# GW - 55

# REPORTS

# Date:

# 1-24-11

AES Animas Environmental Services, LLC

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January 24, 2011

Glen von Gonten
Edward Hansen
New Mexico Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

**RE: 4th Quarter Remedial Progress Report 2010 for the Thriftway Refinery, 626 County Road 5500, Bloomfield, New Mexico**

Dear Mr. von Gonten and Mr. Hansen:

Animas Environmental Services, LLC (AES) has prepared this 4th Quarter Remedial Progress Report 2010 detailing remedial activities during the fourth quarter on behalf of Thriftway Company (Thriftway) for the Thriftway Refinery, located at 626 County Road 5500, Bloomfield, San Juan County, New Mexico, in accordance with New Mexico Oil Conservation Division (NMOCD) and New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) regulations.

This 4th Quarter Remedial Progress Report details groundwater monitoring and sampling activities conducted at the site during November 2010. A General Site Plan is included as Figure 1.

## 1.0 Groundwater Monitoring and Sampling

BioTech conducted groundwater monitoring and sampling at the site between November 15 and 17, 2010. The information below, taken from the Interim Groundwater Sampling Plan submitted to NMOCD on January 25, 2010, lists wells that were gauged and/or sampled during the November 2010 sampling event.

**Year 1 Quarterly Gauging/Sampling Monitor Well List**

| *Well Name* | *Gauging Only* | *Gauging and Sampling* |
|---|---|---|
| TW-1 through TW-10 | X | |
| TW-11 | X | |
| TW-12 | X | |
| TW-13 through TW-14 | X | |
| TW-15 through TW-17 | X | |
| TW-18 | | X |
| TW-19 through TW-22 | | X* |
| TW-20 - attached to RSI Unit | | |
| TW-21 damaged beyond repair | | |
| TW-23 | X | |
| TW-24 | | X* |
| TW-25 through TW-29 | | X* |
| TW-30 through TW-31 | | X |
| TW-32 through TW-33 | | X* |
| TW-34 | X | |
| TW-35 | | X |
| TW-36 | | X* |
| TW-37 through TW-39 | | X |
| TW-40 | | X* |
| TW-41 through TW-43 | | X |
| TW-44 | | X* |
| TW-45 | | X |
| TW-46 | | X |
| TW-47 | | X |
| MW-5 | | X |
| MW-20, MW-21 | | X |
| MW-7 | | X |
| * Well currently has measurable NAPL, but will be added to the sampling list during the first quarter in which NAPL is not observed. | | |

## *1.1 Measurement of Groundwater Elevations*

Before collection of groundwater samples, depth to groundwater in each of the selected wells was measured with an electronic water level indicator, which has an accuracy of 0.01 feet. Depth to groundwater measurements were recorded on Water Sample Collection Forms. Electronic copies of the Water Sample Collection Forms are included in Appendix A.

## *1.2 Measurement of Free Product*

Each of the wells previously known to contain light non-aqueous phase liquid (LNAPL, or "free product") were measured with an electronic interface probe, and the depths to the top of product and the oil/water interface were recorded on a groundwater measurement form. Free product was measured in November 2010 in a total of 14 wells, including TW-13, TW-19, TW-20, TW-22, TW-24, TW-25, TW-26, TW-28, TW-29, TW-32, TW-33, TW-36, TW-40, and TW-44. Monitor wells containing free product were not sampled during November 2010.

In monitor wells containing free product, corrected groundwater elevations (Hc) were determined using the following formula:

$$H_c = H_m + (H_o * (\rho_o/\rho_w))$$

*where:*
$H_m$ is the measured elevation of the hydrocarbon-water interface (ft)
$H_o$ is the thickness of the hydrocarbon layer (ft)
$\rho_o$ is the hydrocarbon density of diesel, assumed to be 0.827 (g/ml) (API, 1986)
$\rho_w$ is the water density, assumed to be 1.0 (g/mL)

## *1.3 Groundwater Sampling*

Once the depth to groundwater was measured in each well to be sampled, the well was purged with a new disposable bailer to remove stagnant water from the well. Groundwater samples were then collected. Groundwater sampling procedures included the following:

1. A new disposable bailer was used at each well. Samples were collected using a slow release valve attached to the bottom of the bailer (to ensure a slow flow and less volatilization of contaminants from groundwater). Each sample container was filled completely, ensuring there were no bubbles or headspace in the sample bottles.

2. Each bottle was labeled, and chain-of-custody documentation was filled out as each well was sampled. Clean sample containers, obtained from the analyzing laboratory, were utilized during the sampling events.

3. Samples were placed in an insulated cooler and maintained at temperature below 6°C during transportation to Hall Environmental Analysis Laboratory (Hall), Albuquerque, New Mexico.

In order to reduce the potential for cross-contamination, groundwater samples were collected in the order from the least contaminated sampling location to the most contaminated sampling location, as determined by the previous sampling event.

