.18 |
| | 10/6/09 | 16.07 | | 28.17 |
| | 2/17/10 | 13.60 | | 30.64 |
| | 4/13/10 | 17.70 | | 26.54 |
| | 7/6/10 | 14.00 | | 30.24 |
| | 10/27/10 | 15.21 | | 29.03 |
| | 1/25/11 | 13.81 | | 30.43 |
| | 4/5/11 | 11.96 | | 32.28 |
| | 10/31/11 | 14.64 | | 29.60 |
| | 6/13/12 | 14.03 | | 30.21 |
| | 1/2/13 | 13.39 | | 30.85 |
| MW-8 | 2/18/92 | 16.57 | 42.26 | 25.69 |
| | 5/14/92 | 16.24 | | 26.02 |
| | 8/27/92 | 18.28 | | 23.98 |
| | 11/19/92 | 19.32 | | 22.94 |
| | 2/3/93 | 14.87 | | 27.39 |
| | 6/23/93 | 15.18 | | 27.08 |
| | 9/22/93 | 18.79 | | 23.47 |
| | 1/24/94 | 17.06 | | 25.20 |
| | 4/7/94 | 15.95 | | 26.31 |
| | 6/7/94 | 15.10 | | 27.16 |
| | 9/28/94 | 17.63 | | 24.63 |
| | 12/14/94 | 16.66 | | 25.60 |
| | 3/15/95 | 14.30 | | 27.96 |
| | 6/13/95 | 14.37 | | 27.89 |
| | 9/28/95 | 15.62 | | 26.64 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-8 | 12/28/95 | 15.62 | 42.26 | 26.64 |
| (cont.) | 3/12/96 | 12.75 | | 29.51 |
| | 6/11/96 | 13.94 | | 28.32 |
| | 10/2/96 | 15.41 | | 26.85 |
| | 1/28/97 | 12.30 | | 29.96 |
| | 5/20/97 | 14.42 | | 27.84 |
| | 8/18/97 | 16.16 | | 26.10 |
| | 9/29/97 | NM | | -- |
| | 11/5/97 | 16.25 | | 26.01 |
| | 3/31/98 | 11.49 | | 30.77 |
| | 5/26/98 | 12.60 | | 29.66 |
| | 5/28/98 | NM | | -- |
| | 8/19/98 | 14.15 | | 28.11 |
| | 11/17/98 | 14.98 | | 27.28 |
| | 2/18/99 | 13.41 | | 28.85 |
| | 6/24/99 | 14.35 | | 27.91 |
| | 8/30/99 | 15.16 | | 27.10 |
| | 11/9/99 | 15.61 | | 26.65 |
| | 3/22/00 | 13.17 | | 29.09 |
| | 6/12/00 | 14.19 | | 28.07 |
| | 11/15/00 | 16.04 | | 26.22 |
| | 2/26/01 | 12.99 | | 29.27 |
| | 5/21/01 | 13.86 | | 28.40 |
| | 9/5/01 | 14.91 | | 27.35 |
| | 11/7/01 | 15.62 | | 26.64 |
| | 2/11/02 | 13.55 | 44.58 | 31.03 |
| | 6/3/02 | 13.96 | | 30.62 |
| | 8/6/02 | 15.82 | | 28.76 |
| | 11/14/02 | 15.86 | | 28.72 |
| | 2/20/03 | 14.70 | | 29.88 |
| | 5/15/03 | 14.50 | | 30.08 |
| | 7/31/03 | 15.73 | | 28.85 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-8 | 10/28/03 | 16.14 | 44.58 | 28.44 |
| (cont.) | 2/28/04 | 14.02 | | 30.56 |
| | 4/16/04 | 14.52 | | 30.06 |
| | 7/16/04 | 14.88 | | 29.70 |
| | 11/13/04 | 15.12 | | 29.46 |
| | 2/4/05 | 14.17 | | 30.41 |
| | 4/13/05 | 13.16 | | 31.42 |
| | 8/10/05 | 14.41 | | 30.17 |
| | 11/5/05 | 14.87 | | 29.71 |
| | 1/30/06 | 13.65 | | 30.93 |
| | 4/28/06 | 12.63 | | 31.95 |
| | 8/15/06 | 14.42 | | 30.16 |
| | 10/26/06 | 15.32 | | 29.26 |
| | 2/2/07 | 15.52 | | 29.06 |
| | 4/30/07 | 15.15 | | 29.43 |
| | 7/18/07 | 15.80 | | 28.78 |
| | 10/30/07 | 16.23 | | 28.35 |
| | 1/28/08 | 14.81 | | 29.77 |
| | 3/14/08 | 14.67 | | 29.91 |
| | 5/13/08 | 15.30 | | 29.28 |
| | 7/16/08 | 15.82 | | 28.76 |
| | 9/5/08 | 16.35 | 44.95 | 28.60 |
| | 10/8/08 | 16.70 | | 28.25 |
| | 1/29/09 | 16.40 | | 28.55 |
| | 4/14/09 | 15.15 | | 29.80 |
| | 7/1/09 | 15.92 | | 29.03 |
| | 10/6/09 | 16.87 | | 28.08 |
| | 2/17/10 | 14.62 | | 30.33 |
| | 4/13/10 | 13.87 | | 31.08 |
| | 7/6/10 | 15.00 | | 29.95 |
| | 10/27/10 | 16.20 | | 28.75 |
| | 1/25/11 | 15.15 | | 29.80 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-8 | 4/5/11 | 13.02 | 44.95 | 31.93 |
| (cont.) | 10/31/11 | 15.64 | | 29.31 |
| | 6/13/12 | 15.05 | | 29.90 |
| | 1/2/13 | 14.42 | | 30.53 |
| MW-9 | 2/18/92 | 18.87 | 44.94 | 26.07 |
| | 5/14/92 | 18.55 | | 26.39 |
| | 8/27/92 | 20.80 | | 24.14 |
| | 11/19/92 | 21.90 | | 23.04 |
| | 2/3/93 | 17.25 | | 27.69 |
| | 6/23/93 | 17.61 | | 27.33 |
| | 9/22/93 | 19.18 | | 25.76 |
| | 1/24/94 | 19.17 | | 25.77 |
| | 4/7/94 | 18.23 | | 26.71 |
| | 6/7/94 | 18.40 | | 26.54 |
| | 9/28/94 | 20.01 | | 24.93 |
| | 12/14/94 | 18.88 | | 26.06 |
| | 3/15/95 | 16.24 | | 28.70 |
| | 6/13/95 | 16.75 | | 28.19 |
| | 9/28/95 | 18.04 | | 26.90 |
| | 12/28/95 | 17.87 | | 27.07 |
| | 3/12/96 | NM | | -- |
| | 6/11/96 | 16.26 | | 28.68 |
| | 10/2/96 | 17.74 | | 27.20 |
| | 1/28/97 | 14.51 | | 30.43 |
| | 5/20/97 | 16.73 | | 28.21 |
| | 8/18/97 | NM | | -- |
| | 9/29/97 | NM | | -- |
| | 11/5/97 | 18.61 | | 26.33 |
| | 3/31/98 | NM | | -- |
| | 5/26/98 | 15.28 | | 29.66 |
| | 5/28/98 | NM | | -- |
| | 8/19/98 | 16.55 | | 28.39 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-9 | 11/17/98 | 17.32 | 44.94 | 27.62 |
| (cont.) | 2/18/99 | 15.74 | | 29.20 |
| | 6/24/99 | 16.73 | | 28.21 |
| | 8/30/99 | 17.48 | | 27.46 |
| | 11/9/99 | 17.98 | | 26.96 |
| | 3/22/00 | 15.46 | | 29.48 |
| | 6/12/00 | 16.70 | | 28.24 |
| | 11/15/00 | 18.65 | | 26.29 |
| | 2/26/01 | 14.80 | | 30.14 |
| | 5/21/01 | 15.68 | | 29.26 |
| | 9/5/01 | 16.70 | | 28.24 |
| | 11/7/01 | 17.23 | | 27.71 |
| | 2/11/02 | 17.16 | 47.26 | 30.10 |
| | 6/3/02 | 17.66 | | 29.60 |
| | 8/6/02 | 18.26 | | 29.00 |
| | 11/14/02 | 18.33 | | 28.93 |
| | 2/20/03 | 16.85 | | 30.41 |
| | 5/15/03 | 16.63 | | 30.63 |
| | 7/31/03 | 17.58 | | 29.68 |
| | 10/28/03 | 17.93 | | 29.33 |
| | 2/28/04 | 16.22 | | 31.04 |
| | 4/16/04 | 16.82 | | 30.44 |
| | 7/16/04 | 17.33 | | 29.93 |
| | 11/13/04 | 17.42 | | 29.84 |
| | 2/4/05 | 16.68 | | 30.58 |
| | 4/13/05 | 15.78 | | 31.48 |
| | 8/10/05 | 17.11 | | 30.15 |
| | 11/5/05 | 17.59 | | 29.67 |
| | 1/30/06 | 16.06 | | 31.20 |
| | 4/28/06 | 12.50 | | 34.76 |
| | 8/15/06 | 16.87 | | 30.39 |
| | 10/26/06 | 17.87 | | 29.39 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-9 | 2/2/07 | 17.88 | 47.26 | 29.38 |
| (cont.) | 4/30/07 | 17.48 | | 29.78 |
| | 7/18/07 | 18.15 | | 29.11 |
| | 10/30/07 | 18.55 | | 28.71 |
| | 1/28/08 | 16.98 | | 30.28 |
| | 3/14/08 | 16.89 | | 30.37 |
| | 5/13/08 | 17.48 | | 29.78 |
| | 7/16/08 | 17.95 | | 29.31 |
| | 9/5/08 | 18.61 | 47.65 | 29.04 |
| | 10/8/08 | 18.89 | | 28.76 |
| | 1/29/09 | 18.58 | | 29.07 |
| | 4/14/09 | 17.34 | | 30.31 |
| | 7/1/09 | 18.22 | | 29.43 |
| | 10/6/09 | 19.30 | | 28.35 |
| | 2/17/10 | 16.89 | | 30.76 |
| | 4/13/10 | 16.20 | | 31.45 |
| | 7/6/10 | 17.20 | | 30.45 |
| | 10/27/10 | 18.40 | | 29.25 |
| | 1/25/11 | 17.00 | | 30.65 |
| | 4/5/11 | 15.50 | | 32.15 |
| | 10/31/11 | 17.87 | | 29.78 |
| | 6/13/12 | 17.29 | | 30.36 |
| | 1/2/13 | 16.75 | | 30.90 |
| MW-10 | 2/18/92 | 16.63 | 42.34 | 25.71 |
| | 5/14/92 | 15.25 | | 27.09 |
| | 5/15/92 | NM | | -- |
| | 8/27/92 | 18.35 | | 23.99 |
| | 8/29/92 | NM | | -- |
| | 11/19/92 | 19.43 | | 22.91 |
| | 2/3/93 | 15.01 | | 27.33 |
| | 6/23/93 | 15.30 | | 27.04 |
| | 9/22/93 | 16.90 | | 25.44 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-10 | 1/24/94 | NM | 42.34 | -- |
| (cont.) | 4/7/94 | 15.97 | | 26.37 |
| | 6/7/94 | 16.04 | | 26.30 |
| | 9/28/94 | 17.69 | | 24.65 |
| | 12/14/94 | 16.65 | | 25.69 |
| | 3/15/95 | 14.08 | | 28.26 |
| | 6/13/95 | 14.49 | | 27.85 |
| | 9/28/95 | 15.81 | | 26.53 |
| | 12/28/95 | 15.46 | | 26.88 |
| | 3/12/96 | 12.62 | | 29.72 |
| | 6/11/96 | 14.40 | | 27.94 |
| | 10/2/96 | 15.47 | | 26.87 |
| | 1/28/97 | 15.69 | | 26.65 |
| | 5/20/97 | 14.48 | | 27.86 |
| | 8/18/97 | 15.91 | | 26.43 |
| | 9/29/97 | NM | | -- |
| | 11/5/97 | 16.32 | | 26.02 |
| | 3/31/98 | 12.25 | | 30.09 |
| | 5/26/98 | 12.97 | | 29.37 |
| | 5/28/98 | NM | | -- |
| | 8/19/98 | 14.27 | | 28.07 |
| | 11/17/98 | 15.08 | | 27.26 |
| | 2/18/99 | 13.61 | | 28.73 |
| | 6/24/99 | 14.50 | | 27.84 |
| | 8/30/99 | 15.26 | | 27.08 |
| | 11/9/99 | 15.72 | | 26.62 |
| | 3/22/00 | 13.40 | | 28.94 |
| | 6/12/00 | 14.42 | | 27.92 |
| | 11/15/00 | 16.75 | | 25.59 |
| | 2/26/01 | 14.73 | | 27.61 |
| | 5/21/01 | 15.25 | | 27.09 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-10 | 9/5/01 | 16.35 | 42.34 | 25.99 |
| (cont.) | 11/7/01 | 17.05 | | 25.29 |
| | 2/11/02 | 14.94 | 44.65 | 29.71 |
| | 6/3/02 | 15.41 | | 29.24 |
| | 8/6/02 | 15.98 | | 28.67 |
| | 11/14/02 | 16.10 | | 28.55 |
| | 2/20/03 | 14.90 | | 29.75 |
| | 5/15/03 | 14.69 | | 29.96 |
| | 7/31/03 | 15.63 | | 29.02 |
| | 10/28/03 | 16.39 | | 28.26 |
| | 2/28/04 | 14.01 | | 30.64 |
| | 4/16/04 | 14.69 | | 29.96 |
| | 7/16/04 | 15.09 | | 29.56 |
| | 11/13/04 | 15.24 | | 29.41 |
| | 2/4/05 | 14.43 | | 30.22 |
| | 4/13/05 | 13.61 | | 31.04 |
| | 8/10/05 | 14.82 | | 29.83 |
| | 11/5/05 | 15.20 | | 29.45 |
| | 1/30/06 | 13.97 | | 30.68 |
| | 4/28/06 | 13.22 | | 31.43 |
| | 8/15/06 | 14.63 | | 30.02 |
| | 10/26/06 | 15.49 | | 29.16 |
| | 2/2/07 | 15.60 | | 29.05 |
| | 4/30/07 | 15.30 | | 29.35 |
| | 7/18/07 | 15.91 | | 28.74 |
| | 10/30/07 | 16.32 | | 28.33 |
| | 1/28/08 | 14.93 | | 29.72 |
| | 3/14/08 | 14.74 | | 29.91 |
| | 5/13/08 | 15.31 | | 29.34 |
| | 7/16/08 | 15.75 | | 28.90 |
| | 9/5/08 | 16.40 | 45.04 | 28.64 |
| | 10/8/08 | 16.62 | | 28.42 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-10 | 1/29/09 | 16.42 | 45.04 | 28.62 |
| (cont.) | 4/14/09 | 15.24 | | 29.80 |
| | 7/1/09 | 16.00 | | 29.04 |
| | 10/6/09 | 16.98 | | 28.06 |
| | 2/17/10 | 14.72 | | 30.32 |
| | 4/13/10 | 14.08 | | 30.96 |
| | 7/6/10 | 15.05 | | 29.99 |
| | 10/27/10 | 16.20 | | 28.84 |
| | 1/25/11 | 14.90 | | 30.14 |
| | 4/5/11 | 13.40 | | 31.64 |
| | 10/31/11 | 15.70 | | 29.34 |
| | 6/13/12 | 15.13 | | 29.91 |
| | 1/2/13 | 14.62 | | 30.42 |
| MW-11 | 2/18/92 | 17.00 | 45.00 | 28.00 |
| | 5/14/92 | 19.02 | | 25.98 |
| | 8/27/92 | 21.13 | | 23.87 |
| | 11/19/92 | 17.91 | | 27.09 |
| | 2/3/93 | 17.91 | | 27.09 |
| | 6/23/93 | 18.14 | | 26.86 |
| | 9/22/93 | 19.63 | | 25.37 |
| | 1/24/94 | 19.79 | | 25.21 |
| | 4/7/94 | 18.78 | | 26.22 |
| | 6/7/94 | 18.88 | | 26.12 |
| | 9/28/94 | 20.45 | | 24.55 |
| | 12/14/94 | 19.45 | | 25.55 |
| | 3/15/95 | 17.32 | | 27.68 |
| | 6/13/95 | 17.43 | | 27.57 |
| | 9/28/95 | 18.67 | | 26.33 |
| | 12/28/95 | 18.31 | | 26.69 |
| | 3/12/96 | 15.89 | | 29.11 |
| | 6/11/96 | 16.98 | | 28.02 |
| | 10/2/96 | 18.20 | | 26.80 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-11 | 1/28/97 | 12.53 | 45.00 | 32.47 |
| (cont.) | 5/20/97 | 17.36 | | 27.64 |
| | 8/18/97 | 18.84 | | 26.16 |
| | 9/29/97 | NM | | -- |
| | 11/5/97 | NM | | -- |
| | 3/31/98 | 15.39 | | 29.61 |
| | 5/26/98 | 16.25 | | 28.75 |
| | 5/28/98 | NM | | -- |
| | 8/19/98 | 17.30 | | 27.70 |
| | 11/17/98 | 18.05 | | 26.95 |
| | 2/18/99 | 16.87 | | 28.13 |
| | 6/24/99 | 17.50 | | 27.50 |
| | 8/30/99 | 18.19 | | 26.81 |
| | 11/9/99 | 18.64 | | 26.36 |
| | 3/22/00 | 16.52 | | 28.48 |
| | 6/12/00 | 17.44 | | 27.56 |
| | 11/15/00 | 19.07 | | 25.93 |
| | 2/26/01 | 17.80 | | 27.20 |
| | 5/21/01 | 18.23 | | 26.77 |
| | 9/5/01 | 19.21 | | 25.79 |
| | 11/7/01 | 19.80 | | 25.20 |
| | 2/11/02 | 17.40 | 47.36 | 29.96 |
| | 6/3/02 | 18.30 | | 29.06 |
| | 8/6/02 | 18.80 | | 28.56 |
| | 11/14/02 | 18.94 | | 28.42 |
| | 2/20/03 | 17.46 | | 29.90 |
| | 5/15/03 | 17.64 | | 29.72 |
| | 7/31/03 | 18.81 | | 28.55 |
| | 10/28/03 | 19.20 | | 28.16 |
| | 2/28/04 | 17.33 | | 30.03 |
| | 4/16/04 | 17.67 | | 29.69 |
| | 7/16/04 | 18.01 | | 29.35 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-11 | 11/13/04 | 18.19 | 47.36 | 29.17 |
| (cont.) | 2/4/05 | 17.47 | | 29.89 |
| | 4/13/05 | 16.81 | | 30.55 |
| | 8/10/05 | 17.74 | | 29.62 |
| | 11/5/05 | 18.14 | | 29.22 |
| | 1/30/06 | 17.11 | | 30.25 |
| | 4/28/06 | 16.49 | | 30.87 |
| | 8/15/06 | 17.61 | | 29.75 |
| | 10/26/06 | 18.32 | | 29.04 |
| | 2/2/07 | 18.50 | | 28.86 |
| | 4/30/07 | 18.17 | | 29.19 |
| | 7/18/07 | 18.71 | | 28.65 |
| | 10/30/07 | 19.11 | | 28.25 |
| | 1/28/08 | 17.87 | | 29.49 |
| | 3/14/08 | 17.76 | | 29.60 |
| | 5/13/08 | 18.23 | | 29.13 |
| | 7/16/08 | 18.67 | | 28.69 |
| | 9/5/08 | 19.21 | | 28.48 |
| | 10/8/08 | 19.52 | | 28.17 |
| | 1/29/09 | 19.28 | | 28.41 |
| | 4/14/09 | 18.21 | | 29.48 |
| | 7/1/09 | 18.90 | | 28.79 |
| | 10/6/09 | 19.80 | | 27.89 |
| | 2/17/10 | 17.74 | | 29.95 |
| | 4/13/10 | 17.24 | | 30.45 |
| | 7/6/10 | 18.05 | | 29.64 |
| | 10/27/10 | 19.10 | | 28.59 |
| | 1/25/11 | 17.92 | | 29.77 |
| | 4/5/11 | 16.67 | | 31.02 |
| | 10/31/11 | 18.62 | | 29.07 |
| | 6/13/12 | 18.11 | | 29.58 |
| | 1/2/13 | 17.67 | | 30.02 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| MW-12 | 7/18/07 | 18.00 | 46.88 | 28.88 |
| | 10/30/07 | 18.42 | | 28.46 |
| | 1/28/08 | 16.96 | | 29.92 |
| | 3/14/08 | 16.83 | | 30.05 |
| | 5/13/08 | 17.35 | | 29.53 |
| | 7/16/08 | 17.70 | | 29.18 |
| | 9/5/08 | 18.51 | 47.27 | 28.76 |
| | 10/8/08 | 18.75 | | 28.52 |
| | 1/29/09 | 18.49 | | 28.78 |
| | 4/14/09 | 17.34 | | 29.93 |
| | 7/1/09 | 18.13 | | 29.14 |
| | 10/6/09 | 19.03 | | 28.24 |
| | 2/17/10 | 16.90 | | 30.37 |
| | 4/13/10 | 16.28 | | 30.99 |
| | 7/6/10 | 17.19 | | 30.08 |
| | 10/27/10 | 18.30 | | 28.97 |
| | 1/25/11 | 17.05 | | 30.22 |
| | 4/5/11 | 15.60 | | 31.67 |
| | 10/31/11 | 17.75 | | 29.52 |
| | 6/13/12 | 17.29 | | 29.98 |
| | 1/2/13 | 16.74 | | 30.53 |
| RW-1 | 5/14/92 | 16.88 | 43.17 | 26.29 |
| | 5/15/92 | NM | | -- |
| | 8/27/92 | 19.05 | | 24.12 |
| | 11/19/92 | 21.11 | | 22.06 |
| | 2/3/93 | 15.48 | | 27.69 |
| | 6/23/93 | 28.25 | | 14.92 |
| | 9/22/93 | 17.83 | | 25.34 |
| | 1/24/94 | 24.00 | | 19.17 |
| | 4/7/94 | 16.05 | | 27.12 |
| | 6/7/94 | 16.00 | | 27.17 |
| | 9/28/94 | 18.35 | | 24.82 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| RW-1 | 12/14/94 | 19.50 | 43.17 | 23.67 |
| (cont.) | 3/15/95 | 17.00 | | 26.17 |
| | 4/10/95 | NM | | -- |
| | 6/13/95 | 14.95 | | 28.22 |
| | 9/28/95 | 27.63 | | 15.54 |
| | 12/28/95 | 14.54 | | 28.63 |
| | 3/12/96 | 11.02 | | 32.15 |
| | 6/11/96 | 14.52 | | 28.65 |
| | 10/2/96 | 15.53 | | 27.64 |
| | 1/28/97 | 12.59 | | 30.58 |
| | 5/20/97 | 14.85 | | 28.32 |
| | 8/18/97 | 16.19 | | 26.98 |
| | 9/29/97 | NM | | -- |
| | 11/5/97 | 16.95 | | 26.22 |
| | 3/31/98 | 11.85 | | 31.32 |
| | 5/26/98 | 13.13 | | 30.04 |
| | 5/28/98 | NM | | -- |
| | 8/19/98 | 14.70 | | 28.47 |
| | 11/17/98 | 15.54 | | 27.63 |
| | 2/18/99 | 13.75 | | 29.42 |
| | 6/24/99 | 14.96 | | 28.21 |
| | 8/30/99 | 15.75 | | 27.42 |
| | 11/9/99 | 17.45 | | 25.72 |
| | 3/22/00 | 13.51 | | 29.66 |
| | 6/12/00 | 13.65 | | 29.52 |
| | 11/15/00 | 29.45 | | 13.72 |
| | 2/26/01 | 28.40 | | 14.77 |
| | 5/21/01 | 15.36 | | 27.81 |
| | 9/5/01 | 26.90 | | 16.27 |
| | 11/7/01 | 28.41 | | 14.76 |
| | 2/11/02 | 27.61 | 45.47 | 17.86 |
| | 6/3/02 | 26.90 | | 18.57 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| RW-1 | 8/6/02 | 25.56 | 45.47 | 19.91 |
| (cont.) | 11/14/02 | 24.83 | | 20.64 |
| | 2/20/03 | 23.56 | | 21.91 |
| | 5/15/03 | 22.80 | | 22.67 |
| | 7/31/03 | 21.71 | | 23.76 |
| | 10/28/03 | 22.07 | | 23.40 |
| | 2/28/04 | 19.32 | | 26.15 |
| | 4/16/04 | 23.95 | | 21.52 |
| | 7/16/04 | 30.04 | | 15.43 |
| | 11/13/04 | 15.63 | | 29.84 |
| | 2/4/05 | 18.57 | | 26.90 |
| | 4/13/05 | 24.21 | | 21.26 |
| | 8/10/05 | 33.59 | | 11.88 |
| | 11/5/05 | 25.63 | | 19.84 |
| | 1/30/06 | 24.39 | | 21.08 |
| | 4/28/06 | 16.32 | | 29.15 |
| | 8/15/06 | 34.04 | | 11.43 |
| | 10/26/06 | 25.48 | | 19.99 |
| | 2/2/07 | 16.62 | | 28.85 |
| | 4/30/07 | NM | | -- |
| | 7/18/07 | 30.72 | | 14.75 |
| | 10/30/07 | 31.15 | | 14.32 |
| | 1/28/08 | 26.79 | | 18.68 |
| | 3/14/08 | 15.14 | | 30.33 |
| | 5/13/08 | 15.79 | | 29.68 |
| | 7/16/08 | 16.32 | | 29.15 |
| | 9/5/08 | 16.93 | 45.86 | 28.93 |
| | 10/8/08 | 17.21 | | 28.65 |
| | 1/29/09 | 16.87 | | 28.99 |
| | 4/14/09 | 15.63 | | 30.23 |
| | 7/1/09 | 16.53 | | 29.33 |
| | 10/6/09 | 17.48 | | 28.38 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| RW-1 (cont.) | 2/17/10 | 15.08 | 45.86 | 30.78 |
| | 4/13/10 | 14.30 | | 31.56 |
| | 7/6/10 | 15.48 | | 30.38 |
| | 10/27/10 | 16.70 | | 29.16 |
| | 1/25/11 | 15.25 | | 30.61 |
| | 4/5/11 | 13.43 | | 32.43 |
| | 10/31/11 | 16.02 | | 29.84 |
| | 6/13/12 | 15.49 | | 30.37 |
| | 1/2/13 | 14.85 | | 31.01 |
| RW-2 | 11/13/04 | 16.17 | 45.00 | 28.83 |
| | 2/4/05 | 15.44 | | 29.56 |
| | 4/13/05 | 14.54 | | 30.46 |
| | 8/10/05 | 15.93 | | 29.07 |
| | 11/5/05 | 16.36 | | 28.64 |
| | 1/30/06 | 14.83 | | 30.17 |
| | 4/28/06 | 13.93 | | 31.07 |
| | 8/15/06 | 15.67 | | 29.33 |
| | 10/26/06 | 23.50 | | 21.50 |
| | 2/2/07 | 14.27 | | 30.73 |
| | 4/30/07 | 18.35 | | 26.65 |
| | 7/18/07 | 17.95 | | 27.05 |
| | 10/30/07 | 17.63 | | 27.37 |
| | 1/28/08 | 15.91 | | 29.09 |
| | 3/14/08 | 15.69 | | 29.31 |
| | 5/13/08 | 16.32 | | 28.68 |
| | 7/16/08 | 16.81 | | 28.19 |
| | 9/5/08 | 17.39 | 46.40 | 29.01 |
| | 10/8/08 | 17.63 | | 28.77 |
| | 1/29/09 | 17.35 | | 29.05 |
| | 4/14/09 | 16.20 | | 30.20 |
| | 7/1/09 | 17.00 | | 29.40 |
| | 10/6/09 | 18.00 | | 28.40 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| RW-2 (cont.) | 2/17/10 | 15.64 | 46.40 | 30.76 |
| | 4/13/10 | 14.90 | | 31.50 |
| | 7/6/10 | 15.95 | | 30.45 |
| | 10/27/10 | 17.17 | | 29.23 |
| | 1/25/11 | 15.74 | | 30.66 |
| | 4/5/11 | 14.13 | | 32.27 |
| | 10/31/11 | 16.59 | | 29.81 |
| | 6/13/12 | 16.02 | | 30.38 |
| | 1/2/13 | 15.43 | | 30.97 |
| OS-1 | 9/5/08 | 18.14 | 47.19 | 29.05 |
| | 10/8/08 | 18.41 | | 28.78 |
| | 1/29/09 | 18.10 | | 29.09 |
| | 4/14/09 | 16.86 | | 30.33 |
| | 7/1/09 | 17.78 | | 29.41 |
| | 10/6/09 | 18.78 | | 28.41 |
| | 10/6/09 | 18.78 | | 28.41 |
| | 2/17/10 | 16.37 | | 30.82 |
| | 1/25/11 | 16.53 | | 30.66 |
| OS-2 | 9/5/08 | 17.75 | 46.79 | 29.04 |
| | 10/8/08 | NM | | -- |
| | 1/29/09 | 17.74 | | 29.05 |
| | 4/14/09 | 16.50 | | 30.29 |
| | 7/1/09 | 17.38 | | 29.41 |
| | 10/6/09 | 18.42 | | 28.37 |
| | 10/6/09 | 18.42 | | 28.37 |
| | 2/17/10 | 16.00 | | 30.79 |
| | 1/25/11 | 16.15 | | 30.64 |
| OS-3 | 9/5/08 | 16.68 | 45.68 | 29.00 |
| | 10/8/08 | 16.95 | | 28.73 |
| | 1/29/09 | 16.60 | | 29.08 |
| | 4/14/09 | 15.33 | | 30.35 |
| | 7/1/09 | 16.26 | | 29.42 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| OS-3 | 10/6/09 | 17.30 | 45.68 | 28.38 |
| (cont.) | 10/6/09 | 17.30 | | 28.38 |
| | 2/17/10 | 14.80 | | 30.88 |
| | 1/25/11 | 14.94 | | 30.74 |
| OS-4 | 9/5/08 | 17.00 | 46.02 | 29.02 |
| | 10/8/08 | 17.26 | | 28.76 |
| | 1/29/09 | 16.97 | | 29.05 |
| | 4/14/09 | 15.70 | | 30.32 |
| | 7/1/09 | 16.61 | | 29.41 |
| | 10/6/09 | 17.63 | | 28.39 |
| | 10/6/09 | 17.63 | | 28.39 |
| | 2/17/10 | 15.16 | | 30.86 |
| | 1/25/11 | 15.34 | | 30.68 |
| PT-1 | 9/5/08 | 17.50 | 46.48 | 28.98 |
| | 10/8/08 | 17.77 | | 28.71 |
| | 1/29/09 | 17.47 | | 29.01 |
| | 4/14/09 | 16.21 | | 30.27 |
| | 7/1/09 | 17.10 | | 29.38 |
| | 10/6/09 | 18.10 | | 28.38 |
| | 10/6/09 | 18.10 | | 28.38 |
| | 2/17/10 | 15.66 | | 30.82 |
| | 7/6/10 | 16.10 | | 30.38 |
| | 10/27/10 | 17.27 | | 29.21 |
| | 1/25/11 | 15.85 | | 30.63 |
| | 4/5/11 | 14.20 | | 32.28 |
| | 10/31/11 | 16.69 | | 29.79 |