## *1.4 Equipment Decontamination Protocols*

In order to ensure data validity and limit cross-contamination, the following decontamination protocols for sampling equipment were employed:

- Wash with detergent (Alconox) and warm water
- Rinse with warm water
- Wash with detergent (Alconox) and warm water
- Rinse with de-ionized water

## *1.5 Laboratory Analyses*

Samples collected from 16 wells, including TW-18, TW-30, TW-31, TW-35, TW-37 through TW-39, TW-41 through TW-43, TW-45, TW-47, TW-49, MW-5, MW-20, and MW-21, were analyzed for the following:

- Total petroleum hydrocarbons (TPH) for Gasoline Range Organics (GRO), Motor Oil Range Organics (MRO), and Diesel Range Organics (DRO) per EPA Method 8015B;
- Benzene, toluene, ethylbenzene, xylenes (BTEX), methyl-t-butyl ether (MTBE), and naphthalene per EPA Method 8260;
- RCRA 8 Metals per EPA Method 6010 and 7470;
- Dissolved metals (calcium, magnesium, potassium, and xodium) per EPA Method 6010;
- Bromide, chloride, fluoride, and sulfate per EPA Method 300.0;
- Hardness as $CaCO_3$ per EPA Method 6010;
- Total dissolved solids (TDS) per Standard Method 2540C; and
- Specific conductance per EPA Method 120.1.

All samples were analyzed at Hall Laboratories in Albuquerque, New Mexico.

## 2.0 Groundwater Monitoring and Sampling Results

### *2.1 Hydraulic Gradient and Water Quality Data*

#### 2.1.1 Hydraulic Gradient

Using surveyed top of casing (TOC) elevations and the recorded groundwater depths, AES determined specific groundwater elevations, relative to sea level, for each well measured. Groundwater elevations across the site in November 2010 ranged from 5,423.80 feet above mean sea level (AMSL) in MW-5 to 5,440.70 feet AMSL in TW-1. Groundwater elevations have decreased across the site by an average of 0.20 feet since the last sampling event in August 2010. Groundwater gradient was calculated between TW-1 and MW-5 with a magnitude of 0.008 ft/ft to the northwest for November 2010. The groundwater flow direction has remained stable, in a northwesterly direction, which is consistent with historical site data.

Table 1 includes depth to groundwater measurements and final water table elevations. Groundwater elevation contours for November 2010 are included on Figure 2. Electronic copies of the Water Sample Collection Forms are included in Appendix A.

#### 2.1.2 Water Quality Data

During the purging of each well prior to sampling, water quality data was recorded for all wells being sampled until temperature, pH, conductivity, and dissolved oxygen (DO) measurements stabilized. Recorded temperatures during the November 2010 sampling event ranged from 13.63 °C in MW-20 to 16.96 °C in TW-38. Groundwater pH ranged between 6.93 (TW-12, TW-41, and TW-45) and 7.62 (MW-5), and conductivity readings were between 3.343 mS in TW-12 and 10.79 mS in TW-47. Dissolved oxygen concentrations ranged from 0.40 mg/L in MW-20 to 2.09 mg/L in TW-47.

### *2.2 Free Product*

Free product (LNAPL) was measured in 14 monitor wells, including TW-13, TW-19, TW-20, TW-22, TW-24, TW-25, TW-26, TW-28, TW-29, TW-32, TW-33, TW-36, TW-40, and TW-44. Measured LNAPL thicknesses ranged from 0.03 feet (TW-44) to 1.57 feet (TW-32). Free product thickness contours for November 2010 are presented in Figure 3, and Graph 1

includes free product thicknesses over time in the eastern portion of the product plume (TW-13, TW-14, TW-19, and TW-22).

## *2.3 Dissolved Phase Contaminant Concentrations*

### 2.3.1 Volatile Organics

Dissolved phase benzene concentrations outside the area of free product exceeded the New Mexico Water Quality Control Commission (WQCC) standard of 10 µg/L in four of the 16 wells sampled, including TW-37 (280 µg/L), TW-38 (140 µg/L), TW-39 (92 µg/L), and TW-41 (96 µg/L). Dissolved phase benzene concentration contours for November 2010 are included on Figure 4.

Toluene and ethylbenzene concentrations outside the area of free product were below laboratory detection limits or below the applicable WQCC standards of 750 µg/L in all sampled wells. Xylene concentrations were also below laboratory detection limits or below the applicable WQCC standard of 620 µg/L, in all wells sampled with the exception of TW-41 (2,200 µg/L).

Dissolved phase MTBE concentrations outside the area of free product were above the WQCC standard of 100 µg/L in four of the wells sampled in November 2010, including TW-37 (120 µg/L), TW-43 (370 µg/L), TW-45 (170 µg/L), and MW-20 (160 µg/L). All other wells were either below the laboratory detection limit of 1.0 µg/L or below applicable WQCC standards. MTBE concentration contours for November 2010 are included on Figure 5.