**TABLE C-1**

**HISTORICAL WELL AND GROUNDWATER ELEVATIONS**
**TESORO - SAN LORENZO, 67107**

| Well No. | Date of Measurement | Depth to Water (feet below casing) | PVC Casing Elevation[(a)] (feet MSL) | Water Table Elevation[(b)] (feet MSL) |
|---|---|---|---|---|
| PT-1 | 6/13/12 | 16.09 | 46.48 | 30.39 |
| (cont.) | 1/2/13 | 15.73 | | 30.75 |

(a) Elevation of PVC well casing relative to mean sea level (MSL), provided by RDM Environmental, Inc. (RDM), Fourth Quarter 2007 Groundwater Monitoring Report.
Wells were surveyed by Cross Land Surveying, Inc., per AB 2886 requirements on 26 September 2008.
(b) Difference between "PVC Casing Elevation" and "Depth to Water."
(c) NM - Well not measured.
(d) "--" - Not calculated.
(e) Field logs noted well was plugged at 14 feet below top of casing on 20 May 1997.

# ATTACHMENT D

# HISTORICAL GROUNDWATER ANALYTICAL RESULTS

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| MW-1 | 5/15/92 | 41,000 | 2,000 | 47 | 1,200 | 400 | --[e] | -- | -- | -- | -- |
| | 8/28/92 | 110,000 | 3,800 | 54 | 850 | 970 | -- | -- | -- | -- | -- |
| | 11/19/92 | 3,600 | 200 | ND<0.5[f] | 90 | 140 | -- | -- | -- | -- | -- |
| | 2/3/93 | 3,000 | 180 | 22 | 79 | 130 | -- | -- | -- | -- | -- |
| | 6/23/93 | 12,000 | 2,400 | 74 | 650 | 510 | -- | -- | -- | -- | -- |
| | 9/22/93 | 23,000 | 3,000 | 290 | 1,100 | 1,200 | -- | -- | -- | -- | -- |
| | 1/24/94 | 18,000 | 2,400 | 280 | 1,100 | 1,700 | -- | -- | -- | -- | -- |
| | 4/7/94 | 20,000 | 4,200 | 820 | 1,600 | 2,100 | -- | -- | -- | -- | -- |
| | 6/7/94 | 26,000 | 1,800 | 510 | 1,100 | 1,600 | -- | -- | -- | -- | -- |
| | 9/28/94 | 18,000 | 1,700 | 210 | 970 | 870 | -- | -- | -- | -- | -- |
| | 12/14/94 | 31,000 | 4,400 | 2,400 | 2,300 | 4,300 | -- | -- | -- | -- | -- |
| | 3/15/95 | 17,000 | 830 | 310 | 840 | 1,200 | -- | -- | -- | -- | -- |
| | 6/13/95 | 22,000 | 1,300 | 99 | 1,500 | 1,100 | -- | -- | -- | -- | -- |
| | 9/28/95 | 8,800 | 580 | ND<25 | 780 | 410 | -- | -- | -- | -- | -- |
| | 12/28/95 | 4,800 | 4.9 | ND<1.3 | ND<1.3 | 290 | 74 | -- | -- | -- | -- |
| | 1/30/96 | 1,500 | 17 | 7.1 | 20 | 45 | 63 | -- | -- | -- | -- |
| | 3/12/96 | 110 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 44 | -- | -- | -- | -- |
| | 9/11/96 | 600 | 48 | 0.90 | 37 | 26 | 75 | -- | -- | -- | -- |
| | 10/2/96 | 210 | 16 | ND<0.5 | 6.0 | 0.92 | 11 | -- | -- | -- | -- |
| | 1/28/97 | 150 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 160 | -- | -- | -- | -- |
| | 5/20/97 | 680 | ND<2.5 | ND<2.5 | ND<2.5 | ND<2.5 | 640 | -- | -- | -- | -- |
| | 8/18/97 | ND<250 | ND<2.5 | ND<2.5 | ND<2.5 | ND<2.5 | 540 | -- | -- | -- | -- |
| | 11/5/97 | ND<250 | 2.8 | ND<2.5 | ND<2.5 | ND<2.5 | 390 | -- | -- | -- | -- |
| | 3/31/98 | 3,300 | 260 | 13 | 110 | 150 | 7,900 | -- | -- | -- | -- |
| | 5/28/98 | 7,800 | 120 | ND<10 | 39 | 55 | 9,300 | -- | -- | -- | -- |
| | 8/19/98 | ND<250 | 12 | ND<2.5 | 6.0 | 3.8 | 2,200 | -- | -- | -- | -- |
| | 11/17/98 | 860 | 8.3 | ND<2.5 | 9.2 | 7.6 | 4,200 | -- | -- | -- | -- |
| | 2/18/99 | 310 | 2.7 | ND<2.5 | ND<2.5 | 3.9 | 4,200 | -- | -- | -- | -- |
| | 6/24/99 | 860 | 10 | ND<2.5 | 12 | 6.5 | 3,400 | -- | -- | -- | -- |
| | 8/30/99 | 140 | 2.0 | ND<0.5 | 3.9 | 2.0 | 2,800 | -- | -- | -- | -- |
| | 11/9/99 | 170 | ND<0.5 | ND<0.5 | 3.1 | 2.0 | 1,500 | -- | -- | -- | -- |
| | 3/22/00 | ND<200 | 2.8 | ND<2 | 3.6 | ND<2 | 1,200 | -- | -- | -- | -- |
| | 6/12/00 | 190 | 1.3 | ND<1 | ND<1 | ND<1 | 640 | -- | -- | -- | -- |
| | 11/15/00 | 240 | ND<1 | ND<1 | ND<1 | ND<1 | 960 | -- | -- | -- | -- |
| | 2/26/01 | ND<100 | 1.2 | ND<1 | ND<1 | ND<1 | 2,800 | -- | -- | -- | -- |
| | 5/21/01 | ND<200 | ND<2 | ND<2 | ND<2 | ND<2 | 540 | -- | -- | -- | -- |
| | 9/5/01 | ND<200 | 7.0 | ND<2 | ND<2 | ND<2 | 550 | -- | -- | -- | -- |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| MW-1 | 11/7/01 | 290 | ND<2 | ND<2 | ND<2 | ND<2 | 750 | -- | -- | -- | -- |
| (cont.) | 2/11/02 | 270 | ND<1 | ND<1 | ND<1 | ND<1 | 450 | -- | -- | -- | -- |
| | 6/3/02 | 310 | ND<2 | ND<2 | ND<2 | ND<2 | 610 | -- | -- | -- | -- |
| | 8/6/02 | 170 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 540 | -- | -- | -- | -- |
| | 11/14/02 | 490 | ND<2 | ND<2 | ND<2 | ND<2 | 900 | -- | -- | -- | -- |
| | 2/20/03 | 210 | ND<1 | ND<1 | ND<1 | ND<1 | 320 | -- | -- | -- | -- |
| | 5/15/03 | 400 | ND<1.5 | ND<1.5 | ND<1.5 | ND<1.5 | 670 | ND<1.5 | ND<1.5 | ND<1.5 | ND<15 |
| | 7/31/03 | 380 | ND<1.5 | ND<1.5 | ND<1.5 | ND<1.5 | 620 | ND<1.5 | ND<1.5 | ND<1.5 | ND<15 |
| | 10/28/03 | 230 | ND<1 | ND<1 | ND<1 | ND<1 | 470 | ND<1 | ND<1 | ND<1 | ND<10 |
| | 2/28/04 | 300 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 400 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/16/04 | ND<200 | ND<1.5 | ND<1.5 | ND<1.5 | ND<1.5 | 510 | ND<1.5 | ND<1.5 | ND<1.5 | ND<15 |
| | 7/16/04 | 280 | ND<1.5 | ND<1.5 | ND<1.5 | ND<1.5 | 660 | ND<1.5 | ND<1.5 | ND<1.5 | ND<15 |
| | 11/13/04 | ND<100 | ND<1 | ND<1 | ND<1 | ND<1 | 530 | ND<1 | ND<1 | ND<1 | 19 |
| | 2/4/05 | 140 | ND<1 | ND<1 | ND<1 | ND<1 | 610 | ND<1 | ND<1 | ND<1 | 18 |
| | 4/13/05 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 19 | ND<0.5 | ND<0.5 | ND<0.5 | 12 |
| | 8/10/05 | 100 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 170 | ND<0.5 | ND<0.5 | ND<0.5 | 17 |
| | 11/5/05 | 220 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 95 | ND<0.5 | ND<0.5 | ND<0.5 | 24 |
| | 1/30/06 | 92 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 120 | ND<0.5 | ND<0.5 | ND<0.5 | 20 |
| | 4/28/06 | 57 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 18 | ND<0.5 | ND<0.5 | ND<0.5 | 13 |
| | 8/15/06 | 60 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 15 | ND<0.5 | ND<0.5 | ND<0.5 | 10 |
| | 10/26/06 | 110 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 34 | ND<0.5 | ND<0.5 | ND<0.5 | 6.2 |
| | 2/2/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 17 | ND<0.5 | ND<0.5 | ND<0.5 | 6.7 |
| | 4/30/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/18/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.94 | ND<0.5 | ND<0.5 | 68 | 5.5 |
| | 10/30/07 | 77[g] | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.0 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/28/08 | 56[g] | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.6 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 5/13/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 7.2 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/16/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 7.3 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/8/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 5.7 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/29/09 | 98 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 11 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| DUP[h] | 1/29/09 | 250 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 19 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/14/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 5.2 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/1/09 | 110 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 24 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/7/09 | 170 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 28 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/17/10 | 60 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 21 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/13/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 4.9 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/6/10 | 160 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 6.1 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| MW-1 | 10/27/10 | 200 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 4.7 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| (cont.) | 1/25/11 | 140 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 6.8 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/5/11 | 63 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.59 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/31/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 3.0 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 6/13/12 | 260 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.98 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/2/13 | 100 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.3 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| MW-2 | 2/18/92 | 1,600 | ND<0.5 | ND<0.5 | 1.9 | ND<0.5 | -- | -- | -- | -- | -- |
| | 5/14/92 | 740 | 1.2 | 1.0 | 1.3 | ND<0.5 | -- | -- | -- | -- | -- |
| | 8/27/92 | 1,400 | 6.5 | 1.1 | 0.60 | ND<0.5 | -- | -- | -- | -- | -- |
| | 11/19/92 | 360 | ND<0.5 | ND<0.5 | 2.7 | ND<0.5 | -- | -- | -- | -- | -- |
| | 2/3/93 | 590 | 1.2 | 1.6 | 4.5 | 6.4 | -- | -- | -- | -- | -- |
| | 6/23/93 | 160 | ND<0.5 | ND<0.5 | 0.52 | 0.50 | -- | -- | -- | -- | -- |
| | 9/22/93 | 290 | ND<0.5 | 0.59 | 1.2 | 0.59 | -- | -- | -- | -- | -- |
| | 1/24/94 | 330 | ND<0.5 | ND<0.5 | 0.68 | ND<0.5 | -- | -- | -- | -- | -- |
| | 4/7/94 | 490 | ND<0.5 | ND<0.5 | ND<0.5 | 4.4 | -- | -- | -- | -- | -- |
| | 6/7/94 | 550 | ND<0.5 | ND<0.5 | 1.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 9/28/94 | 190 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 12/14/94 | 1,400 | 7.2 | 0.84 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 3/15/95 | 730 | 39 | ND<0.5 | 0.53 | ND<0.5 | -- | -- | -- | -- | -- |
| | 6/13/95 | 750 [g] | 8.3 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 9/28/95 | 670 [g] | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 12/28/95 | 3,100 | 9.5 | ND<5 | ND<5 | 5.2 | 4,600 | -- | -- | -- | -- |
| | 3/12/96 | 710 | ND<1.3 | ND<1.3 | ND<1.3 | ND<1.3 | 3,200 | -- | -- | -- | -- |
| | 6/13/96 | 1,900 [g] | 1.6 | 1.6 | ND<1.3 | ND<1.3 | 5,100 | -- | -- | -- | -- |
| | 10/2/96 | 2,800 | ND<2.5 | ND<2.5 | ND<2.5 | ND<2.5 | 7,900 | -- | -- | -- | -- |
| | 1/28/97 | 130 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 210 | -- | -- | -- | -- |
| | 5/20/97 | 1,400 | 120 | 16 | ND<2.5 | 4.0 | 390 | -- | -- | -- | -- |
| | 8/18/97 | ND<250 | ND<2.5 | ND<2.5 | ND<2.5 | ND<2.5 | 2,000 | -- | -- | -- | -- |
| | 11/5/97 | ND<250 | ND<2.5 | ND<2.5 | ND<2.5 | ND<2.5 | 2,900 | -- | -- | -- | -- |
| | 3/31/98 | ND<10,000 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 85,000 | -- | -- | -- | -- |
| | 5/28/98 | ND<50,000 | ND<500 | ND<500 | ND<500 | ND<500 | 97,000 | -- | -- | -- | -- |
| | 8/19/98 | 210 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 22,000 | -- | -- | -- | -- |
| | 11/17/98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 17,000 | -- | -- | -- | -- |
| | 2/18/99 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 13,000 | -- | -- | -- | -- |
| | 6/24/99 | 180 | ND<15 | ND<15 | ND<15 | ND<15 | 39,000 | -- | -- | -- | -- |
| | 8/30/99 | ND<2,500 | ND<25 | ND<25 | ND<25 | ND<25 | 18,000 | -- | -- | -- | -- |
| | 11/9/99 | ND<500 | ND<5 | ND<5 | ND<5 | ND<5 | 14,000 | -- | -- | -- | -- |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| MW-2 | 3/22/00 | ND<500 | ND<5 | ND<5 | ND<5 | ND<5 | 54,000 | -- | -- | -- | -- |
| (cont.) | 6/12/00 | ND<2,000 | ND<20 | ND<20 | ND<20 | ND<20 | 53,000 | -- | -- | -- | -- |
| | 11/15/00 | ND<5,000 | ND<50 | ND<50 | ND<50 | ND<50 | 35,000 | -- | -- | -- | -- |
| | 2/26/01 | ND<2,000 | ND<20 | ND<20 | ND<20 | ND<20 | 2,800 | -- | -- | -- | -- |
| | 5/21/01 | ND<5,000 | ND<25 | ND<25 | ND<25 | ND<25 | 20,000 | -- | -- | -- | -- |
| | 9/5/01 | ND<2,000 | ND<20 | ND<20 | ND<20 | ND<20 | 12,000 | -- | -- | -- | -- |
| | 11/7/01 | ND<2,000 | ND<20 | ND<20 | ND<20 | ND<20 | 7,600 | -- | -- | -- | -- |
| | 2/11/02 | ND<500 | ND<5 | ND<5 | ND<5 | ND<5 | 1500 | -- | -- | -- | -- |
| | 6/3/02 | ND<500 | ND<5 | ND<5 | ND<5 | ND<5 | 2,200 | -- | -- | -- | -- |
| | 8/6/02 | ND<500 | ND<5 | ND<5 | ND<5 | ND<5 | 3,300 | -- | -- | -- | -- |
| | 11/14/02 | ND<1,000 | ND<10 | ND<10 | ND<10 | ND<10 | 3,200 | -- | -- | -- | -- |
| | 2/20/03 | ND<50 | ND<2 | ND<2 | ND<2 | ND<2 | 160 | -- | -- | -- | -- |
| | 5/15/03 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 270 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/31/03 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 300 | ND<2 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/28/03 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1,600 | ND<1 | ND<0.5 | 1.8 | 20 |
| | 2/28/04 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 340 | ND<1.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/16/04 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 130 | ND<1.5 | ND<0.5 | ND<0.5 | 35 |
| | 7/16/04 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 68 | ND<1 | ND<0.5 | ND<0.5 | ND<5 |
| | 11/13/04 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 35 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/4/05 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 22 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/13/05 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 11 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 8/10/05 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 12 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 11/5/05 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 11 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/30/06 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 5.2 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/28/06 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.3 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 8/15/06 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 2.7 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/26/06 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.9 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/2/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.1 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/30/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.85 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/18/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.2 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/30/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.7 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/28/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.89 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 5/13/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.86 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/16/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.3 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/8/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.8 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/29/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.6 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/14/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.77 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| MW-2 | 7/1/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.6 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| (cont.) | 10/7/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.3 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/17/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.58 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/13/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/6/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/27/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/25/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/5/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 6/13/12 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| MW-3 | 5/15/92 | 160,000 | 6,300 | 5,900 | 1,700 | 6,100 | -- | -- | -- | -- | -- |
| | 8/28/92 | 1,300,000 | 2,500 | 40,000 | 6,700 | 44,000 | -- | -- | -- | -- | -- |
| | 2/3/93 | 82,000 | 7,200 | 11,000 | 2,900 | 13,000 | -- | -- | -- | -- | -- |
| | 6/23/93 | 61,000 | 3,200 | 5,300 | 2,500 | 9,100 | -- | -- | -- | -- | -- |
| | 9/22/93 | 94,000 | 12,000 | 14,000 | 3,900 | 18,000 | -- | -- | -- | -- | -- |
| | 1/24/94 | 110,000 | 14,000 | 17,000 | 4,200 | 14,000 | -- | -- | -- | -- | -- |
| | 4/7/94 | 28,000 | 6,500 | 1,800 | 1,700 | 4,100 | -- | -- | -- | -- | -- |
| | 6/7/94 | 27,000 | 6,400 | 2,300 | 1,500 | 3,500 | -- | -- | -- | -- | -- |
| | 9/28/94 | 40,000 | 7,400 | 4,300 | 1,500 | 4,600 | -- | -- | -- | -- | -- |
| | 12/14/94 | 140,000 | 17,000 | 21,000 | 3,900 | 22,000 | -- | -- | -- | -- | -- |
| | 3/15/95 | 58,000 | 4,900 | 1,900 | 1,800 | 7,100 | -- | -- | -- | -- | -- |
| | 6/13/95 | 44,000 | 7,200 | 2,900 | 1,200 | 4,600 | -- | -- | -- | -- | -- |
| | 9/28/95 | 30,000 | 5,600 | 2,100 | 1,900 | 6,900 | -- | -- | -- | -- | -- |
| | 12/28/95 | 16,000 | 32 | 5.8 | 18 | 4,700 | 360 | -- | -- | -- | -- |
| | 1/30/96 | 8,700 | 850 | 800 | 190 | 1,700 | 430 | -- | -- | -- | -- |
| | 3/12/96 | 2,400 | 48 | 64 | 5.3 | 630 | 97 | -- | -- | -- | -- |
| | 7/10/97 | 300 | ND<0.5 | ND<0.5 | ND<0.5 | 4.8 | 40 | -- | -- | -- | -- |
| | 8/18/97 | 3,600 | 480 | 8.4 | 100 | 230 | 170 | -- | -- | -- | -- |
| | 9/29/97 | 3,500 | 740 | 8.6 | 160 | 240 | 210 | -- | -- | -- | -- |
| | 11/5/97 | 4,100 | 870 | 15 | 180 | 210 | 240 | -- | -- | -- | -- |
| | 3/31/98 | 12,000 | 1,800 | 600 | 410 | 1,400 | 510 | -- | -- | -- | -- |
| | 5/28/98 | 6,500 | 1,500 | 400 | 280 | 870 | 480 | -- | -- | -- | -- |
| | 8/19/98 | 1,400 | 130 | 11 | 24 | 60 | 140 | -- | -- | -- | -- |
| | 11/17/98 | 510 | 48 | 3.5 | 9.9 | 14 | 120 | -- | -- | -- | -- |
| | 2/18/99 | 690 | 67 | 28 | 24 | 81 | 88 | -- | -- | -- | -- |
| | 6/24/99 | 540 | 27 | 21 | 8.6 | 32 | 61 | -- | -- | -- | -- |
| | 8/30/99 | 250 | 12 | 12 | 3.2 | 13 | 50 | -- | -- | -- | -- |
| | 11/9/99 | 230 | 9.8 | 5.3 | 3.4 | 10 | 48 | -- | -- | -- | -- |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| MW-3 | 3/22/00 | 1,500 | 180 | 47 | 46 | 100 | 80 | -- | -- | -- | -- |
| (cont.) | 6/12/00 | 920 | 100 | 6.2 | 20 | 25 | 76 | -- | -- | -- | -- |
| | 11/15/00 | 1,100 | 280 | 5.0 | 21 | 20 | 140 | -- | -- | -- | -- |
| | 2/26/01 | 140 | 14 | 4.3 | 3.1 | 11 | 230 | -- | -- | -- | 190 |
| | 5/21/01 | 510 | 36 | 0.72 | 1.0 | 2.2 | 280 | -- | -- | -- | 110 |
| | 9/5/01 | 390 | 59 | 0.53 | 0.75 | 0.57 | 620 | -- | -- | -- | 120 |
| | 11/7/01 | 830 | 170 | 2.3 | 4.9 | 4.8 | 900 | -- | -- | -- | -- |
| | 2/11/02 | 370 | 17 | ND<2.5 | 4.7 | 7.9 | 1,200 | -- | -- | -- | -- |
| | 6/3/02 | 460 | 120 | ND<2.5 | 5.6 | 8.4 | 1,400 | -- | -- | -- | 140 |
| | 8/6/02 | 800 | 110 | ND<5 | ND<5 | ND<5 | 2,200 | -- | -- | -- | 170 |
| | 11/14/02 | 1,400 | 89 | ND<10 | ND<10 | ND<10 | 2,800 | -- | -- | -- | 210 |
| | 2/20/03 | ND<500 | 14 | ND<5 | ND<5 | ND<5 | 2,300 | -- | -- | -- | 97 |
| | 5/15/03 | ND<500 | 43 | ND<5 | ND<5 | ND<5 | 2,000 | ND<5 | ND<5 | ND<5 | 87 |
| | 7/31/03 | 1,500 | 280 | ND<5 | 6.6 | 7.4 | 1,600 | ND<5 | ND<5 | ND<5 | 130 |
| | 10/28/03 | 2,200 | 140 | 1.6 | 6.5 | 4.0 | 1,100 | ND<0.5 | ND<0.5 | 0.75 | 74 |
| | 2/28/04 | 1,200 | 99 | 31 | 12 | 52 | 1,500 | ND<0.5 | ND<0.5 | ND<0.5 | 82 |
| | 4/16/04 | 1,200 | 95 | 19 | 12 | 48 | 1,100 | ND<0.5 | ND<0.5 | ND<0.5 | 340 |
| | 7/16/04 | 980 | 94 | 27 | 9.4 | 38 | 810 | ND<0.5 | ND<0.5 | ND<0.5 | 580 |
| MW-3R | 11/13/04 | 9,000 | 580 | 52 | 440 | 1,600 | 450 | ND<0.5 | ND<0.5 | ND<0.5 | 440 |
| | 2/4/05 | 5,400 | 350 | 29 | 260 | 1,100 | 270 | ND<0.5 | ND<0.5 | ND<0.5 | 390 |
| | 4/13/05 | 20,000 | 1,300 | 84 | 1,200 | 3,200 | 290 | ND<0.5 | ND<0.5 | ND<0.5 | 150 |
| | 8/10/05 | 7,100 | 400 | 23 | 340 | 1,200 | 110 | ND<0.5 | ND<0.5 | ND<0.5 | 160 |
| | 11/5/05 | 4,100 | 230 | 10 | 250 | 600 | 81 | ND<0.5 | ND<0.5 | ND<0.5 | 200 |
| | 1/30/06 | 6,100 | 460 | 20 | 470 | 1,000 | 85 | ND<0.5 | ND<0.5 | ND<0.5 | 190 |
| | 4/28/06 | 8,200 | 510 | 15 | 490 | 940 | 81 | ND<0.5 | ND<0.5 | ND<0.5 | 90 |
| | 8/15/06 | 5,600 | 470 | 11 | 500 | 680 | 80 | ND<0.5 | ND<0.5 | ND<0.5 | 92 |
| | 10/26/06 | 1,800 | 82 | 4.2 | 38 | 220 | 53 | ND<0.5 | ND<0.5 | ND<0.5 | 45 |
| | 2/2/07 | 1,500 | 94 | 4.3 | 7.0 | 110 | 42 | ND<0.5 | ND<0.5 | ND<0.5 | 26 |
| | 4/30/07 | 3,700 | 240 | 17 | 280 | 300 | 38 | ND<0.5 | ND<0.5 | ND<0.5 | 22 |
| | 7/18/07 | 690 | 85 | 1.5 | 3.6 | 20 | 29 | ND<0.5 | ND<0.5 | ND<0.5 | 17 |
| | 10/30/07 | 410 | 46 | 0.90 | 4.7 | 12 | 19 | ND<0.5 | ND<0.5 | ND<0.5 | 14 |
| | 1/28/08 | 4,500 | 350 | 10 | 250 | 220 | 48 | ND<0.5 | ND<0.5 | ND<0.5 | 22 |
| | 5/13/08 | 1,300 | 68 | 4.4 | 74 | 38 | 18 | ND<0.5 | ND<0.5 | ND<0.5 | 15 |
| | 7/16/08 | 1,400 | 71 | 9.8 | 38 | 20 | 35 | ND<0.5 | ND<0.5 | ND<0.5 | 33 |
| | 10/8/08 | 980 | 66 | 2.5 | 6.7 | ND<0.5 | 32 | ND<0.5 | ND<0.5 | ND<0.5 | 22 |
| | 1/29/09 | 58 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 11 | ND<0.5 | ND<0.5 | ND<0.5 | 8.0 |
| DUP | 1/30/09 | 860 | 82 | 1.4 | 16 | 4.3 | 19 | ND<0.5 | ND<0.5 | ND<0.5 | 21 |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| MW-3R | 4/15/09 | 120 | 1.6 | ND<0.5 | ND<0.5 | ND<0.5 | 12 | ND<0.5 | ND<0.5 | ND<0.5 | 16 |
| (cont.) | 7/1/09 | 690 | 30 | 1.2 | 4.4 | 2.0 | 19 | ND<0.5 | ND<0.5 | ND<0.5 | 20 |
| | 10/7/09 | 480 | 28 | 0.73 | 2.3 | 1.5 | 20 | ND<0.5 | ND<0.5 | ND<0.5 | 16 |
| | 2/18/10 | 400 | 38 | 0.76 | 25 | 6.5 | 10 | ND<0.5 | ND<0.5 | ND<0.5 | 18 |
| | 4/14/10 | 840 | 81 | 1.4 | 62 | 22 | 16 | ND<0.5 | ND<0.5 | ND<0.5 | 16 |
| | 7/7/10 | 570 | 59 | 0.94 | 21 | 5.6 | 13 | ND<0.5 | ND<0.5 | ND<0.5 | 16 |
| | 10/27/10 | 420 | 24 | 0.56 | 2.1 | 0.83 | 12 | ND<0.5 | ND<0.5 | ND<0.5 | 14 |
| | 1/25/11 | 1,100 | 64 | 1.1 | 40 | 9.4 | 9.8 | ND<0.5 | ND<0.5 | ND<0.5 | 14 |
| | 4/6/11 | 980 | 71 | 1.2 | 43 | 14 | 14 | ND<0.5 | ND<0.5 | ND<0.5 | 11 |
| | 10/31/11 | 1,200 | 83 | 1.1 | 24 | 4.8 | 16 | ND<0.5 | ND<0.5 | ND<0.5 | 14 |
| | 6/13/12 | 1,300 | 70 | 1.4 | 23 | 4.4 | 14 | ND<0.5 | ND<0.5 | ND<0.5 | 16 |
| | 1/2/13 | 240 | 15 | ND<0.5 | 6.0 | 0.95 | 6.1 | ND<0.5 | ND<0.5 | ND<0.5 | 13 |
| MW-4 | 2/18/92 | 5,100 | ND<0.5 | ND<0.5 | 12 | 21 | -- | -- | -- | -- | -- |
| | 5/14/92 | 4,600 | ND<0.5 | 5.6 | 1.8 | 2.2 | -- | -- | -- | -- | -- |
| | 8/28/92 | 1,700 | 6.6 | 1.3 | 1.6 | 3.1 | -- | -- | -- | -- | -- |
| | 11/19/92 | 400 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 2/3/93 | 1,100 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 6/23/93 | 120 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 9/22/93 | 110 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 1/24/94 | 260 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 4/7/94 | 430 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 6/7/94 | 150 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 9/28/94 | 75 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 12/14/94 | 160 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 3/15/95 | 500 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 6/13/95 | 210[g] | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 9/28/95 | 140[g] | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 12/28/95 | 510[g] | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 3/12/96 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 6/11/96 | 50[g] | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 10/2/96 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 1/28/97 | 270[g] | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 5/20/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 8/18/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 11/5/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- |
| | 3/31/98 | 110 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 5/28/98 | 94 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| MW-4 | 8/19/98 | 120[g] | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 46 | -- | -- | -- | -- |
| (cont.) | 11/17/98 | ND<50 | 1.3 | ND<0.5 | ND<0.5 | ND<0.5 | 780 | -- | -- | -- | -- |
| | 2/18/99 | 130 | 8.2 | ND<0.5 | ND<0.5 | ND<0.5 | 240 | -- | -- | -- | -- |
| | 6/24/99 | ND<50 | ND<1 | ND<0.5 | ND<0.5 | ND<0.5 | 2,100 | -- | -- | -- | -- |
| | 11/9/99 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 2,500 | -- | -- | -- | -- |
| | 3/22/00 | 69 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 12,000 | -- | -- | -- | -- |
| | 6/12/00 | ND<2,000 | ND<20 | ND<20 | ND<20 | ND<20 | 17,000 | -- | -- | -- | -- |
| | 11/15/00 | ND<100 | ND<1 | ND<1 | ND<1 | ND<1 | 17,000 | -- | -- | -- | -- |
| | 5/21/01 | ND<5,000 | ND<25 | ND<25 | ND<25 | ND<25 | 13,000 | -- | -- | -- | -- |
| | 11/7/01 | ND<1,000 | ND<10 | ND<10 | ND<10 | ND<10 | 3,800 | -- | -- | -- | -- |
| | 6/3/02 | ND<200 | ND<2 | ND<2 | ND<2 | ND<2 | 1,100 | -- | -- | -- | -- |
| | 11/14/02 | ND<200 | ND<2 | ND<2 | ND<2 | ND<2 | 700 | -- | -- | -- | -- |
| | 5/15/03 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 73 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/28/03 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 65 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/16/04 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 6.0 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 11/13/04 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/30/06 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 3.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/28/06 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.89 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 8/15/06 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 8.8 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/26/06 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 7.7 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/2/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.0 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/30/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/18/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/30/07 | 90 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/28/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.7 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 5/13/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/16/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.51 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/8/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/29/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/14/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/1/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/7/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.56 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/17/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/13/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/6/10 | ND<50 | ND<0.5 | ND<0.5 | 0.62 | 0.83 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/27/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.65 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/25/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| MW-4 | 4/5/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| (cont.) | 6/13/12 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| MW-5 | 2/18/92 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 5/14/92 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 8/27/92 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 11/19/92 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 2/3/93 | 55 | 3.0 | 2.7 | 8.0 | 9.9 | -- | -- | -- | -- | -- |
| | 6/23/93 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 9/22/93 | ND<50 | 0.66 | 1.1 | ND<0.5 | 0.60 | -- | -- | -- | -- | -- |
| | 1/24/94 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 4/7/94 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 6/7/94 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 9/28/94 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 12/14/94 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 3/15/95 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 6/13/95 | ND<50 | ND<0.5 | 0.52 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 9/28/95 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 12/28/95 | 120 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 3/12/96 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 9.0 | -- | -- | -- | -- |
| | 6/11/96 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 10/2/96 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 1/28/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 5/20/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 8/18/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 11/5/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- |
| | 3/31/98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 5/28/98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 8/19/98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 7.1 | -- | -- | -- | -- |
| | 11/17/98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 6.3 | -- | -- | -- | -- |
| | 2/18/99 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 3/22/00 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 10/8/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/29/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/7/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/13/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/27/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| MW-6 | 2/18/92 | 370 | 4.8 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 5/14/92 | 120 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 8/27/92 | ND<50 | 1.2 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 11/19/92 | 66 | 1.3 | ND<0.5 | 1.0 | 1.1 | -- | -- | -- | -- | -- |
| | 2/3/93 | 100 | 1.9 | 2.6 | 23 | 12 | -- | -- | -- | -- | -- |
| | 6/23/93 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 9/22/93 | 81 | 2.2 | 3.8 | 0.53 | 2.7 | -- | -- | -- | -- | -- |
| | 1/24/94 | 98 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 4/7/94 | 150 | 0.71 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 6/7/94 | 180 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 9/28/94 | 100 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 12/14/94 | 140 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 3/15/95 | 110 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 6/13/95 | 150[g] | ND<0.5 | 0.87 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 9/28/95 | ND<50 | 0.78 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 12/28/95 | 410 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 70 | -- | -- | -- | -- |
| | 1/30/96 | 81 | 1.0 | ND<0.5 | ND<0.5 | ND<0.5 | 46 | -- | -- | -- | -- |
| | 3/12/96 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 7.0 | -- | -- | -- | -- |
| | 6/11/96 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 10/2/96 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 1/28/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 5/20/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 8/18/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 11/5/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 2.8 | -- | -- | -- | -- |
| | 3/31/98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 5/28/98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 8/19/98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 11/17/98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 2/18/99 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 3/22/00 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 10/8/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 5.1 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/29/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 3.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/15/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/1/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.71 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/7/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 2.0 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/18/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.71 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/14/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| MW-6 | 7/7/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| (cont.) | 10/27/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.64 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/25/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/6/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 6/13/12 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| MW-7 | 2/18/92 | 670 | 16 | ND<0.5 | 10 | 16 | -- | -- | -- | -- | -- |
| | 5/14/92 | 1,500 | 44 | ND<0.5 | 38 | 88 | -- | -- | -- | -- | -- |
| | 8/27/92 | 23,000 | 400 | 5.8 | 290 | 1,400 | -- | -- | -- | -- | -- |
| | 11/19/92 | 330 | 29 | ND<0.5 | 10 | 53 | -- | -- | -- | -- | -- |
| | 2/3/93 | 2,000 | 200 | ND<0.5 | 110 | 480 | -- | -- | -- | -- | -- |
| | 6/23/93 | 280 | 20 | ND<0.5 | 16 | 16 | -- | -- | -- | -- | -- |
| | 9/22/93 | 860 | 71 | 2.2 | 33 | 210 | -- | -- | -- | -- | -- |
| | 1/24/94 | 900 | 61 | ND<1.3 | 10 | 160 | -- | -- | -- | -- | -- |
| | 4/7/94 | 630 | 53 | ND<0.5 | 7.1 | 49 | -- | -- | -- | -- | -- |
| | 6/7/94 | 730 | 55 | ND<0.5 | 14 | 24 | -- | -- | -- | -- | -- |
| | 9/28/94 | 300 | 21 | ND<0.5 | 2.3 | 3.1 | -- | -- | -- | -- | -- |
| | 12/14/94 | 430 | 19 | ND<0.5 | 3.3 | 32 | -- | -- | -- | -- | -- |
| | 3/15/95 | 70 | 0.88 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 6/13/95 | 190 | 7.3 | 0.79 | 7.6 | 8.9 | -- | -- | -- | -- | -- |
| | 9/28/95 | 60 | 1.5 | ND<0.5 | 1.2 | 0.84 | -- | -- | -- | -- | -- |
| | 12/28/95 | 60 | ND<0.5 | ND<0.5 | 0.91 | 0.69 | 10 | -- | -- | -- | -- |
| | 3/12/96 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 11 | -- | -- | -- | -- |
| | 6/11/96 | 79 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 16 | -- | -- | -- | -- |
| | 10/2/96 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 26 | -- | -- | -- | -- |
| | 1/28/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 13 | -- | -- | -- | -- |
| | 5/20/97 | 78 | ND<0.5 | 0.85 | ND<0.5 | ND<0.5 | 40 | -- | -- | -- | -- |
| | 8/18/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 18 | -- | -- | -- | -- |
| | 11/5/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 8.0 | -- | -- | -- | -- |
| | 3/31/98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | 1.3 | 6.0 | -- | -- | -- | -- |
| | 5/28/98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 10 | -- | -- | -- | -- |
| | 8/19/98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 27 | -- | -- | -- | -- |
| | 11/17/98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 30 | -- | -- | -- | -- |
| | 2/18/99 | 51 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 22 | -- | -- | -- | -- |
| | 11/9/99 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 16 | -- | -- | -- | -- |
| | 3/22/00 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 18 | -- | -- | -- | -- |
| | 11/15/00 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 17 | -- | -- | -- | -- |
| | 11/7/01 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 5.4 | -- | -- | -- | -- |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| MW-7 | 11/14/02 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.64 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| (cont.) | 10/28/03 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 11/13/04 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/30/06 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/2/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/30/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/30/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 5/13/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/16/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/8/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/29/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/14/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/7/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/13/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/27/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/5/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 6/13/12 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| MW-8 | 2/18/92 | 1,200 | ND<0.5 | ND<0.5 | 9.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 5/14/92 | 130 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 8/27/92 | 140 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 11/19/92 | 320 | ND<0.5 | ND<0.5 | 2.0 | ND<0.5 | -- | -- | -- | -- | -- |
| | 2/3/93 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 6/23/93 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 9/22/93 | ND<50 | ND<0.5 | ND<0.5 | 0.67 | ND<0.5 | -- | -- | -- | -- | -- |
| | 1/24/94 | 290 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 4/7/94 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 6/7/94 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 9/28/94 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 12/14/94 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 3/15/95 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 6/13/95 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 12/28/95 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 3/12/96 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 6/11/96 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 10/2/96 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 1/28/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 5/20/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| MW-8 | 8/18/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| (cont.) | 11/5/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- |
| | 3/31/98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 5/28/98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 8/19/98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 11/17/98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 2/18/99 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 3/22/00 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 4/30/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/18/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 5/13/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/16/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/8/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/29/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/14/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/7/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/13/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/27/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| MW-9 | 2/18/92 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 5/14/92 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 8/27/92 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 11/19/92 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | 1.3 | -- | -- | -- | -- | -- |
| | 2/3/93 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 6/23/93 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 9/22/93 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 1/24/94 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 4/7/94 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 6/7/94 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 9/28/94 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 12/14/94 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 3/15/95 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 6/13/95 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 9/28/95 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 12/28/95 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 6/11/96 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 10/2/96 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 1/28/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| MW-9 | 5/20/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| (cont.) | 11/5/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- |
| | 8/19/98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 11/17/98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 2/18/99 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 3/22/00 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 6/3/02 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- |
| | 8/6/02 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/30/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/18/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 5/13/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/16/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/8/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/29/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/14/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/1/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/7/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/18/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/14/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/27/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/25/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| MW-10 | 2/18/92 | 18,000 | 110 | 57 | 440 | 53 | -- | -- | -- | -- | -- |
| | 5/15/92 | 8,500 | 24 | 9.8 | 97 | ND<0.5 | -- | -- | -- | -- | -- |
| | 8/29/92 | 9,600 | 20 | 2.8 | 40 | 3.5 | -- | -- | -- | -- | -- |
| | 11/19/92 | 5,700 | 36 | 21 | 330 | 31 | -- | -- | -- | -- | -- |
| | 2/3/93 | 2,200 | 15 | 4.6 | 36 | 9.6 | -- | -- | -- | -- | -- |
| | 6/23/93 | 8,100 | 21 | 24 | 540 | 45 | -- | -- | -- | -- | -- |
| | 9/22/93 | 6,200 | 22 | 17 | 350 | 16 | -- | -- | -- | -- | -- |
| | 4/7/94 | 4,000 | 6.4 | 2.9 | 150 | 4.7 | -- | -- | -- | -- | -- |
| | 6/7/94 | 6,700 | 5.6 | ND<2.5 | 150 | 5.7 | -- | -- | -- | -- | -- |
| | 9/28/94 | 5,700 | 2.2 | 2.6 | 110 | 44 | -- | -- | -- | -- | -- |
| | 12/14/94 | 3,500 | ND<1.3 | ND<1.3 | 77 | 27 | -- | -- | -- | -- | -- |
| | 3/15/95 | 7,200 | ND<5 | 6.7 | 150 | 23 | -- | -- | -- | -- | -- |
| | 6/13/95 | 8,400 | 9.0 | 48 | 610 | 130 | -- | -- | -- | -- | -- |
| | 9/28/95 | 6,300 | 22 | 17 | 360 | 24 | -- | -- | -- | -- | -- |
| | 12/28/95 | 5,000 | 4.4 | 5.6 | 340 | 11 | 37 | -- | -- | -- | -- |
| | 3/12/96 | 4,500 | 1.4 | 5.9 | 41 | 73 | 120 | -- | -- | -- | -- |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| MW-10 | 6/11/96 | 7,500 | ND<5 | 25 | 350 | 81 | ND<25 | -- | -- | -- | -- |
| (cont.) | 10/2/96 | 2,600 | 18 | ND<2.5 | ND<2.5 | ND<2.5 | ND<25 | -- | -- | -- | -- |
| | 1/28/97 | 2,800 | 5.9 | ND<2.5 | 29 | 19 | ND<25 | -- | -- | -- | -- |
| | 5/20/97 | 6,000 | ND<20 | 34 | 290 | 74 | ND<100 | -- | -- | -- | -- |
| | 8/18/97 | 5,900 | ND<20 | 7.7 | 94 | 15 | ND<50 | -- | -- | -- | -- |
| | 11/5/97 | 5,400 | 1.1 | 0.86 | 47 | 1.6 | 2.3 | -- | -- | -- | -- |
| | 3/31/98 | 20,000 | 56 | 180 | 1,400 | 3,700 | 250 | -- | -- | -- | -- |
| | 5/28/98 | 16,000 | 76 | 200 | 1,600 | 3,900 | 190 | -- | -- | -- | -- |
| | 8/19/98 | 14,000 | 95 | 160 | 1,300 | 1,700 | ND<100 | -- | -- | -- | -- |
| | 11/17/98 | 7,500 | 82 | 64 | 590 | 150 | 290 | -- | -- | -- | -- |
| | 2/18/99 | 4,700 | 41 | 16 | 270 | 79 | ND<100 | -- | -- | -- | -- |
| | 6/24/99 | 9,400 | 27 | 74 | 280 | 160 | 300 | -- | -- | -- | -- |
| | 8/30/99 | 8,500 | 15 | 33 | 160 | 33 | 290 | -- | -- | -- | -- |
| | 11/9/99 | 7,600 | 3.9 | 11 | 60 | 14 | 120 | -- | -- | -- | -- |
| | 3/22/00 | 5,800 | 3.5 | 33 | 360 | 320 | 160 | -- | -- | -- | -- |
| | 6/12/00 | 7,200 | 4.3 | 47 | 370 | 210 | 270 | -- | -- | -- | -- |
| | 11/15/00 | 4,400 | 0.54 | 2.2 | 3.8 | 7.3 | 420 | -- | -- | -- | -- |
| | 2/26/01 | 5,000 | ND<1 | 2.5 | 24 | 13 | 860 | -- | -- | -- | -- |
| | 5/21/01 | 3,500 | ND<0.5 | 3.2 | 4.1 | 12 | 530 | -- | -- | -- | -- |
| | 9/5/01 | 3,400 | ND<2 | ND<2 | ND<2 | 4.1 | 770 | -- | -- | -- | -- |
| | 11/7/01 | 3,600 | ND<0.5 | 0.64 | 0.75 | 2.7 | 790 | -- | -- | -- | -- |
| | 2/11/02 | 4,100 | ND<2 | 2.2 | 61 | 26 | 750 | -- | -- | -- | -- |
| | 6/3/02 | 4,100 | ND<1 | 7.0 | 67 | 37 | 320 | -- | -- | -- | -- |
| | 8/6/02 | 4,500 | ND<1 | 5.4 | 18 | 18 | 310 | -- | -- | -- | -- |
| | 11/14/02 | 5,200 | ND<1 | ND<1 | 2.2 | 6.4 | 280 | ND<0.5 | ND<0.5 | ND<0.5 | 13 |
| | 2/20/03 | 6,300 | ND<1.5 | 9.5 | 280 | 69 | 220 | ND<2 | ND<2 | ND<2 | -- |
| | 5/15/03 | 5,700 | 1.2 | 14 | 280 | 78 | 130 | ND<1 | ND<1 | ND<1 | 11 |
| | 7/31/03 | 4,700 | ND<0.5 | 4.5 | 20 | 17 | 110 | ND<1.5 | ND<1.5 | ND<1.5 | 7.5 |
| | 10/28/03 | 1,900 | ND<0.5 | 0.54 | 0.80 | 2.9 | 88 | ND<1.5 | ND<1.5 | ND<1.5 | 5.9 |
| | 2/28/04 | 3,500 | ND<1 | ND<1 | 17 | 7.9 | 44 | ND<1 | ND<1 | ND<1 | ND<10 |
| | 4/16/04 | 6,000 | ND<1.5 | 3.0 | 150 | 34 | 53 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/16/04 | 6,300 | ND<1 | 3.5 | 110 | 29 | 40 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 11/13/04 | 4,900 | ND<0.5 | 4.8 | 42 | 23 | 25 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/4/05 | 5,000 | ND<0.5 | 3.3 | 46 | 30 | 21 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/13/05 | 4,000 | 0.81 | 6.5 | 200 | 120 | 29 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 8/10/05 | 6,600 | 2.0 | 6.5 | 74 | 72 | 29 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 11/5/05 | 6,000 | 3.0 | 9.7 | 17 | 56 | 5.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| MW-10 | 1/30/06 | 3,800 | 1.8 | 3.9 | 61 | 29 | 16 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| (cont.) | 4/28/06 | 5,800 | 3.1 | 7.0 | 210 | 120 | 38 | ND<0.5 | ND<0.5 | ND<0.5 | 8.4 |
| | 8/15/06 | 5,400 | 1.7 | 4.2 | 22 | 40 | 42 | ND<0.5 | ND<0.5 | ND<0.5 | 7.3 |
| | 10/26/06 | 5,000 | 0.71 | 2.2 | 4.8 | 25 | 24 | ND<0.5 | ND<0.5 | ND<0.5 | 5.0 |