Dissolved phase total naphthalene concentrations outside the area of free product were above the WQCC standard of 30 µg/L in one well, TW-41 (55 µg/L). The remaining wells sampled were either below laboratory detection limits or below the applicable WQCC standard.

Dissolved phase TPH-GRO concentrations outside the area of free product ranged from below laboratory detection limits of 0.050 mg/L (TW-31, TW-35, and TW-47) to 6.6 mg/L (TW-41). TPH-MRO concentrations were below laboratory detection limits of 5.0 mg/L in all sampled wells. TPH-DRO concentrations were below laboratory detection limits of 1.0 mg/L in all sampled wells, except TW-37 (2.3 mg/L) and TW-41 (1.4 mg/L).

BTEX, MTBE, naphthalene, and TPH analytical data are summarized in Table 2, and electronic copies of laboratory analytical reports are presented in Appendix A.

### 2.3.2 Geochemical Parameters

Geochemical analytical results from November 2010 are as follows:

- RCRA 8 Metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) were reported below the laboratory detection limit or the below the applicable WQCC standards in all sampled wells;
- Dissolved calcium concentrations ranged from 150 mg/L (MW-5) to 630 mg/L (TW-49);
- Dissolved magnesium concentrations ranged from 29 mg/L (MW-5) to 120 mg/L (TW-47);
- Dissolved potassium concentrations ranged from 3.5 mg/L (TW-37 and TW-38) to 14 mg/L (TW-49);
- Dissolved sodium concentrations ranged from 760 mg/L (TW-37) to 2,300 mg/L (TW-47);
- Bromide concentrations ranged from 0.26 mg/L (TW-35) to 2.1 mg/L (TW-49);
- Chloride concentrations were reported above the WQCC standard of 250 mg/L in TW-30 (1,400 mg/L), TW-31 (750 mg/L), TW-37 (310 mg/L), TW-39 (540 mg/L), TW-41 (1,100 mg/L), TW-42 (840 mg/L), TW-45 (320 mg/L), TW-47 (1,200 mg/L), TW-49 (3,400 mg/L), MW-5 (310 mg/L), MW-20 (430 mg/L), and MW-21 (820 mg/L);
- Fluoride concentrations remained below the WQCC of 1.6 mg/L in all sampled wells;
- Sulfate concentrations were reported above the WQCC standard of 600 mg/L in all sampled wells. Reported sulfate concentrations ranged from 610 mg/L (TW-41) to 7,000 mg/L (TW-49);
- Specific conductance in the sampled wells ranged from 4,100 µmhos/cm to 8,800 µmhos/cm;
- Hardness as $CaCO_3$ ranged from 500 mg/L (MW-5) and 1,900 mg/L (TW-49);
- TDS concentrations were above the WQCC standard of 1,000 mg/L in all wells sampled, with the highest TDS concentrations detected in TW-47 (8,800 mg/L).

Groundwater geochemical results have been summarized in Table 3 and Table 4. Electronic copies of laboratory analytical reports are included in Appendix A.

## 3.0 Measurement of Groundwater and Free Product in MPE Remediation Wells

BioTech personnel measured depth to groundwater in the Phase 1, 2, and 3 multi-phase extraction (MPE) wells on November 11 and 12, 2010. Depth to water ranged from 14.14 feet below TOC in MPE-56 to 23.82 feet below TOC in MPE-1. On November 11 and 12, 2010, free product was reported in MPE-2 (0.09 feet), MPE-5 (0.15 feet), MPE-13 (0.06 feet), MPE-21 (0.09 feet), MPE-22 (0.01 feet), MPE-26 (0.55 feet), MPE-35 (0.41 feet), MPE-38 (0.60 feet), and MPE-47 (0.41 feet). MPE well data is included in Table 5.

## 4.0 MPE Remediation System Operations

The MPE remediation system was brought online on March 10, 2010. The MPE system consists of an RSI internal combustion engine (ICE) unit with two engines (Engine #1 and Engine #2) to extract soil vapors and free product from the MPE extractions wells.

Both Engine #1 and Engine #2 were shut-down during September 2010 due to extensive mechanical problems, and as a result no data report has been generated since September 2010. September data will be included with the next MPE Systems Operation report expected in 2011. The unit engines underwent rebuild during the fourth quarter of 2010. The first engine rebuild is almost complete, with operation testing currently in progress. Installation of the first engine at the site is anticipated for early 2011.