| | 2/2/07 | 4,900 | 0.72 | 2.3 | 7.4 | 15 | 21 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/30/07 | 4,300 | ND<0.5 | 2.2 | 7.6 | 16 | 13 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/18/07 | 2,700 | ND<0.5 | 0.97 | ND<0.5 | 3.4 | 4.8 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/30/07 | 3,400 | ND<0.5 | 0.73 | ND<0.5 | 2.1 | 1.9 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/28/08 | 2,600 | ND<0.5 | 0.88 | ND<0.5 | 1.5 | 0.76 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 5/13/08 | 4,100 | ND<0.5 | 0.66 | ND<0.5 | 3.0 | 1.1 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/16/08 | 2,700 | ND<0.5 | ND<0.5 | ND<0.5 | 1.4 | 0.80 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/8/08 | 1,900 | ND<0.5 | ND<0.5 | ND<0.5 | 0.63 | 0.63 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/30/09 | 1,900 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.88 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| DUP | 1/30/09 | 2,800 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.72 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/15/09 | 2,400 | ND<0.5 | ND<0.5 | 0.67 | 1.4 | 1.7 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/1/09 | 2,900 | ND<0.5 | ND<0.5 | ND<0.5 | 1.4 | 1.4 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/7/09 | 2,800 | ND<0.5 | ND<0.5 | ND<0.5 | 0.61 | 1.3 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/17/10 | 3,300 | ND<0.5 | ND<0.5 | 0.58 | 0.90 | 1.0 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/14/10 | 4,300 | ND<0.5 | ND<0.5 | 24 | 6.9 | 0.80 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/7/10 | 3,600 | ND<0.5 | ND<0.5 | 2.0 | 9.1 | 1.8 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/27/10 | 2,900 | ND<0.5 | ND<0.5 | ND<0.5 | 2.0 | 0.88 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/25/11 | 3,500 | ND<0.5 | ND<0.5 | 1.6 | 2.1 | 0.59 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/5/11 | 4,000 | ND<0.5 | 0.55 | 34 | 11 | 1.7 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 6/13/12 | 4,000 | ND<0.5 | ND<0.5 | 1.3 | 3.3 | 0.56 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/2/13 | 2,200 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| MW-11 | 2/18/92 | 2,400 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 5/14/92 | 1,600 | ND<0.5 | 1.9 | 1.3 | 0.70 | -- | -- | -- | -- | -- |
| | 8/27/92 | 2,100 | 15 | 2.0 | 0.60 | 1.2 | -- | -- | -- | -- | -- |
| | 11/19/92 | 490 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 2/3/93 | 500 | ND<0.5 | ND<0.5 | 0.55 | ND<0.5 | -- | -- | -- | -- | -- |
| | 6/23/93 | 350 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 9/22/93 | 200 | ND<0.5 | 0.65 | ND<0.5 | 0.71 | -- | -- | -- | -- | -- |
| | 1/24/94 | 450 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 4/7/94 | 500 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 6/7/94 | 560 | ND<0.5 | ND<0.5 | ND<0.5 | 0.64 | -- | -- | -- | -- | -- |
| | 9/28/94 | 600 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 12/14/94 | 340 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| MW-11 | 3/15/95 | 340 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| (cont.) | 6/13/95 | 210[g] | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 9/28/95 | 93 | 4.1 | 0.50 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 12/28/95 | 380[g] | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 3/12/96 | 110 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 6/11/96 | 400[g] | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 10/2/96 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 1/28/97 | 110[g] | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 5/20/97 | 330 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 8/18/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- |
| | 3/31/98 | 460 | ND<0.5 | 2.8 | 12 | 16 | ND<0.5 | -- | -- | -- | -- |
| | 5/28/98 | 1,100 | 14 | 24 | 88 | 75 | 24 | -- | -- | -- | -- |
| | 8/19/98 | 1200 | 16 | 9.6 | 69 | 17 | 6.0 | -- | -- | -- | -- |
| | 11/17/98 | 580 | 15 | 4.4 | 14 | ND<0.5 | 21 | -- | -- | -- | -- |
| | 2/18/99 | 390 | 8.0 | ND<0.5 | 1.4 | ND<0.5 | 44 | -- | -- | -- | -- |
| | 6/24/99 | 610 | 4.6 | ND<0.5 | 0.66 | ND<0.5 | 59 | -- | -- | -- | -- |
| | 11/9/99 | 250 | 0.87 | ND<0.5 | ND<0.5 | ND<0.5 | 66 | -- | -- | -- | -- |
| | 3/22/00 | 330 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 100 | -- | -- | -- | -- |
| | 6/12/00 | 52 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 49 | -- | -- | -- | -- |
| | 11/15/00 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.8 | -- | -- | -- | -- |
| | 5/21/01 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 30 | -- | -- | -- | -- |
| | 11/7/01 | 360 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 330 | -- | -- | -- | -- |
| | 6/3/02 | 120 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 220 | ND<0.5 | ND<0.5 | ND<0.5 | 13 |
| | 11/14/02 | 240 | ND<1 | ND<1 | ND<1 | ND<1 | 380 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 5/15/03 | 160 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 170 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/28/03 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 35 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/28/04 | 360 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 140 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/16/04 | 440 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 110 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/16/04 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 10 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 11/13/04 | 230 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 49 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/4/05 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 7.0 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/13/05 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 12 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 11/5/05 | 310 | ND<0.5 | 0.71 | ND<0.5 | 1.6 | 4.8 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/30/06 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.0 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/28/06 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.8 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 8/15/06 | 65 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 9.1 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/26/06 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 2.3 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| MW-11 | 2/2/07 | 930 | ND<0.5 | ND<0.5 | ND<0.5 | 0.72 | 27 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| (cont.) | 4/30/07 | 740 | ND<0.5 | 0.58 | ND<0.5 | 0.64 | 28 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/18/07 | 490 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 19 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/30/07 | 420 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 28 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/28/08 | 280 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 18 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 5/13/08 | 480 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 9.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/16/08 | 370 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 13 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/8/08 | 320 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 13 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/30/09 | 280 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 11 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| DUP | 1/30/09 | 300 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 8.1 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/15/09 | 300 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 5.2 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/1/09 | 240 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 2.1 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/7/09 | 410 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 3.0 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/17/10 | 460 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 2.0 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/14/10 | 260 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.77 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/7/10 | 400 | ND<0.5 | ND<0.5 | ND<0.5 | 0.80 | 1.9 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/27/10 | 130 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.74 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/25/11 | 240 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.77 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/5/11 | 250 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.2 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 6/13/12 | 76 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.1 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/2/13 | ND<5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.62 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| MW-12 | 7/18/07 | 68[g] | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/30/07 | 70[g] | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/28/08 | 60[g] | ND<0.5 | ND<0.5 | ND<0.5 | 0.57 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 5/13/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/16/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/8/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/29/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/14/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/1/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/7/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/17/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/13/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/27/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/25/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/5/11 | 53 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 6/13/12 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| RW-1 | 5/15/92 | 790 | 270 | 62 | 29 | 140 | -- | -- | -- | -- | -- |
| | 8/27/92 | 24,000 | 1,300 | 200 | 68 | 810 | -- | -- | -- | -- | -- |
| | 2/3/93 | 620 | 71 | 35 | 22 | 110 | -- | -- | -- | -- | -- |
| | 6/23/93 | 220 | 30 | 33 | 9.8 | 35 | -- | -- | -- | -- | -- |
| | 9/22/93 | 4,100 | 800 | 400 | 170 | 910 | -- | -- | -- | -- | -- |
| | 1/24/94 | 190 | 33 | 6.0 | 6.9 | 23 | -- | -- | -- | -- | -- |
| | 4/7/94 | 1,500 | 110 | 57 | 32 | 260 | -- | -- | -- | -- | -- |
| | 6/7/94 | 1,700 | 130 | 51 | 45 | 180 | -- | -- | -- | -- | -- |
| | 9/28/94 | 350 | 54 | 9.2 | 12 | 29 | -- | -- | -- | -- | -- |
| | 12/14/94 | 79 | 6.8 | 2.1 | 1.2 | 3.4 | -- | -- | -- | -- | -- |
| | 4/10/95 | 410 | 54 | 11 | 11 | 69 | -- | -- | -- | -- | -- |
| | 6/13/95 | 8,200 | 1,600 | 780 | 340 | 1,400 | -- | -- | -- | -- | -- |
| | 9/28/95 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- | -- |
| | 12/28/95 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 | -- | -- | -- | -- |
| | 3/12/96 | 86 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 110 | -- | -- | -- | -- |
| | 6/11/96 | 230 | 38 | 11 | 4.7 | 50 | 68 | -- | -- | -- | -- |
| | 10/2/96 | 360 | 68 | 29 | 14 | 75 | 47 | -- | -- | -- | -- |
| | 1/28/97 | ND<50 | 0.77 | ND<0.5 | ND<0.5 | ND<0.5 | 9.0 | -- | -- | -- | -- |
| | 5/20/97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 32 | -- | -- | -- | -- |
| | 8/18/97 | 220 | 25 | ND<0.5 | ND<0.5 | 3.6 | 170 | -- | -- | -- | -- |
| | 9/29/97 | 900 | 240 | 2.8 | 51 | 55 | 230 | -- | -- | -- | -- |
| | 11/5/97 | 1,300 | 340 | 3.2 | 59 | 78 | 220 | -- | -- | -- | -- |
| | 3/31/98 | 4,100 | 450 | 130 | 200 | 940 | 4,100 | -- | -- | -- | -- |
| | 5/28/98 | 14,000 | 830 | 210 | 170 | 720 | 14,000 | -- | -- | -- | -- |
| | 8/19/98 | 2,100 | 20 | ND<2.5 | 7.1 | 15 | 2,100 | -- | -- | -- | -- |
| | 11/17/98 | 630 | 7.8 | ND<2.5 | 5.6 | ND<2.5 | 730 | -- | -- | -- | -- |
| | 2/18/99 | 180 | 6.7 | 1.6 | 3.2 | 15 | 100 | -- | -- | -- | -- |
| | 6/24/99 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 42 | -- | -- | -- | -- |
| | 8/30/99 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 79 | -- | -- | -- | -- |
| | 11/9/99 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 78 | -- | -- | -- | -- |
| | 3/22/00 | ND<50 | 1.2 | ND<0.5 | ND<0.5 | ND<0.5 | 17 | -- | -- | -- | -- |
| | 6/12/00 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | 1.0 | 40 | -- | -- | -- | -- |
| | 11/15/00 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 290 | -- | -- | -- | -- |
| | 2/26/01 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 360 | -- | -- | -- | -- |
| | 5/21/01 | 100 | 4.1 | 1.6 | 1.8 | 23 | 170 | -- | -- | -- | -- |
| | 9/5/01 | 73 | 33 | ND<0.5 | ND<0.5 | ND<0.5 | 310 | -- | -- | -- | -- |
| | 11/7/01 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 240 | -- | -- | -- | -- |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| RW-1 | 2/11/02 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 21 | -- | -- | -- | -- |
| (cont.) | 6/3/02 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 160 | ND<0.5 | ND<0.5 | ND<0.5 | 7.7 |
| | 8/6/02 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 190 | ND<0.5 | ND<0.5 | ND<0.5 | 6.0 |
| | 11/14/02 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 170 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/20/03 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 120 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 5/15/03 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 110 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/31/03 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 99 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/28/03 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 88 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/28/04 | ND<50 | 1.3 | ND<0.5 | ND<0.5 | ND<0.5 | 52 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/16/04 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 57 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/16/04 | ND<50 | 0.72 | ND<0.5 | ND<0.5 | ND<0.5 | 100 | ND<0.5 | ND<0.5 | ND<0.5 | 4.2 |
| | 11/13/04 | ND<50 | 1.0 | ND<0.5 | ND<0.5 | ND<0.5 | 71 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/4/05 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 45 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/13/05 | ND<50 | 1.1 | ND<0.5 | ND<0.5 | ND<0.5 | 52 | ND<0.5 | ND<0.5 | ND<0.5 | 12 |
| | 8/10/05 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 29 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 11/5/05 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 27 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/30/06 | ND<50 | 0.61 | ND<0.5 | ND<0.5 | 1.3 | 23 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/28/06 | ND<50 | 0.69 | ND<0.5 | ND<0.5 | 1.6 | 16 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 8/15/06 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 18 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/26/06 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 16 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/2/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 12 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/30/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 8.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/18/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 7.3 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/30/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 6.9 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/28/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 5.3 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 5/13/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 5.5 | ND<0.5 | ND<0.5 | ND<0.5 | 6.8 |
| | 7/16/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 7.2 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/8/08 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 6.6 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/29/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 7.2 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| DUP | 1/30/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 8.7 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/14/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 6.3 | ND<0.5 | ND<0.5 | ND<0.5 | 6.6 |
| | 7/1/09 | 750 | ND<0.5 | ND<0.5 | ND<0.5 | 0.67 | 1.7 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/7/09 | ND<50 | 0.68 | ND<0.5 | ND<0.5 | ND<0.5 | 23 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/17/10 | 82 | 3.0 | ND<0.5 | 4.0 | 1.4 | 10 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/13/10 | ND<50 | 4.2 | ND<0.5 | 4.8 | 1.1 | 9.7 | ND<0.5 | ND<0.5 | ND<0.5 | 7.5 |
| | 7/6/10 | ND<50 | 0.82 | ND<0.5 | ND<0.5 | ND<0.5 | 8.0 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/28/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 6.4 | ND<0.5 | ND<0.5 | ND<0.5 | 6.6 |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| RW-1 | 1/25/11 | 230 | 17 | ND<0.5 | 1.2 | ND<0.5 | 9.6 | ND<0.5 | ND<0.5 | ND<0.5 | 9.3 |
| (cont.) | 4/5/11 | 410 | 26 | 0.52 | 7.6 | 3.9 | 8.3 | ND<0.5 | ND<0.5 | ND<0.5 | 8.1 |
| | 10/31/2011 | 100 | 1.3 | ND<0.5 | ND<0.5 | ND<0.5 | 8.5 | ND<0.5 | ND<0.5 | ND<0.5 | 9.2 |
| | 6/13/12 | 120 | 2.3 | ND<0.5 | 0.5 | ND<0.5 | 8.0 | ND<0.5 | ND<0.5 | ND<0.5 | 11 |
| | 1/2/13 | ND<50 | 0.79 | ND<0.5 | ND<0.5 | ND<0.5 | 2.6 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| RW-2 | 11/13/04 | 4,200 | ND<0.5 | ND<0.5 | 45 | 70 | 29 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/4/05 | 2,900 | ND<0.5 | ND<0.5 | 24 | 24 | 41 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/13/05 | 1,400 | ND<0.5 | ND<0.5 | 8.6 | 9.9 | 39 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 8/10/05 | 2,900 | ND<0.5 | ND<0.5 | 26 | 33 | 29 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 11/5/05 | 2,400 | ND<0.5 | ND<0.5 | 16 | 19 | 12 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/30/06 | 1,200 | ND<0.5 | ND<0.5 | 4.6 | 5.3 | 17 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/28/06 | 1,200 | ND<0.5 | ND<0.5 | 12 | 15 | 19 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 8/15/06 | 1,200 | ND<0.5 | ND<0.5 | 6.7 | 7.0 | 18 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/26/06 | 760 | ND<0.5 | ND<0.5 | 0.81 | 7.5 | 7.6 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/2/07 | 1,100 | ND<0.5 | ND<0.5 | 0.75 | 1.3 | 2.3 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/30/07 | 3,300 | 190 | 13 | 230 | 230 | 32 | ND<0.5 | ND<0.5 | ND<0.5 | 18 |
| | 7/18/07 | 810 | ND<0.5 | ND<0.5 | 1.1 | 3.2 | 2.2 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/30/07 | 290 | 29 | 0.60 | 2.7 | 6.5 | 15 | ND<0.5 | ND<0.5 | ND<0.5 | 8.6 |
| | 1/28/08 | 3,300 | 250 | 7.9 | 190 | 170 | 33 | ND<0.5 | ND<0.5 | ND<0.5 | 17 |
| | 5/13/08 | 190 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 5.8 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/16/08 | 360 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 6.4 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/8/08 | 400 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 4.7 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/29/09 | 100 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| DUP | 1/30/09 | 430 | ND<0.5 | ND<0.5 | ND<0.5 | 0.74 | 0.74 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/15/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.51 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/1/09 | 52 | 1.5 | ND<0.5 | ND<0.5 | ND<0.5 | 14 | ND<0.5 | ND<0.5 | ND<0.5 | 6.7 |
| | 10/7/09 | 350 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.85 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/18/10 | 620 | ND<0.5 | ND<0.5 | ND<0.5 | 0.92 | 0.84 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/14/10 | 390 | ND<0.5 | ND<0.5 | ND<0.5 | 1.1 | 0.97 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/7/10 | 380 | ND<0.5 | ND<0.5 | ND<0.5 | 0.79 | 0.82 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/28/10 | 220 | ND<0.5 | ND<0.5 | ND<0.5 | 0.67 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/25/11 | 460 | ND<0.5 | ND<0.5 | ND<0.5 | 0.70 | 0.52 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/6/11 | 280 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/31/11 | 310 | ND<0.5 | ND<0.5 | 0.53 | 1.1 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 6/13/12 | 190 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/2/13 | 290 | ND<0.5 | ND<0.5 | 0.90 | 1.8 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| DW-15800[i] | 1/14/03 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.81 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 3/20/03 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 9/19/06 | NS[j] | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 2/5/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 5/29/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| DW-15808[i] | 1/14/03 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 3/20/03 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 9/19/06 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/5/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 5/29/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| DW-246[i] | 9/19/06 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/5/07[k] | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 7.0 |
| | 2/21/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 5/29/07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| OS-1 | 9/5/08 | 800 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/8/08 | 610 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/29/09 | 65 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| DUP | 1/30/09 | 150 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/15/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/1/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/7/09 | 60 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/18/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/25/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| OS-2 | 9/5/08 | 1,300 | ND<0.5 | 0.56 | ND<0.5 | ND<0.5 | 0.99 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/29/09 | 200 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/30/09 | 1900 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.55 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/15/09 | 1200 | ND<0.5 | ND<0.5 | 0.72 | ND<0.5 | 1.3 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/1/09 | 1,500 | ND<0.5 | ND<0.5 | 0.69 | ND<0.5 | 1.8 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/7/09 | 1,200 | ND<0.5 | ND<0.5 | 0.55 | ND<0.5 | 1.4 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/18/10 | 140 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 0.82 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/25/11 | 1,200 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 1.2 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| OS-3 | 9/5/08 | 3,200 | 160 | 15 | 72 | 470 | 19 | ND<0.5 | ND<0.5 | ND<0.5 | 23 |
| | 10/8/08 | 4,100 | 240 | 38 | 240 | 630 | 22 | ND<0.5 | ND<0.5 | ND<0.5 | 20 |
| | 1/29/09 | 670 | 78 | 3.5 | 75 | 28 | 11 | ND<0.5 | ND<0.5 | ND<0.5 | 7.8 |
| DUP | 1/30/09 | 1,400 | 140 | 5.3 | 120 | 120 | 11 | ND<0.5 | ND<0.5 | ND<0.5 | 16 |
| | 4/15/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 32 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/1/09 | 2,100 | 220 | 6.8 | 190 | 250 | 20 | ND<0.5 | ND<0.5 | ND<0.5 | 18 |