## 5.0 Phytoremediation Project

A representative from the New Mexico State University (NMSU) Agricultural Science Center in Farmington conducted an evaluation of the phytoremediation project area in October 2010. Seasonal irrigation of the project area was shut down on October 1, 2010. Results of the August and October evaluation are tabulated below:

**Former Thriftway 810**
**Phytoremediation Project August and October 2010 Evaluation Results**

| *Species* | *% Survival-August 2010* | *% Survival-October 2010* | *Plant Height-August 2010 (ft)* | *Plant Height-October 2010 (ft)* |
|---|---|---|---|---|
| Fourwing Saltbush (4wsb) | 100.0 | 73.3 | -- | 0.3 |
| Fourwing Saltbush – Santa Fe (4wsb-sf) | 100.0 | 87.1 | -- | 1.2 |
| Poplar Tree (58-280) | 40.0 | 10.0 | 3.0 | 3.3 |
| Poplar Tree (dn-34) | 75.0 | 85.0 | 3.4 | 3.5 |
| Native Cottonwood (Native) | 82.9 | 82.9 | 2.9 | 3.3 |
| Oxford Paper Hybrid (OP-367) | 79.3 | 82.9 | 3.9 | 4.4 |
| Poplar Tree (pc-6) | 78.0 | 86.0 | 3.5 | 4.0 |
| Giant Sacaton Grass (Sac) | na | na | na | na |

Decreases in survival rates were noted in the fourwing saltbushes and poplar tree (58-280), while survival rates increased in the remaining species. Increases in survival rates may be a result of an early die-off then a late green-up phase. Plant heights increased in all species since the August evaluation.

## 6.0 Summary and Conclusions

BioTech Remediation completed groundwater monitoring and sampling at the site in November 2010. Groundwater elevations in November 2010 decreased by an average of 0.20 feet since August 2010 and are consistent with historical seasonal fluctuations. The groundwater gradient was calculated to be approximately 0.008 ft/ft in a northwest direction across the site, which is consistent with historical site data.

In November 2010, free product was observed and measured in 14 monitor wells, including TW-13, TW-19, TW-20, TW-22, TW-24 through TW-26, TW-28, TW-29, TW-32, TW-33, TW-36, TW-40, and TW-44. Measured thicknesses ranged from 0.03 feet (TW-44)

to 1.57 feet (TW-32). In November 2010, free product was also observed in remediation wells MPE-2, MPE-5, MPE-13, MPE-21, MPE-22, MPE-26, MW-35, MPE-38, and MPE-47.

Based upon the analytical results for the November 2010 sampling event, dissolved phase contaminant concentrations of benzene, xylenes, MTBE, and TDS exceeded the New Mexico WQCC standards in several wells. The highest benzene concentration was reported at 280 µg/L in TW-37. Xylene concentrations were above the applicable WQCC standard of 620 µg/L in TW-41 (2,200 µg/L). The highest dissolved phase MTBE concentration was detected in TW-43 (370 µg/L). Monitor well TW-41 exceeded the WQCC standard for naphthalene with 55 µg/L.

Geochemical data for the November 2010 sampling event showed that chloride concentrations exceeded the WQCC standard of 250 mg/L in 12 of the 16 sampled wells with the highest concentration being reported in TW-49 (3,400 mg/L). All sampled wells had concentrations of sulfate above the WQCC standard of 600 mg/L, with the highest concentration reported in TW-49 with 7,000 mg/L. All wells exceeded the WQCC standard of 1,000 mg/L for TDS with the highest concentration reported in TW-47 (8,800 mg/L). The groundwater monitor wells at the site have historically shown elevated TDS concentrations, which is attributable to the site's proximity to the Kutz Wash and shallow depth to groundwater.

The MPE remediation units have remained off-line during the fourth quarter. One of the engines is currently undergoing testing with installation anticipated for early January 2011. The second unit is anticipated to be operational during the first half of 2011.

## 7.0 Recommendations and Scheduled Site Activities

The following items are scheduled to occur during the 4$^{th}$ Quarter 2010:

1. In accordance with the conditions of the Interim Groundwater Sampling Plan approval by NMOCD, the quarterly groundwater and NAPL monitoring event will be conducted in February and the first semi-annual sampling event will be conducted in May 2011.

2. A representative from the NMSU Agricultural Science Center at Farmington will be onsite in the spring of 2011 to conduct a survival rate survey and evaluation of the phytoremediation project trees as well as a review of the health of the plants.

3. It is anticipated that Engine #1 of the MPE Remediation Unit will be installed onsite during January 2011. BioTech will collect air emission samples from the well gas influent and from the pre-cat and post-cat sample ports from the engines once the engines are in operation. Air samples will be analyzed for BTEX and MTBE per EPA Method 8021B and EPA Method 8015B GRO.

If you have any questions regarding this report or scheduled site activities, please do not hesitate to contact Ross Kennemer or Elizabeth McNally at (505) 564-2281.

Sincerely,

Deborah Watson, Project Manager

Elizabeth McNally, P.E.
New Mexico Registration #15799

## Tables

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## Graphs

Graph 1. Free Product Thicknesses over Time In TW-13, TW-14, TW-19, and TW-22

## Appendices

Appendix A. *Electronic*
Water Sample Collection Forms
Laboratory Analytical Reports

cc: Robert Moss
Thriftway Company
501 Airport Drive
Farmington, NM 87401

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TABLE 1
SUMMARY OF RECENT GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date | T.O.C. (ft amsl) | Depth to Product (ft) | Depth to Water (ft) | NAPL Thickness (ft) | Corrected GW Elev. (ft) | pH | Conductivity (mS) | Dissolved Oxygen (mg/L) | Temp. (°C) | ORP (mV) | Purge Volume (gallons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TW-1** | 15-Dec-08 | 5471.58 | | 27.95 | | 5443.63 | 6.24 | 2.772 | 7.51* | 14.64 | 113.8 | 0.25 |
| **TW-1** | 26-Jan-09 | 5471.58 | | 30.53 | | 5441.05 | NM | NM | NM | NM | NM | NM |
| **TW-1** | 19-Aug-09 | 5471.58 | | 30.73 | | 5440.85 | 7.09 | 1.795 | 8.08 | 16.17 | 289.1 | 1.00 |
| **TW-1** | 19-Feb-10 | 5471.58 | | 30.68 | | 5440.90 | NM | NM | NM | NM | NM | NM |
| **TW-1** | 07-May-10 | 5471.58 | | 30.43 | | 5441.15 | NM | NM | NM | NM | NM | NM |
| **TW-1** | 18-Aug-10 | 5471.58 | | 30.64 | | 5440.94 | NM | NM | NM | NM | NM | NM |
| **TW-1** | 15-Nov-10 | 5471.58 | | 30.88 | | 5440.70 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-2** | 15-Dec-08 | 5469.31 | | 28.91 | | 5440.40 | 6.63 | 4.421 | 3.60 | 13.08 | 125.5 | 1.25 |
| **TW-2** | 26-Jan-09 | 5469.31 | | 28.80 | | 5440.51 | NM | NM | NM | NM | NM | NM |
| **TW-2** | 19-Aug-09 | 5469.31 | | 28.97 | | 5440.34 | 7.03 | 2.948 | 2.68 | 16.85 | 291.3 | 2.00 |
| **TW-2** | 19-Feb-10 | 5469.31 | | 28.93 | | 5440.38 | NM | NM | NM | NM | NM | NM |
| **TW-2** | 07-May-10 | 5469.31 | | 28.71 | | 5440.60 | NM | NM | NM | NM | NM | NM |
| **TW-2** | 18-Aug-10 | 5469.31 | | 28.88 | | 5440.43 | NM | NM | NM | NM | NM | NM |
| **TW-2** | 15-Nov-10 | 5469.31 | | 29.11 | | 5440.20 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-3** | 15-Dec-08 | 5468.14 | | 27.99 | | 5440.15 | 6.63 | 4.249 | 2.01 | 14.44 | -1.6 | 1.25 |
| **TW-3** | 26-Jan-09 | 5468.14 | | 27.87 | | 5440.27 | NM | NM | NM | NM | NM | NM |
| **TW-3** | 19-Aug-09 | 5468.14 | | 28.05 | | 5440.09 | 6.95 | 4.16 | 2.120 | 16.34 | 289.5 | 2.50 |
| **TW-3** | 19-Feb-10 | 5468.14 | | 27.96 | | 5440.18 | NM | NM | NM | NM | NM | NM |
| **TW-3** | 10-May-10 | 5468.14 | | 27.73 | | 5440.41 | NM | NM | NM | NM | NM | NM |
| **TW-3** | 18-Aug-10 | 5468.14 | | 27.95 | | 5440.19 | NM | NM | NM | NM | NM | NM |
| **TW-3** | 15-Nov-10 | 5468.14 | | 28.16 | | 5439.98 | NM | NM | NM | NM | NM | NM |