**TABLE D-1**

**HISTORICAL GROUNDWATER MONITORING ANALYTICAL RESULTS**
**TESORO - SAN LORENZO, 67107**

| Monitoring Well | Sample Date[a] | TPHg[b] (µg/l) | Benzene[b] (µg/l) | Toluene[b] (µg/l) | Ethylbenzene[b] (µg/l) | Total Xylenes[b] (µg/l) | MTBE[b] (µg/l) | DIPE[b] (µg/l) | ETBE[b] (µg/l) | TAME[b] (µg/l) | TBA[b] (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESLs[c] | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | NE[d] | NE | NE | 12 |
| OS-3 (cont.) | 10/7/09 | 2,100 | 230 | 6.5 | 150 | 230 | 20 | ND<0.5 | ND<0.5 | ND<0.5 | 16 |
| | 2/18/10 | 1,600 | 180 | 3.7 | 120 | 140 | 23 | ND<0.5 | ND<0.5 | ND<0.5 | 8.6 |
| | 1/25/11 | 140 | 13 | ND<0.5 | 3.1 | 0.64 | 25 | ND<0.5 | ND<0.5 | ND<0.5 | 6.7 |
| OS-4 | 9/5/08 | 210 | ND<0.5 | ND<0.5 | ND<0.5 | 3.6 | 16 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/8/08 | 170 | 4.2 | ND<0.5 | ND<0.5 | 2.4 | 12 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/29/09 | ND<50 | 1.4 | ND<0.5 | ND<0.5 | ND<0.5 | 21 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| DUP | 1/30/09 | ND<50 | ND<0.5 | ND<0.5 | 0.79 | ND<0.5 | 22 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/15/09 | 88 | 12 | ND<0.5 | 2.2 | 0.58 | 19 | ND<0.5 | ND<0.5 | ND<0.5 | 28 |
| | 7/1/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 34 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/7/09 | 680 | 14 | ND<0.5 | 8.6 | 12 | 38 | ND<0.5 | ND<0.5 | ND<0.5 | 12 |
| | 2/18/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | 0.55 | 25 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/25/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 7.8 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| PT-1 | 9/5/08 | 240 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 5.9 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/8/08 | 140 | ND<0.5 | ND<0.5 | ND<0.5 | 1.0 | 5.4 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/29/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 7.3 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| DUP | 1/30/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 7.6 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/15/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 7.9 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/1/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 13 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/7/09 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 13 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 2/18/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 17 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/14/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 13 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 7/7/10 | 61 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 8.2 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/28/10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 9.4 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/25/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 6.3 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 4/6/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 6.4 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 10/31/11 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 8.7 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 6/13/12 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 5.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |
| | 1/2/13 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 3.6 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5 |

(a) Samples collected before January 2008 reported by others; data provided by RDM Environmental, Inc. (RDM), Fourth Quarter 2007 Groundwater Monitoring Report

(b) Total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, xylenes, methyl tert-butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl tert-butyl ether (ETBE), tert-amyl methyl ether (TAME), tert-butyl alcohol (TBA), analyzed by EPA Method 8260; reported in micrograms per liter ( µg/l).

(c) Environmental Screening Levels (ESLs) taken from Regional Water Quality Control Board, San Francisco Bay Region, Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Volume 1: Summary Tier 1 Lookup tables dated November 2007.

(d) NE - Not established.

(e) "--" - Not analyzed.

(f) ND - Not detected at the reporting limit listed; reporting limit not listed if not previosly reported.

(g) Not typical gasoline.

(h) DUP - Duplicate sample

(i) Domestic water wells (used as irrigation wells); DW-15800 collected from well at 15800 Via Cordoba, DW-15808 collected from well at 15808 Via Cordoba, DW-246 collected from well at 246 Peach Drive in San Lorenzo, CA.

(j) NS - Not sampled this sampling period.

(k) Property owner had the RDM technician sample a faucet plumbed to city water. RDM resampled the 246 Peach well on 21 February 2007.

# ATTACHMENT E

# LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY FORM

KIFF Analytical LLC

Report Number : 83680
Date : 01/09/2013

# Laboratory Results

Mike Purchase
Arctos Environmental
1332 Peralta Avenue
Berkeley, CA 94702

Subject : 7 Water Samples
Project Name : Tesoro - San Lorenzo #67107
Project Number : 01ZO

Dear Mr. Purchase,

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. Testing procedures comply with the 2003 NELAC and TNI 2009 standards. Laboratory results relate only to the samples tested. This report may be freely reproduced in full, but may only be reproduced in part with the express permission of Kiff Analytical, LLC. Kiff Analytical, LLC is certified by the State of California under the National Environmental Laboratory Accreditation Program (NELAP), lab # 08263CA. If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Troy G. Turpen

Troy Turpen

KIFF Analytical LLC

Report Number : 83680
Date : 01/09/2013

Subject : 7 Water Samples
Project Name : Tesoro - San Lorenzo #67107
Project Number : 01ZO

# Case Narrative

Matrix Spike/Matrix Spike Duplicate results associated with samples PT-1 and RW-2 for the analyte Sulfate were affected by the analyte concentration present in the un-spiked sample.

KIFF Analytical LLC

Report Number : 83680
Date : 01/09/2013

Project Name : **Tesoro - San Lorenzo #67107**
Project Number : **01ZO**

Sample : **PT-1** Matrix : Water Lab Number : 83680-01
Sample Date :01/02/2013

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date/Time Analyzed |
|---|---|---|---|---|---|
| Nitrate as N | < 0.10 | 0.10 | mg/L | EPA 300.0 | 01/03/13 12:02 |
| **Sulfate** | **29** | 0.50 | mg/L | EPA 300.0 | 01/03/13 12:02 |
| Ferrous Iron | < 0.10 | 0.10 | mg/L | SM 3500-Fe D | 01/02/13 16:05 |
| **Iron** | **18** | 0.10 | mg/L | EPA 6010B | 01/09/13 12:11 |
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 03:57 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 03:57 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 03:57 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 03:57 |
| **Methyl-t-butyl ether (MTBE)** | **3.6** | 0.50 | ug/L | EPA 8260B | 01/03/13 03:57 |
| Diisopropyl ether (DIPE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 03:57 |
| Ethyl-t-butyl ether (ETBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 03:57 |
| Tert-amyl methyl ether (TAME) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 03:57 |
| Tert-Butanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 01/03/13 03:57 |
| Methanol | < 50 | 50 | ug/L | EPA 8260B | 01/03/13 03:57 |
| Ethanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 01/03/13 03:57 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 01/03/13 03:57 |
| 1,2-Dichloroethane-d4 (Surr) | 98.2 | | % Recovery | EPA 8260B | 01/03/13 03:57 |
| Toluene - d8 (Surr) | 99.7 | | % Recovery | EPA 8260B | 01/03/13 03:57 |

KIFF Analytical LLC

Report Number : 83680
Date : 01/09/2013

Project Name : **Tesoro - San Lorenzo #67107**
Project Number : **01ZO**

Sample : **MW-1** Matrix : Water Lab Number : 83680-02
Sample Date :01/02/2013

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date/Time Analyzed |
|---|---|---|---|---|---|
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 04:32 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 04:32 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 04:32 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 04:32 |
| **Methyl-t-butyl ether (MTBE)** | **1.3** | 0.50 | ug/L | EPA 8260B | 01/03/13 04:32 |
| Diisopropyl ether (DIPE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 04:32 |
| Ethyl-t-butyl ether (ETBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 04:32 |
| Tert-amyl methyl ether (TAME) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 04:32 |
| Tert-Butanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 01/03/13 04:32 |
| Methanol | < 50 | 50 | ug/L | EPA 8260B | 01/03/13 04:32 |
| Ethanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 01/03/13 04:32 |
| **TPH as Gasoline** | **100** | 50 | ug/L | EPA 8260B | 01/03/13 04:32 |
| 1,2-Dichloroethane-d4 (Surr) | 98.4 | | % Recovery | EPA 8260B | 01/03/13 04:32 |
| Toluene - d8 (Surr) | 99.6 | | % Recovery | EPA 8260B | 01/03/13 04:32 |

KIFF Analytical LLC

Report Number : 83680
Date : 01/09/2013

Project Name : **Tesoro - San Lorenzo #67107**
Project Number : **01ZO**

Sample : **RW-1** Matrix : Water Lab Number : 83680-03
Sample Date :01/02/2013

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date/Time Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.79** | 0.50 | ug/L | EPA 8260B | 01/03/13 05:06 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 05:06 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 05:06 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 05:06 |
| **Methyl-t-butyl ether (MTBE)** | **2.6** | 0.50 | ug/L | EPA 8260B | 01/03/13 05:06 |
| Diisopropyl ether (DIPE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 05:06 |
| Ethyl-t-butyl ether (ETBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 05:06 |
| Tert-amyl methyl ether (TAME) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 05:06 |
| Tert-Butanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 01/03/13 05:06 |
| Methanol | < 50 | 50 | ug/L | EPA 8260B | 01/03/13 05:06 |
| Ethanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 01/03/13 05:06 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 01/03/13 05:06 |
| 1,2-Dichloroethane-d4 (Surr) | 98.3 | | % Recovery | EPA 8260B | 01/03/13 05:06 |
| Toluene - d8 (Surr) | 99.1 | | % Recovery | EPA 8260B | 01/03/13 05:06 |

KIFF Analytical LLC

Report Number : 83680
Date : 01/09/2013

Project Name : **Tesoro - San Lorenzo #67107**
Project Number : **01ZO**

Sample : **MW-11** Matrix : Water Lab Number : 83680-04
Sample Date :01/02/2013

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date/Time Analyzed |
|---|---|---|---|---|---|
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 04:15 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 04:15 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 04:15 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 04:15 |
| **Methyl-t-butyl ether (MTBE)** | **0.62** | 0.50 | ug/L | EPA 8260B | 01/03/13 04:15 |
| Diisopropyl ether (DIPE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 04:15 |
| Ethyl-t-butyl ether (ETBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 04:15 |
| Tert-amyl methyl ether (TAME) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 04:15 |
| Tert-Butanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 01/03/13 04:15 |
| Methanol | < 50 | 50 | ug/L | EPA 8260B | 01/03/13 04:15 |
| Ethanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 01/03/13 04:15 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 01/03/13 04:15 |
| 1,2-Dichloroethane-d4 (Surr) | 103 | | % Recovery | EPA 8260B | 01/03/13 04:15 |
| Toluene - d8 (Surr) | 98.5 | | % Recovery | EPA 8260B | 01/03/13 04:15 |

KIFF Analytical LLC

Report Number : 83680
Date : 01/09/2013

Project Name : **Tesoro - San Lorenzo #67107**
Project Number : **01ZO**

Sample : **RW-2** Matrix : Water Lab Number : 83680-05
Sample Date :01/02/2013

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date/Time Analyzed |
|---|---|---|---|---|---|
| **Nitrate as N** | **3.2** | 0.10 | mg/L | EPA 300.0 | 01/03/13 12:16 |
| **Sulfate** | **58** | 2.5 | mg/L | EPA 300.0 | 01/03/13 13:35 |
| Ferrous Iron | < 0.10 | 0.10 | mg/L | SM 3500-Fe D | 01/02/13 16:06 |
| **Iron** | **3.0** | 0.10 | mg/L | EPA 6010B | 01/09/13 12:15 |
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 02:30 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 02:30 |
| **Ethylbenzene** | **0.90** | 0.50 | ug/L | EPA 8260B | 01/03/13 02:30 |
| **Total Xylenes** | **1.8** | 0.50 | ug/L | EPA 8260B | 01/03/13 02:30 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 02:30 |
| Diisopropyl ether (DIPE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 02:30 |
| Ethyl-t-butyl ether (ETBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 02:30 |
| Tert-amyl methyl ether (TAME) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 02:30 |
| Tert-Butanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 01/03/13 02:30 |
| Methanol | < 50 | 50 | ug/L | EPA 8260B | 01/03/13 02:30 |
| Ethanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 01/03/13 02:30 |
| **TPH as Gasoline** | **290** | 50 | ug/L | EPA 8260B | 01/03/13 02:30 |
| 1,2-Dichloroethane-d4 (Surr) | 100 | | % Recovery | EPA 8260B | 01/03/13 02:30 |
| Toluene - d8 (Surr) | 98.4 | | % Recovery | EPA 8260B | 01/03/13 02:30 |

KIFF Analytical LLC

Report Number : 83680
Date : 01/09/2013

Project Name : **Tesoro - San Lorenzo #67107**
Project Number : **01ZO**

Sample : **MW-3R** Matrix : Water Lab Number : 83680-06
Sample Date :01/02/2013

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date/Time Analyzed |
|---|---|---|---|---|---|
| Nitrate as N | < 0.10 | 0.10 | mg/L | EPA 300.0 | 01/03/13 12:29 |
| **Sulfate** | **18** | 0.50 | mg/L | EPA 300.0 | 01/07/13 12:39 |
| **Ferrous Iron** | **0.43** | 0.10 | mg/L | SM 3500-Fe D | 01/02/13 16:07 |
| **Iron** | **2.9** | 0.10 | mg/L | EPA 6010B | 01/09/13 12:19 |
| **Benzene** | **15** | 0.50 | ug/L | EPA 8260B | 01/03/13 03:05 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 03:05 |
| **Ethylbenzene** | **6.0** | 0.50 | ug/L | EPA 8260B | 01/03/13 03:05 |
| **Total Xylenes** | **0.95** | 0.50 | ug/L | EPA 8260B | 01/03/13 03:05 |
| **Methyl-t-butyl ether (MTBE)** | **6.1** | 0.50 | ug/L | EPA 8260B | 01/03/13 03:05 |
| Diisopropyl ether (DIPE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 03:05 |
| Ethyl-t-butyl ether (ETBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 03:05 |
| Tert-amyl methyl ether (TAME) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 03:05 |
| **Tert-Butanol** | **13** | 5.0 | ug/L | EPA 8260B | 01/03/13 03:05 |
| Methanol | < 50 | 50 | ug/L | EPA 8260B | 01/03/13 03:05 |
| Ethanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 01/03/13 03:05 |
| **TPH as Gasoline** | **240** | 50 | ug/L | EPA 8260B | 01/03/13 03:05 |
| 1,2-Dichloroethane-d4 (Surr) | 101 | | % Recovery | EPA 8260B | 01/03/13 03:05 |
| Toluene - d8 (Surr) | 98.7 | | % Recovery | EPA 8260B | 01/03/13 03:05 |

KIFF Analytical LLC

Report Number : 83680
Date : 01/09/2013

Project Name : **Tesoro - San Lorenzo #67107**
Project Number : **01ZO**

Sample : **MW-10** Matrix : Water Lab Number : 83680-07
Sample Date :01/02/2013

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date/Time Analyzed |
|---|---|---|---|---|---|
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 03:40 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 03:40 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 03:40 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 03:40 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 03:40 |
| Diisopropyl ether (DIPE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 03:40 |
| Ethyl-t-butyl ether (ETBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 03:40 |
| Tert-amyl methyl ether (TAME) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/03/13 03:40 |
| Tert-Butanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 01/03/13 03:40 |
| Methanol | < 50 | 50 | ug/L | EPA 8260B | 01/03/13 03:40 |
| Ethanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 01/03/13 03:40 |
| **TPH as Gasoline** | **2200** | 50 | ug/L | EPA 8260B | 01/03/13 03:40 |
| 1,2-Dichloroethane-d4 (Surr) | 96.8 | | % Recovery | EPA 8260B | 01/03/13 03:40 |
| Toluene - d8 (Surr) | 96.2 | | % Recovery | EPA 8260B | 01/03/13 03:40 |

Report Number : 83680

Date : 01/09/2013

**QC Report : Method Blank Data**

Project Name : **Tesoro - San Lorenzo #67107**

Project Number : **01ZO**

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| Iron | < 0.10 | 0.10 | mg/L | EPA 6010B | 01/07/2013 |
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/02/2013 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/02/2013 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/02/2013 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/02/2013 |
| Diisopropyl ether (DIPE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/02/2013 |
| Ethanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 01/02/2013 |
| Ethyl-t-butyl ether (ETBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/02/2013 |
| Methanol | < 50 | 50 | ug/L | EPA 8260B | 01/02/2013 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/02/2013 |
| Tert-Butanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 01/02/2013 |
| Tert-amyl methyl ether (TAME) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/02/2013 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 01/02/2013 |
| 1,2-Dichloroethane-d4 (Surr) | 102 | | % | EPA 8260B | 01/02/2013 |
| Toluene - d8 (Surr) | 99.3 | | % | EPA 8260B | 01/02/2013 |
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/02/2013 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/02/2013 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/02/2013 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/02/2013 |
| Diisopropyl ether (DIPE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/02/2013 |
| Ethanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 01/02/2013 |
| Ethyl-t-butyl ether (ETBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/02/2013 |
| Methanol | < 50 | 50 | ug/L | EPA 8260B | 01/02/2013 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/02/2013 |
| Tert-Butanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 01/02/2013 |
| Tert-amyl methyl ether (TAME) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/02/2013 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 01/02/2013 |
| 1,2-Dichloroethane-d4 (Surr) | 98.4 | | % | EPA 8260B | 01/02/2013 |
| Toluene - d8 (Surr) | 99.6 | | % | EPA 8260B | 01/02/2013 |

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| Ferrous Iron | <0.10 | 0.10 | mg/L | SM 3500-Fe D | 01/02/2013 |
| Nitrate as N | <0.10 | 0.10 | mg/L | EPA 300.0 | 01/03/2013 |
| Sulfate | <0.50 | 0.50 | mg/L | EPA 300.0 | 01/03/2013 |
| Sulfate | <0.50 | 0.50 | mg/L | EPA 300.0 | 01/07/2013 |