TABLE 1
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| Well ID | Date | T.O.C. (ft amsl) | Depth to Product (ft) | Depth to Water (ft) | NAPL Thickness (ft) | Corrected GW Elev. (ft) | pH | Conductivity (mS) | Dissolved Oxygen (mg/L) | Temp. (°C) | ORP (mV) | Purge Volume (gallons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| **TW-4** | 16-Dec-08 | 5458.72 | | 19.16 | | 5439.56 | 6.67 | 7.258 | 4.09 | 13.40 | 170.6 | 1.25 |
| **TW-4** | 26-Jan-09 | 5458.72 | | NM | | | NM | NM | NM | NM | NM | NM |
| **TW-4** | 19-Aug-09 | 5458.72 | | 19.22 | | 5439.50 | 7.08 | 6.739 | 4.19 | 16.19 | 289.9 | 4.30 |
| **TW-4** | 19-Feb-10 | 5458.72 | | 19.09 | | 5439.63 | NM | NM | NM | NM | NM | NM |
| **TW-4** | 10-May-10 | 5458.72 | | 18.86 | | 5439.86 | NM | NM | NM | NM | NM | NM |
| **TW-4** | 18-Aug-10 | 5458.72 | | 19.12 | | 5439.60 | NM | NM | NM | NM | NM | NM |
| **TW-4** | 15-Nov-10 | 5458.72 | | 19.31 | | 5439.41 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-5** | 15-Dec-08 | 5465.18 | | 25.54 | | 5439.64 | 6.56 | 3.704 | 3.26 | 14.25 | 16.0 | 1.25 |
| **TW-5** | 26-Jan-09 | 5465.18 | | 25.44 | | 5439.74 | NM | NM | NM | NM | NM | NM |
| **TW-5** | 19-Aug-09 | 5465.18 | | 25.58 | | 5439.60 | 6.96 | 3.636 | 5.53 | 16.55 | 298.9 | 3.60 |
| **TW-5** | 19-Feb-10 | 5465.18 | | 25.53 | | 5439.65 | NM | NM | NM | NM | NM | NM |
| **TW-5** | 10-May-10 | 5465.18 | | 25.31 | | 5439.87 | NM | NM | NM | NM | NM | NM |
| **TW-5** | 18-Aug-10 | 5465.18 | | 25.49 | | 5439.69 | NM | NM | NM | NM | NM | NM |
| **TW-5** | 15-Nov-10 | 5465.18 | | 25.70 | | 5439.48 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-6** | 15-Dec-08 | 5463.57 | | 24.78 | | 5438.79 | 6.50 | 4.719 | 0.99 | 14.50 | 9.0 | 1.25 |
| **TW-6** | 26-Jan-09 | 5463.57 | | 24.67 | | 5438.90 | NM | NM | NM | NM | NM | NM |
| **TW-6** | 19-Aug-09 | 5463.57 | | 24.82 | | 5438.75 | 6.95 | 4.535 | 1.81 | 16.24 | 295.6 | 4.00 |
| **TW-6** | 19-Feb-10 | 5463.57 | | 24.74 | | 5438.83 | NM | NM | NM | NM | NM | NM |
| **TW-6** | 10-May-10 | 5463.57 | | 24.54 | | 5439.03 | NM | NM | NM | NM | NM | NM |
| **TW-6** | 18-Aug-10 | 5463.57 | | 24.73 | | 5438.84 | NM | NM | NM | NM | NM | NM |

TABLE 1

SUMMARY OF RECENT GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date | T.O.C. (ft amsl) | Depth to Product (ft) | Depth to Water (ft) | NAPL Thickness (ft) | Corrected GW Elev. (ft) | pH | Conductivity (mS) | Dissolved Oxygen (mg/L) | Temp. (°C) | ORP (mV) | Purge Volume (gallons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TW-6** | 15-Nov-10 | 5463.57 | | 24.90 | | 5438.67 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-7** | 15-Dec-08 | 5461.17 | | 22.25 | | 5438.92 | 6.47 | 5.302 | 0.82 | 14.88 | 0.8 | 1.25 |
| **TW-7** | 26-Jan-09 | 5461.17 | | 22.14 | | 5439.03 | NM | NM | NM | NM | NM | NM |
| **TW-7** | 19-Aug-09 | 5461.17 | | 22.25 | | 5438.92 | 6.92 | 4.780 | 1.67 | 16.37 | 290.3 | 3.00 |
| **TW-7** | 19-Feb-10 | 5461.17 | | 22.17 | | 5439.00 | NM | NM | NM | NM | NM | NM |
| **TW-7** | 10-May-10 | 5461.17 | | 21.97 | | 5439.20 | NM | NM | NM | NM | NM | NM |
| **TW-7** | 18-Aug-10 | 5461.17 | | 22.17 | | 5439.00 | NM | NM | NM | NM | NM | NM |
| **TW-7** | 15-Nov-10 | 5461.17 | | 22.37 | | 5438.80 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-8** | 16-Dec-08 | 5458.29 | | 19.76 | | 5438.53 | 6.42 | 5.575 | 0.51 | 12.78 | -258.2 | 1.25 |
| **TW-8** | 26-Jan-09 | 5458.29 | | 19.62 | | 5438.67 | NM | NM | NM | NM | NM | NM |
| **TW-8** | 20-Aug-09 | 5458.29 | | 19.88 | | 5438.41 | 7.12 | 4.523 | 1.40 | 14.52 | 264.7 | 4.00 |
| **TW-8** | 19-Feb-10 | 5458.29 | | 19.59 | | 5438.70 | NM | NM | NM | NM | NM | NM |
| **TW-8** | 10-May-10 | 5458.29 | | 19.73 | | 5438.56 | NM | NM | NM | NM | NM | NM |
| **TW-8** | 18-Aug-10 | 5458.29 | | 19.72 | | 5438.57 | NM | NM | NM | NM | NM | NM |
| **TW-8** | 15-Nov-10 | 5458.29 | | 19.87 | | 5438.42 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-9** | 16-Dec-08 | 5450.61 | | 12.20 | | 5438.41 | 6.90 | 3.473 | 2.27 | 14.53 | 15.6 | 1.25 |
| **TW-9** | 26-Jan-09 | 5450.61 | | 12.05 | | 5438.56 | NM | NM | NM | NM | NM | NM |
| **TW-9** | 20-Aug-09 | 5450.61 | | 12.49 | | 5438.12 | 7.57 | 2.397 | 1.33 | 16.93 | 269.2 | 2.50 |
| **TW-9** | 19-Feb-10 | 5450.61 | | 11.99 | | 5438.62 | NM | NM | NM | NM | NM | NM |
| **TW-9** | 10-May-10 | 5450.61 | | 11.89 | | 5438.72 | NM | NM | NM | NM | NM | NM |

TABLE 1

SUMMARY OF RECENT GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date | T.O.C. (ft amsl) | Depth to Product (ft) | Depth to Water (ft) | NAPL Thickness (ft) | Corrected GW Elev. (ft) | pH | Conductivity (mS) | Dissolved Oxygen (mg/L) | Temp. (°C) | ORP (mV) | Purge Volume (gallons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TW-9** | 18-Aug-10 | 5450.61 | | 12.30 | | 5438.31 | NM | NM | NM | NM | NM | NM |
| **TW-9** | 15-Nov-10 | 5450.61 | | 12.36 | | 5438.25 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-10** | 16-Dec-08 | 5450.16 | | 12.42 | | 5437.74 | 6.49 | 3.876 | 0.98 | 11.97 | -189.3 | 1.25 |
| **TW-10** | 26-Jan-09 | 5450.16 | | 12.25 | | 5437.91 | NM | NM | NM | NM | NM | NM |
| **TW-10** | 20-Aug-09 | 5450.16 | | 12.70 | | 5437.46 | 7.37 | 4.019 | 1.42 | 16.75 | 254.7 | 4.00 |
| **TW-10** | 19-Feb-10 | 5450.16 | | 12.19 | | 5437.97 | NM | NM | NM | NM | NM | NM |
| **TW-10** | 10-May-10 | 5450.16 | | 12.15 | | 5438.01 | NM | NM | NM | NM | NM | NM |
| **TW-10** | 18-Aug-10 | 5450.16 | | 12.52 | | 5437.64 | NM | NM | NM | NM | NM | NM |
| **TW-10** | 15-Nov-10 | 5450.16 | | 12.54 | | 5437.62 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-11** | 16-Dec-08 | 5456.31 | | 18.12 | | 5438.19 | 6.75 | 6.941 | 1.41 | 14.32 | 72.0 | 1.25 |
| **TW-11** | 26-Jan-09 | 5456.31 | | 18.02 | | 5438.29 | NM | NM | NM | NM | NM | NM |
| **TW-11** | 20-Aug-09 | 5456.31 | | 18.22 | | 5438.09 | 7.43 | 6.704 | 2.52 | 15.35 | 261.4 | 4.00 |
| **TW-11** | 17-Feb-10 | 5456.31 | | 18.04 | | 5438.27 | 7.14 | 10.42 | 3.98 | 12.88 | 49.7 | 4.20 |
| **TW-11** | 11-May-10 | 5456.31 | | 17.89 | | 5438.42 | 7.22 | 6.44 | 2.32 | 13.25 | 232.1 | 3.75 |
| **TW-11** | 18-Aug-10 | 5456.31 | | 18.04 | | 5438.27 | NM | NM | NM | NM | NM | NM |
| **TW-11** | 15-Nov-10 | 5456.31 | | 18.24 | | 5438.07 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-12** | 15-Dec-08 | 5460.44 | | 22.44 | | 5438.00 | 6.49 | 4.247 | 0.95 | 16.15 | -97.3 | 1.25 |
| **TW-12** | 26-Jan-09 | 5460.44 | 22.34 | 22.44 | 0.1 | 5438.08 | NM | NM | NM | NM | NM | NM |
| **TW-12** | 20-Aug-09 | 5460.44 | | 22.50 | | 5437.94 | 7.02 | 3.881 | 2.34 | 17.09 | 266.5 | 2.50 |
| **TW-12** | 17-Feb-10 | 5460.44 | | 22.39 | | 5438.05 | 6.94 | 5.727 | 1.46 | 15.59 | 206.2 | 3.00 |