KIFF ANALYTICAL, LLC

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

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

Date : 01/09/2013

Project Name : **Tesoro - San Lorenzo #67107**

Project Number : **01ZO**

| 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 | | | | | | | | | | | | | | |
| | 83678-03 | <0.50 | 40.0 | 40.0 | 39.5 | 38.4 | ug/L | EPA 8260B | 1/2/13 | 98.7 | 96.0 | 2.76 | 80-120 | 25 |
| Diisopropyl ether | | | | | | | | | | | | | | |
| | 83678-03 | 1.2 | 39.4 | 39.4 | 40.9 | 40.2 | ug/L | EPA 8260B | 1/2/13 | 101 | 98.8 | 1.89 | 80-120 | 25 |
| Ethanol | | | | | | | | | | | | | | |
| | 83678-03 | <5.0 | 99.6 | 99.6 | 97.9 | 105 | ug/L | EPA 8260B | 1/2/13 | 98.3 | 106 | 7.34 | 55.1-159 | 25 |
| Ethyl-tert-butyl ether | | | | | | | | | | | | | | |
| | 83678-03 | <0.50 | 40.6 | 40.6 | 39.0 | 38.8 | ug/L | EPA 8260B | 1/2/13 | 96.2 | 95.7 | 0.429 | 76.5-120 | 25 |
| Ethylbenzene | | | | | | | | | | | | | | |
| | 83678-03 | <0.50 | 40.0 | 40.0 | 41.7 | 40.4 | ug/L | EPA 8260B | 1/2/13 | 104 | 101 | 3.13 | 80-120 | 25 |
| Methanol | | | | | | | | | | | | | | |
| | 83678-03 | <50 | 999 | 999 | 956 | 961 | ug/L | EPA 8260B | 1/2/13 | 95.8 | 96.2 | 0.467 | 53.2-147 | 25 |
| Methyl-t-butyl ether | | | | | | | | | | | | | | |
| | 83678-03 | 1.3 | 40.1 | 40.1 | 39.1 | 38.5 | ug/L | EPA 8260B | 1/2/13 | 94.3 | 92.8 | 1.61 | 69.7-121 | 25 |
| P + M Xylene | | | | | | | | | | | | | | |
| | 83678-03 | <0.50 | 40.0 | 40.0 | 38.2 | 37.0 | ug/L | EPA 8260B | 1/2/13 | 95.6 | 92.5 | 3.29 | 76.8-120 | 25 |
| Tert-Butanol | | | | | | | | | | | | | | |
| | 83678-03 | <5.0 | 201 | 201 | 203 | 201 | ug/L | EPA 8260B | 1/2/13 | 101 | 100 | 0.890 | 80-120 | 25 |
| Tert-amyl-methyl ether | | | | | | | | | | | | | | |
| | 83678-03 | <0.50 | 40.4 | 40.4 | 38.9 | 38.0 | ug/L | EPA 8260B | 1/2/13 | 96.3 | 94.2 | 2.14 | 78.9-120 | 25 |



KIFF ANALYTICAL, LLC

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

Report Number : 83680

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

Date : 01/09/2013

Project Name : **Tesoro - San Lorenzo #67107**

Project Number : **01ZO**

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | | | | | | | | | | | | | | |
| | 83678-03 | <0.50 | 40.0 | 40.0 | 39.9 | 38.7 | ug/L | EPA 8260B | 1/2/13 | 99.7 | 96.8 | 2.96 | 80-120 | 25 |
| Benzene | | | | | | | | | | | | | | |
| | 83678-04 | <0.50 | 40.0 | 40.0 | 41.1 | 39.9 | ug/L | EPA 8260B | 1/2/13 | 103 | 99.8 | 2.94 | 80-120 | 25 |
| Diisopropyl ether | | | | | | | | | | | | | | |
| | 83678-04 | <0.50 | 39.4 | 39.4 | 41.4 | 41.2 | ug/L | EPA 8260B | 1/2/13 | 105 | 104 | 0.454 | 80-120 | 25 |
| Ethanol | | | | | | | | | | | | | | |
| | 83678-04 | <5.0 | 99.6 | 99.6 | 117 | 121 | ug/L | EPA 8260B | 1/2/13 | 117 | 121 | 3.37 | 55.1-159 | 25 |
| Ethyl-tert-butyl ether | | | | | | | | | | | | | | |
| | 83678-04 | <0.50 | 40.6 | 40.6 | 39.8 | 39.9 | ug/L | EPA 8260B | 1/2/13 | 98.1 | 98.4 | 0.210 | 76.5-120 | 25 |
| Ethylbenzene | | | | | | | | | | | | | | |
| | 83678-04 | <0.50 | 40.0 | 40.0 | 39.7 | 38.3 | ug/L | EPA 8260B | 1/2/13 | 99.4 | 95.7 | 3.75 | 80-120 | 25 |
| Methanol | | | | | | | | | | | | | | |
| | 83678-04 | <50 | 999 | 999 | 1200 | 1250 | ug/L | EPA 8260B | 1/2/13 | 120 | 125 | 4.38 | 53.2-147 | 25 |
| Methyl-t-butyl ether | | | | | | | | | | | | | | |
| | 83678-04 | 9.9 | 40.1 | 40.1 | 49.3 | 49.6 | ug/L | EPA 8260B | 1/2/13 | 98.5 | 99.1 | 0.609 | 69.7-121 | 25 |
| P + M Xylene | | | | | | | | | | | | | | |
| | 83678-04 | <0.50 | 40.0 | 40.0 | 39.5 | 37.9 | ug/L | EPA 8260B | 1/2/13 | 98.8 | 94.7 | 4.21 | 76.8-120 | 25 |



KIFF ANALYTICAL, LLC

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

Report Number : 83680

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

Date : 01/09/2013

Project Name : **Tesoro - San Lorenzo #67107**

Project Number : **01ZO**

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tert-Butanol | | | | | | | | | | | | | | |
| | 83678-04 | <5.0 | 201 | 201 | 208 | 208 | ug/L | EPA 8260B | 1/2/13 | 103 | 103 | 0.0686 | 80-120 | 25 |
| Tert-amyl-methyl ether | | | | | | | | | | | | | | |
| | 83678-04 | <0.50 | 40.4 | 40.4 | 40.3 | 40.2 | ug/L | EPA 8260B | 1/2/13 | 99.9 | 99.6 | 0.227 | 78.9-120 | 25 |
| Toluene | | | | | | | | | | | | | | |
| | 83678-04 | <0.50 | 40.0 | 40.0 | 41.5 | 40.2 | ug/L | EPA 8260B | 1/2/13 | 104 | 100 | 3.21 | 80-120 | 25 |
| Ferrous Iron | | | | | | | | | | | | | | |
| | 83680-01 | < 0.10 | 0.251 | 0.251 | 0.302 | 0.336 | mg/L | SM 3500-Fe D | 1/2/13 | 101 | 115 | 10.6 | 70.0-130 | 25 |
| Nitrate as N | | | | | | | | | | | | | | |
| | 83680-01 | < 0.10 | 0.500 | 0.500 | 0.497 | 0.490 | mg/L | EPA 300.0 | 1/3/13 | 99.4 | 97.9 | 1.47 | 90.0-110 | 10 |
| **Sulfate** | | | | | | | | | | | | | | |
| | 83680-01 | 29 | 2.50 | 2.50 | 31.4 | 31.1 | mg/L | EPA 300.0 | 1/3/13 | **86.9** | **76.9** | 0.798 | 90.0-110 | 10 |
| Sulfate | | | | | | | | | | | | | | |
| | 83680-06 | 18 | 2.50 | 2.50 | 20.5 | 20.7 | mg/L | EPA 300.0 | 1/7/13 | 90.4 | 95.7 | 0.651 | 90.0-110 | 10 |
| Iron | | | | | | | | | | | | | | |
| | 83681-03 | < 0.10 | 0.400 | 0.400 | 0.413 | 0.430 | mg/L | EPA 6010B | 1/7/13 | 100 | 104 | 3.89 | 75-125 | 20 |



KIFF ANALYTICAL, LLC

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

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

Project Name : **Tesoro - San Lorenzo #67107**

Project Number : **01ZO**

| Parameter | Spike Level | Units | Analysis Method | Date Analyzed | LCS Percent Recov. | LCS Percent Recov. Limit |
|---|---|---|---|---|---|---|
| Iron | 0.400 | mg/L | EPA 6010B | 1/7/13 | 105 | 85-115 |
| | | | | | | |
| Benzene | 40.2 | ug/L | EPA 8260B | 1/2/13 | 99.3 | 80-120 |
| Diisopropyl ether | 39.6 | ug/L | EPA 8260B | 1/2/13 | 101 | 80-120 |
| Ethanol | 100 | ug/L | EPA 8260B | 1/2/13 | 94.2 | 55.1-159 |
| Ethyl-tert-butyl ether | 40.8 | ug/L | EPA 8260B | 1/2/13 | 96.6 | 76.5-120 |
| Ethylbenzene | 40.2 | ug/L | EPA 8260B | 1/2/13 | 108 | 80-120 |
| Methanol | 1000 | ug/L | EPA 8260B | 1/2/13 | 89.0 | 53.2-147 |
| Methyl-t-butyl ether | 40.2 | ug/L | EPA 8260B | 1/2/13 | 95.1 | 69.7-121 |
| P + M Xylene | 40.2 | ug/L | EPA 8260B | 1/2/13 | 106 | 76.8-120 |
| TPH as Gasoline | 479 | ug/L | EPA 8260B | 1/2/13 | 106 | 70.0-130 |
| Tert-Butanol | 202 | ug/L | EPA 8260B | 1/2/13 | 101 | 80-120 |
| Tert-amyl-methyl ether | 40.5 | ug/L | EPA 8260B | 1/2/13 | 95.8 | 78.9-120 |
| Toluene | 40.2 | ug/L | EPA 8260B | 1/2/13 | 105 | 80-120 |
| | | | | | | |
| Benzene | 40.1 | ug/L | EPA 8260B | 1/2/13 | 102 | 80-120 |
| Diisopropyl ether | 39.5 | ug/L | EPA 8260B | 1/2/13 | 103 | 80-120 |
| Ethanol | 99.9 | ug/L | EPA 8260B | 1/2/13 | 120 | 55.1-159 |
| Ethyl-tert-butyl ether | 40.7 | ug/L | EPA 8260B | 1/2/13 | 97.2 | 76.5-120 |
| Ethylbenzene | 40.1 | ug/L | EPA 8260B | 1/2/13 | 98.6 | 80-120 |
| Methanol | 1000 | ug/L | EPA 8260B | 1/2/13 | 124 | 53.2-147 |
| Methyl-t-butyl ether | 40.2 | ug/L | EPA 8260B | 1/2/13 | 98.2 | 69.7-121 |

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

Project Name : **Tesoro - San Lorenzo #67107**

Project Number : **01ZO**

| Parameter | Spike Level | Units | Analysis Method | Date Analyzed | LCS Percent Recov. | LCS Percent Recov. Limit |
|---|---|---|---|---|---|---|
| P + M Xylene | 40.1 | ug/L | EPA 8260B | 1/2/13 | 97.7 | 76.8-120 |
| TPH as Gasoline | 481 | ug/L | EPA 8260B | 1/2/13 | 95.0 | 70.0-130 |
| Tert-Butanol | 202 | ug/L | EPA 8260B | 1/2/13 | 102 | 80-120 |
| Tert-amyl-methyl ether | 40.4 | ug/L | EPA 8260B | 1/2/13 | 99.2 | 78.9-120 |
| Toluene | 40.1 | ug/L | EPA 8260B | 1/2/13 | 102 | 80-120 |
| Ferrous Iron | 0.251 | mg/L | SM 3500-Fe D | 1/2/13 | 95.6 | 70.0-130 |
| Nitrate as N | 0.500 | mg/L | EPA 300.0 | 1/3/13 | 100 | 90.0-110 |
| Sulfate | 2.50 | mg/L | EPA 300.0 | 1/3/13 | 99.6 | 90.0-110 |
| Sulfate | 2.50 | mg/L | EPA 300.0 | 1/7/13 | 98.1 | 90.0-110 |



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

**KIFF Analytical LLC**

2795 2nd Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 83680

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# Chain-of-Custody Record and Analysis Request

| | |
|---|---|
| Project Contact (Hardcopy or PDF To): Mike Purchase | California EDF Report? ☒ Yes ☐ No |
| Company / Address: Arctos Environmental<br>1332 Peralta Avenue, Berkley, CA. 90806 | Sampling Company Log Code: |
| Phone Number: (510) 525-2180 | Global ID: T0600101414 |
| Fax Number: (510) 525-2392 | EDF Deliverable To (Email Address): |
| Project #: / P.O. #: | Bill to: |
| Project Name: Tesoro - San Lorenzo #67107 | Sampler Signature: |
| Project Address: 44 Lewelling Blvd<br>San Lorenzo, CA | |

| Sample Designation | Date | Time | Containers & Preservatives: 40 ml HCl VOA | 250 mL HDPE unpres. | 500 mL HDPE unpres. | 250 mL HDPE $HNO_3$ | 250 mL glass $H_2SO_4$ | 125 mL Amber glass w/ septae | Matrix: Water | Soil | Air | TPH-G, BTEX (8260B) | 7 Oxygenates (MTBE, DIPE, ETBE, TAME, TBA, EtOH, MeOH) (EPA 8260B) | Nitrate & Sulfate | BOD | COD | TOC | Total Alkalinity (SM2320 B) | Total Iron (EPA 6010) | Ferrous Iron (SM 3500-Fe D) | Total Organic Carbon (EPA 415.1) | Total Lead (EPA 200.7 / 6010) | Carbon Dioxide (SM 4500-CO2D) | Phosphorus, Nitrate, Nitrite and Sulfate (EPA 300.0/365.3) | Methane (RSK 175M) | TAT | For Lab Use Only |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PT-1 | 1/2/13 | 945 | 3 | 3 | 1 | 1 | 2 | | X | | | X | X | X | X | X | X | X | X | X | | | | | | | 01 |
| MW-1 | | 1005 | 3 | | | | | | X | | | X | X | | | | | | | | | | | | | | 02 |
| RW-1 | | 1035 | 3 | | | | | | X | | | X | X | | | | | | | | | | | | | | 03 |
| MW-11 | | 1055 | 3 | | | | | | X | | | X | X | | | | | | | | | | | | | | 04 |
| RW-2 | | 1115 | 3 | 3 | 1 | 1 | 2 | | X | | | X | X | X | X | X | X | X | X | X | | | | | | | 05 |
| MW-3R | | 1140 | 3 | 3 | 1 | 1 | 2 | | X | | | X | X | X | X | X | X | X | X | X | | | | | | | 06 |
| MW-10 | | 1220 | 3 | | | | | | X | | | X | X | | | | | | | | | | | | | | 07 |

Analysis Request — circle method

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

| Relinquished by: | Date | Time | Received by: |
|---|---|---|---|
| | 1/2/13 | 1417 | |
| Relinquished by: | Date | Time | Received by: |
| | | | |
| Relinquished by: | Date | Time | Received by Laboratory: |
| | 010213 | 1419 | Kiff Analytical LLC |

Remarks:

For Lab Use Only: Sample Receipt

| Temp °C | Initials | Date | Time | Therm. ID # | Coolant Present |
|---|---|---|---|---|---|
| | | | | | Yes / No |

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KIFF Analytical LLC

# SAMPLE RECEIPT CHECKLIST

RECEIVER: TJB (Initials)

SRG#: 83680 Date: 010213

Project ID: Tesoro - San Lorenzo #67107

Method of Receipt: ☐ Courier ☒ Over-the-counter ☐ Shipper

Shipping Only: ☐ FedEx * ☐ OnTrac * ☐ Greyhound ☐ Other *Service level if not Priority or Sunrise (M-F): _____

**COC Inspection**

| | | | | |
|---|---|---|---|---|
| Is COC present? | ☒ Yes | ☐ No | | |
| Custody seals on shipping container? | ☐ Intact | ☐ Broken | ☐ Not present | ☒ N/A |
| Is COC Signed by Relinquisher? ☒ Yes ☐ No Dated? | ☒ Yes | ☐ No | | |
| Is sampler name legibly indicated on COC? | ☒ Yes | ☐ No | | |
| Is analysis or hold requested for all samples? | ☒ Yes | ☐ No | | |
| Is the turnaround time indicated on COC? | ☒ Yes | ☐ No | | |
| Is COC free of whiteout and uninitialed cross-outs? | ☒ Yes | ☐ No, Whiteout | ☐ No, Cross-outs | |

**Sample Inspection**

Coolant Present: ☒ Yes ☐ No (includes water)

Temperature °C 3.2 Therm. ID# IR-3 Initial TJB Date/Time 010213/1415 ☐ N/A

| | | | | |
|---|---|---|---|---|
| Are there custody seals on sample containers? | ☐ Intact | ☐ Broken | ☒ Not present | |
| Do containers match COC? ☒ Yes ☐ No ☐ No, COC lists absent sample(s) | ☐ No, Extra sample(s) present | | | |
| Are there samples matrices other than soil, water, air or carbon? | ☐ Yes | ☒ No | | |
| Are any sample containers broken, leaking or damaged? | ☐ Yes | ☒ No | | |
| Are preservatives indicated? ☒ Yes, on sample containers | ☒ Yes, on COC | ☐ Not indicated | ☐ N/A | |
| Are preservatives correct for analyses requested? | ☒ Yes | ☐ No | ☐ N/A | |
| Are samples within holding time for analyses requested? | ☒ Yes | ☐ No | | |
| Are the correct sample containers used for the analyses requested? | ☒ Yes | ☐ No | | |
| Is there sufficient sample to perform testing? | ☒ Yes | ☐ No | | |
| Does any sample contain product, have strong odor or are otherwise suspected to be hot? | ☐ Yes | ☒ No | | |

Receipt Details

| | | |
|---|---|---|
| Matrix WA | Container type VOA | # of containers received 21 |
| Matrix WA | Container type Poly | # of containers received 15 |
| Matrix WA | Container type Glass | # of containers received 6 |

Date and Time Sample Put into Temp Storage Date: 010213 Time: 1419

**Quicklog**

| | | | | |
|---|---|---|---|---|
| Are the Sample ID's indicated: | ☐ On COC | ☐ On sample container(s) | ☒ On Both | ☐ Not indicated |
| If Sample ID's are listed on both COC and containers, do they all match? | ☒ Yes | ☐ No | ☐ N/A | |
| Is the Project ID indicated: | ☐ On COC | ☐ On sample container(s) | ☒ On Both | ☐ Not indicated |
| If project ID is listed on both COC and containers, do they all match? | ☒ Yes | ☐ No | ☐ N/A | |
| Are the sample collection dates indicated: | ☐ On COC | ☐ On sample container(s) | ☒ On Both | ☐ Not indicated |
| If collection dates are listed on both COC and containers, do they all match? | ☒ Yes | ☐ No | ☐ N/A | |
| Are the sample collection times indicated: | ☐ On COC | ☐ On sample container(s) | ☒ On Both | ☐ Not indicated |
| If collection times are listed on both COC and containers, do they all match? | ☒ Yes | ☐ No | ☐ N/A | |

**COMMENTS:**

*Leaders in Analytical Science and Service*

KIFF Analytical LLC

# Subcontract Laboratory Report Attachments

2795 Second Street, Suite 300 Davis, CA 95618
tel 530.297.4800 fax 530.297.4808
www.kiffanalytical.com

Calscience Environmental Laboratories, Inc.

# CALSCIENCE

## WORK ORDER NUMBER: 13-01-0053

*The difference is service*

AIR | SOIL | WATER | MARINE CHEMISTRY

**Analytical Report For**

**Client:** Kiff Analytical

**Client Project Name:** Tesoro - San Lorenzo #67107

**Attention:** Joel Kiff
2795 2nd Street, Suite 300
Davis, CA 95618-6505

Amanda Porter

Approved for release on 01/11/2013 by:
Amanda Porter
Project Manager

ResultLink

Email your PM

Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Calscience Environmental Laboratories, Inc.

# Contents

Client Project Name: Tesoro - San Lorenzo #67107
Work Order Number: 13-01-0053

Calscience Environmental Laboratories, Inc.

# Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95618-6505

Date Received: 01/03/13
Work Order No: 13-01-0053

Project: Tesoro - San Lorenzo #67107



| Client Sample Number | Lab Sample Number | Date Collected | Matrix |
|---|---|---|---|
| **PT-1** | **13-01-0053-1** | **01/02/13** | **Aqueous** |

| Parameter | Results | RL | DF | Qual | Units | Date Prepared | Date Analyzed | Method |
|---|---|---|---|---|---|---|---|---|
| Chemical Oxygen Demand | ND | 5.0 | 1 | | mg/L | 01/07/13 | 01/07/13 | EPA 410.4 |
| Alkalinity, Total (as CaCO3) | 432 | 5.00 | 1 | | mg/L | N/A | 01/08/13 | SM 2320B |
| Biochemical Oxygen Demand | ND | 1.0 | 1 | | mg/L | 01/03/13 | 01/08/13 | SM 5210 B |
| Carbon, Total Organic | 46 | 2.5 | 5 | | mg/L | 01/03/13 | 01/04/13 | SM 5310 D |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix |
|---|---|---|---|
| **RW-2** | **13-01-0053-2** | **01/02/13** | **Aqueous** |

| Parameter | Results | RL | DF | Qual | Units | Date Prepared | Date Analyzed | Method |
|---|---|---|---|---|---|---|---|---|
| Chemical Oxygen Demand | ND | 5.0 | 1 | | mg/L | 01/07/13 | 01/07/13 | EPA 410.4 |
| Alkalinity, Total (as CaCO3) | 296 | 5.00 | 1 | | mg/L | N/A | 01/08/13 | SM 2320B |
| Biochemical Oxygen Demand | ND | 1.0 | 1 | | mg/L | 01/03/13 | 01/08/13 | SM 5210 B |
| Carbon, Total Organic | 27 | 2.5 | 5 | | mg/L | 01/03/13 | 01/04/13 | SM 5310 D |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix |
|---|---|---|---|
| **MW-3R** | **13-01-0053-3** | **01/02/13** | **Aqueous** |

| Parameter | Results | RL | DF | Qual | Units | Date Prepared | Date Analyzed | Method |
|---|---|---|---|---|---|---|---|---|
| Chemical Oxygen Demand | ND | 5.0 | 1 | | mg/L | 01/07/13 | 01/07/13 | EPA 410.4 |
| Alkalinity, Total (as CaCO3) | 454 | 5.00 | 1 | | mg/L | N/A | 01/08/13 | SM 2320B |
| Biochemical Oxygen Demand | 1.3 | 1.0 | 1 | | mg/L | 01/03/13 | 01/08/13 | SM 5210 B |
| Carbon, Total Organic | 47 | 2.5 | 5 | | mg/L | 01/03/13 | 01/04/13 | SM 5310 D |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix |
|---|---|---|---|
| **Method Blank** | | **N/A** | **Aqueous** |

| Parameter | Results | RL | DF | Qual | Units | Date Prepared | Date Analyzed | Method |
|---|---|---|---|---|---|---|---|---|
| Chemical Oxygen Demand | ND | 5.0 | 1 | | mg/L | 01/07/13 | 01/07/13 | EPA 410.4 |
| Alkalinity, Total (as CaCO3) | ND | 1.0 | 1 | | mg/L | N/A | 01/08/13 | SM 2320B |
| Biochemical Oxygen Demand | ND | 1.0 | 1 | | mg/L | 01/03/13 | 01/08/13 | SM 5210 B |
| Carbon, Total Organic | ND | 0.50 | 1 | | mg/L | 01/03/13 | 01/04/13 | SM 5310 D |

Return to Contents

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

Calscience Environmental Laboratories, Inc.

# Quality Control - Spike/Spike Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95618-6505

Date Received: 01/03/13
Work Order No: 13-01-0053
Preparation: N/A
Method: SM 5310 D

Project Tesoro - San Lorenzo #67107

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | MS/MSD Batch Number |
|---|---|---|---|---|---|
| **MW-3R** | **Aqueous** | **TOC 6** | **01/03/13** | **01/04/13** | **D0103TOCS1** |

| Parameter | SAMPLE CONC | SPIKE ADDED | MS CONC | MS %REC | MSD CONC | MSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| Carbon, Total Organic | 47 | 25 | 62 | 63 | 62 | 63 | 28-148 | 0 | 0-23 | |

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

## Quality Control - Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95618-6505

Date Received: N/A
Work Order No: 13-01-0053

Project: Tesoro - San Lorenzo #67107

**Matrix: Aqueous or Solid**

| Parameter | Method | QC Sample ID | Date Analyzed | Sample Conc | DUP Conc | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (as CaCO3) | SM 2320B | 13-01-0042-1 | 01/08/13 | 268 | 274 | 2 | 0-25 | |
| Bicarbonate (as CaCO3) | SM 2320B | 13-01-0042-1 | 01/08/13 | 268 | 274 | 2 | 0-25 | |
| Carbonate (as CaCO3) | SM 2320B | 13-01-0042-1 | 01/08/13 | ND | ND | NA | 0-25 | |
| Hydroxide (as CaCO3) | SM 2320B | 13-01-0042-1 | 01/08/13 | ND | ND | NA | 0-25 | |
| Chemical Oxygen Demand | EPA 410.4 | PT-1 | 01/07/13 | ND | ND | NA | 0-25 | |
| Biochemical Oxygen Demand | SM 5210 B | PT-1 | 01/08/13 | ND | ND | NA | 0-25 | |

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

## Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

| | | | |
|---|---|---|---|
| Kiff Analytical | | Date Received: | N/A |
| 2795 2nd Street, Suite 300 | | Work Order No: | 13-01-0053 |
| Davis, CA 95618-6505 | | Preparation: | N/A |
| | | Method: | SM 2320B |

Project: Tesoro - San Lorenzo #67107

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | LCS/LCSD Batch Number |
|---|---|---|---|---|---|
| **099-12-223-5,936** | **Aqueous** | **PH1/BUR03** | **N/A** | **01/08/13** | **D0108ALKL1** |

| Parameter | SPIKE ADDED | LCS CONC | LCS %REC | LCSD CONC | LCSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (as CaCO3) | 100 | 99.6 | 100 | 99.4 | 99 | 80-120 | 0 | 0-20 | |

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

## Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

| | | | |
|---|---|---|---|
| Kiff Analytical | | Date Received: | N/A |
| 2795 2nd Street, Suite 300 | | Work Order No: | 13-01-0053 |
| Davis, CA 95618-6505 | | Preparation: | N/A |
| | | Method: | SM 5310 D |

Project: Tesoro - San Lorenzo #67107

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | LCS/LCSD Batch Number |
|---|---|---|---|---|---|
| **099-05-097-4,785** | **Aqueous** | **TOC 6** | **01/03/13** | **01/04/13** | **D0103TOCL1** |

| Parameter | SPIKE ADDED | LCS CONC | LCS %REC | LCSD CONC | LCSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| Carbon, Total Organic | 5.0 | 5.0 | 101 | 5.0 | 101 | 77-125 | 0 | 0-20 | |

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

## Glossary of Terms and Qualifiers

ACCREDITED IN ACCORDANCE WITH nelac

Work Order Number: 13-01-0053

| Qualifier | Definition |
|---|---|
| * | See applicable analysis comment. |
| < | Less than the indicated value. |
| > | Greater than the indicated value. |
| 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 (MS) or Matrix Spike Duplicate (MSD) 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 or PES/PESD 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 without further clarification. |
| 6 | Surrogate recovery below the acceptance limit. |
| 7 | Surrogate recovery above the acceptance limit. |
| B | Analyte was present in the associated method blank. |
| BU | Sample analyzed after holding time expired. |
| E | Concentration exceeds the calibration range. |
| ET | Sample was extracted past end of recommended max. holding time. |
| HD | The chromatographic pattern was inconsistent with the profile of the reference fuel standard. |
| HDH | The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected). |
| HDL | The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected). |
| J | Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated. |
| ME | LCS/LCSD Recovery Percentage is within Marginal Exceedance (ME) Control Limit range. |
| 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. |
| SG | The sample extract was subjected to Silica Gel treatment prior to analysis. |
| X | % Recovery and/or RPD out-of-range. |
| Z | Analyte presence was not confirmed by second column or GC/MS analysis. |

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
MPN - Most Probable Number

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**KIFF Analytical LLC**

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Calscience
7440 Lincoln Way
Garden Grove. CA 92841-1427
714-895-5494

**13-01-0053**

COC No. **83680** Page 1 of 1

# Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Scott Forbes

EDF Report? YES

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code: CESC

Global ID: T0600101414

Phone No.: 530-297-4800 | FAX No.: 530-297-4808

Project Number: | P.O. No.: 83680

Deliverables to (Email Address): inbox@kiffanalytical.com

Project Name: Tesoro - San Lorenzo #67107

Project Address:

| Sample Designation | Sampling Date | Sampling Time | Container / Preservative: 250ml Glass / $H_2SO_4$ | 1-L Poly / None | 250ml Poly / None | Matrix: Water | Analysis Request: Alkalinity SM 2320 (1) | Biochemical Oxygen Demand | Chemical Oxygen Demand | Total Organic Carbon | Due Date: January 9, 2013 | For Lab Use Only |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PT-1 | 01/02/13 | 09:45 | 2 | 1 | 1 | X | X | X | X | X | X | 1 |
| RW-2 | 01/02/13 | 11:15 | 2 | 1 | 1 | X | X | X | X | X | X | 2 |
| MW-3R | 01/02/13 | 11:40 | 2 | 1 | 1 | X | X | X | X | X | X | 3 |

| Relinquished by: | Date | Time | Received by: |
|---|---|---|---|
| Kiff Analytical | 010213 | 1700 | |
| Relinquished by: | Date | Time | Received by: |
| Relinquished by: CONTRACT | Date 01/03/13 | Time 10:20 | Received by Laboratory: |

Remarks: Please refer to attached Test Detail.

Bill to: Accounts Payable



Return to Contents

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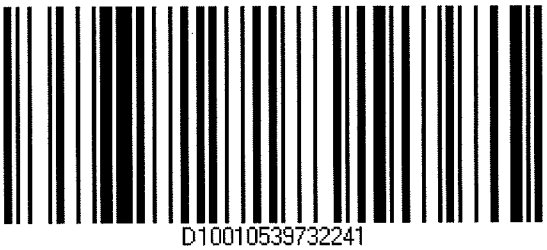
800.334.5000
ontrac.com




0053

Date Printed 1/2/2013

Tracking#D10010539732241

*Shipped From:*
KIFF ANALYTICAL
2795 2ND STREET 300
DAVIS, CA 95618

*Sent By:* SAMPLE RECEIVINGX125
*Phone#:* (530)297-4800
*wgt(lbs):* 20
*Reference:* SUBS 83680
*Reference 2:*

| *Ship To Company:* | *Service:* **S** |
|---|---|
| **CALSCIENCE ENVIRONMENTAL**<br>**7440 LINCOLN WAY**<br>**GARDEN GROVE, CA 92841**<br>**RECEIVING (714)895-5494** | *Sort Code:* **ORG**<br><br>*Special Services:*<br>**Signature Required** |

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 13-01-0053

# SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: ICIFT DATE: 01/03/13

**TEMPERATURE:** Thermometer ID: SC2 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 1.5 °C - 0.2 °C (CF) = 1.3 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: ☐ Air ☐ Filter Initial: JS

**CUSTODY SEALS INTACT:**

☑ Cooler ☐ _____ ☐ No (Not Intact) ☐ Not Present ☐ N/A Initial: JS

☐ Sample ☐ _____ ☐ No (Not Intact) ☑ Not Present Initial: TS

| SAMPLE CONDITION: | Yes | No | N/A |
|---|---|---|---|
| Chain-Of-Custody (COC) document(s) received with samples | ☑ | ☐ | ☐ |
| COC document(s) received complete | ☑ | ☐ | ☐ |
| ☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels. | | | |
| ☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished. | | | |
| Sampler's name indicated on COC | ☐ | ☐ | ☑ |
| Sample container label(s) consistent with COC | ☑ | ☐ | ☐ |
| Sample container(s) intact and good condition | ☑ | ☐ | ☐ |
| Proper containers and sufficient volume for analyses requested | ☑ | ☐ | ☐ |
| Analyses received within holding time | ☑ | ☐ | ☐ |
| pH / Res. Chlorine / Diss. Sulfide / Diss. Oxygen received within 24 hours | ☐ | ☐ | ☑ |
| Proper preservation noted on COC or sample container | ☑ | ☐ | ☐ |
| ☐ Unpreserved vials received for Volatiles analysis | | | |
| Volatile analysis container(s) free of headspace | ☐ | ☐ | ☑ |
| Tedlar bag(s) free of condensation | ☐ | ☐ | ☑ |

**CONTAINER TYPE:**

**Solid:** ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

**Water:** ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☑2 250CGB**s** ☑1PB ☐1PB**na** ☐500PB

☑250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

**Air:** ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** TS

**Container:** **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** JS

**Preservative:** **h:** HCL **n:** $HNO_3$ **na$_2$:** $Na_2S_2O_3$ **na:** NaOH **p:** $H_3PO_4$ **s:** $H_2SO_4$ **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:** _____

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# ATTACHMENT F

# COMPLETED STATE WATER RESOURCES CONTROL BOARD LOW-THREAT UNDERGROUND STORAGE TANK (UST) CASE CLOSURE POLICY CHECKLIST

Site Name: Tesoro No. 67107 (Former Beach 3721); ACEH Case No. RO0498
Site Address: 44 Lewelling Boulevard, San Lorenzo, California

**Site meets the criteria of the Low-Threat Underground Storage Tank (UST) Case Closure Policy as described below.[1]**

| | |
|---|---|
| **General Criteria**<br>General criteria that must be satisfied by all candidate sites: | |
| **Is the unauthorized release located within the service area of a public water system?** | ☒ Yes ☐ No |
| **Does the unauthorized release consist only of petroleum?** | ☒ Yes ☐ No |
| **Has the unauthorized ("primary") release from the UST system been stopped?** | ☒ Yes ☐ No |
| **Has free product been removed to the maximum extent practicable?** | ☒ Yes ☐ No ☐ NA |
| **Has a conceptual site model that assesses the nature, extent, and mobility of the release been developed?** | ☒ Yes ☐ No |
| **Has secondary source been removed to the extent practicable?** | ☒ Yes ☐ No |
| **Has soil or groundwater been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15?** | ☒ Yes ☐ No |
| **Does nuisance as defined by Water Code section 13050 exist at the site?** | ☐ Yes ☒ No |
| **Are there unique site attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents?** | ☐ Yes ☒ No |
| **Media-Specific Criteria**<br>Candidate sites must satisfy all three of these media-specific criteria:<br><br>**1. Groundwater:**<br>To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites: | |
| **Is the contaminant plume that exceeds water quality objectives stable or decreasing in areal extent?** | ☒ Yes ☐ No ☐ NA |
| **Does the contaminant plume that exceeds water quality objectives meet all of the additional characteristics of one of the five classes of sites?** | ☒ Yes ☐ No ☐ NA |
| If YES, check applicable class: ☐ **1** ☒ **2** ☐ **3** ☐ **4** ☐ **5** | |

[1] Refer to the Low-Threat Underground Storage Tank Case Closure Policy for closure criteria for low-threat petroleum UST sites.

| | |
|---|---|
| **For sites with releases that have not affected groundwater, do mobile constituents (leachate, vapors, or light non-aqueous phase liquids) contain sufficient mobile constituents to cause groundwater to exceed the groundwater criteria?** | ☐ Yes ☐ No ☒ NA |
| **2. Petroleum Vapor Intrusion to Indoor Air:**<br>The site is considered low-threat for vapor intrusion to indoor air if site-specific conditions satisfy all of the characteristics of one of the three classes of sites (a through c) or if the exception for active commercial fueling facilities applies.<br><br>**Is the site an active commercial petroleum fueling facility?**<br>Exception: Satisfaction of the media-specific criteria for petroleum vapor intrusion to indoor air is not required at active commercial petroleum fueling facilities, except in cases where release characteristics can be reasonably believed to pose an unacceptable health risk.<br><br>**a. Do site-specific conditions at the release site satisfy all of the applicable characteristics and criteria of scenarios 1 through 3 or all of the applicable characteristics and criteria of scenario 4?**<br>If YES, check applicable scenarios: ☐ **1** ☐ **2** ☒ **3** ☐ **4**<br><br>**b. Has a site-specific risk assessment for the vapor intrusion pathway been conducted and demonstrates that human health is protected to the satisfaction of the regulatory agency?**<br><br>**c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that petroleum vapors migrating from soil or groundwater will have no significant risk of adversely affecting human health?** | ☐ Yes ☒ No<br><br>☒ Yes ☐ No ☐ NA<br><br>☐ Yes ☐ No ☒ NA<br><br>☐ Yes ☐ No ☒ NA |
| **3. Direct Contact and Outdoor Air Exposure:**<br>The site is considered low-threat for direct contact and outdoor air exposure if site-specific conditions satisfy one of the three classes of sites (a through c).<br><br>**a. Are maximum concentrations of petroleum constituents in soil less than or equal to those listed in Table 1 for the specified depth below ground surface (bgs)?**<br><br>**b. Are maximum concentrations of petroleum constituents in soil less than levels that a site specific risk assessment demonstrates will have no significant risk of adversely affecting human health?**<br><br>**c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health?** | ☒ Yes ☐ No ☐ NA<br><br>☒ Yes ☐ No ☐ NA<br><br>☐ Yes ☐ No ☒ NA |

# ATTACHMENT G

# WASTE MANIFEST

# NON-HAZARDOUS WASTE MANIFEST

Please print or type. (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE

GENERATOR

| NON-HAZARDOUS WASTE MANIFEST | 1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of |
|---|---|---|---|
| 3. Generator's Name and Mailing Address: Tesoro #67107, 44 Lewelling Blvd, San Lorenzo | | | |
| 4. Generator's Phone ( ) | | | |
| 5. Transporter 1 Company Name: Confluence Env. | 6. US EPA ID Number | A. State Transporter's ID | |
| | | B. Transporter 1 Phone: (916) 759-8156 | |
| 7. Transporter 2 Company Name | 8. US EPA ID Number | C. State Transporter's ID | |
| | | D. Transporter 2 Phone | |
| 9. Designated Facility Name and Site Address: ESJ, 1105 Airport, Rio Vista, CA. | 10. US EPA ID Number | E. State Facility's ID | |
| | | F. Facility's Phone: (707) | |

| 11. WASTE DESCRIPTION | 12. Containers No. | 12. Containers Type | 13. Total Quantity | 14. Unit Wt./Vol. |
|---|---|---|---|---|
| a. Non Haz Purgewater | 1 | Poly | 255.0 | gal. |
| b. | | | | |
| c. | | | | |
| d. | | | | |

G. Additional Descriptions for Materials Listed Above

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

| Printed/Typed Name | Signature | Date (Month / Day / Year) |
|---|---|---|
| | | |

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

| Printed/Typed Name | Signature | Date (Month / Day / Year) |
|---|---|---|
| Eric Mura | | 1 / 2 / 13 |

18. Transporter 2 Acknowledgement of Receipt of Materials

| Printed/Typed Name | Signature | Date (Month / Day / Year) |
|---|---|---|
| | | |

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

ESJ

| Printed/Typed Name | Signature | Date (Month / Day / Year) |
|---|---|---|
| Patrick McLaughlin | | 1 / 2 / 13 |