TABLE 1

SUMMARY OF RECENT GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date | T.O.C. (ft amsl) | Depth to Product (ft) | Depth to Water (ft) | NAPL Thickness (ft) | Corrected GW Elev. (ft) | pH | Conductivity (mS) | Dissolved Oxygen (mg/L) | Temp. (°C) | ORP (mV) | Purge Volume (gallons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TW-12** | 11-May-10 | 5460.44 | | 22.21 | | 5438.23 | 7.05 | 3.295 | 0.76 | 15.56 | 217.9 | 3.75 |
| **TW-12** | 19-Aug-10 | 5460.44 | | 22.39 | | 5438.05 | 6.93 | 3.343 | 0.55 | 16.74 | 399.3 | 2.50 |
| **TW-12** | 15-Nov-10 | 5460.44 | | 22.54 | | 5437.90 | 6.93 | 3.343 | 0.55 | 16.74 | 399.3 | 2.50 |
| | | | | | | | | | | | | |
| **TW-13** | 16-Dec-08 | 5458.17 | 20.64 | 21.48 | 0.84 | 5437.38 | Not Sampled - NAPL Present | | | | | |
| **TW-13** | 26-Jan-09 | 5458.17 | 20.52 | 21.46 | 0.94 | 5437.49 | NM | NM | NM | NM | NM | NM |
| **TW-13** | 12-Aug-09 | 5458.17 | 20.75 | 21.77 | 1.02 | 5437.24 | NM | NM | NM | NM | NM | NM |
| **TW-13** | 11-Nov-09 | 5458.17 | 20.76 | 21.86 | 1.10 | 5437.22 | NM | NM | NM | NM | NM | NM |
| **TW-13** | 15-Feb-10 | 5458.17 | 20.59 | 21.48 | 0.89 | 5437.43 | NM | NM | NM | NM | NM | NM |
| **TW-13** | 07-May-10 | 5458.17 | 20.44 | 21.03 | 0.59 | 5437.63 | NM | NM | NM | NM | NM | NM |
| **TW-13** | 21-Jun-10 | 5458.17 | 20.48 | 21.15 | 0.67 | 5437.57 | NM | NM | NM | NM | NM | NM |
| **TW-13** | 18-Aug-10 | 5458.17 | 20.77 | 21.15 | 0.38 | 5437.33 | NM | NM | NM | NM | NM | NM |
| **TW-13** | 15-Nov-10 | 5458.17 | 20.79 | 21.39 | 0.60 | 5437.28 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-14** | 16-Dec-08 | 5454.24 | | 16.82 | | 5437.42 | Not Sampled - Sheen of NAPL present | | | | | |
| **TW-14** | 26-Jan-09 | 5454.24 | 16.71 | 17.02 | 0.31 | 5437.48 | NM | NM | NM | NM | NM | NM |
| **TW-14** | 20-Aug-09 | 5454.24 | 16.89 | 17.02 | 0.13 | 5437.33 | Not Sampled - NAPL present | | | | | |
| **TW-14** | 11-Nov-09 | 5454.24 | 17.20 | 17.67 | 0.47 | 5436.96 | NM | NM | NM | NM | NM | NM |
| **TW-14** | 15-Feb-10 | 5454.24 | 16.98 | 17.22 | 0.24 | 5437.22 | NM | NM | NM | NM | NM | NM |
| **TW-14** | 11-May-10 | 5454.24 | | 16.85 | sheen | 5437.39 | 7.25 | 3.49 | 0.11 | 16.95 | 214.6 | NM |
| **TW-14** | 18-Aug-10 | 5454.24 | 17.01 | 17.03 | 0.02 | 5437.23 | NM | NM | NM | NM | NM | NM |
| **TW-14** | 15-Nov-10 | 5454.24 | | 17.17 | | 5437.07 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |

TABLE 1
SUMMARY OF RECENT GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date | T.O.C. (ft amsl) | Depth to Product (ft) | Depth to Water (ft) | NAPL Thickness (ft) | Corrected GW Elev. (ft) | pH | Conductivity (mS) | Dissolved Oxygen (mg/L) | Temp. (°C) | ORP (mV) | Purge Volume (gallons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TW-15** | 16-Dec-08 | 5450.44 | | 13.15 | | 5437.29 | 6.69 | 6.647 | 1.25 | 13.17 | -176.5 | 1.25 |
| **TW-15** | 26-Jan-09 | 5450.44 | | 12.99 | | 5437.45 | NM | NM | NM | NM | NM | NM |
| **TW-15** | 20-Aug-09 | 5450.44 | | 13.35 | | 5437.09 | 7.26 | 6.056 | 3.64 | 16.49 | 320.0 | 4.30 |
| **TW-15** | 17-Feb-10 | 5450.44 | | 12.93 | | 5437.51 | NM | NM | NM | NM | NM | NM |
| **TW-15** | 10-May-10 | 5450.44 | | 12.86 | | 5437.58 | NM | NM | NM | NM | NM | NM |
| **TW-15** | 18-Aug-10 | 5450.44 | | 13.21 | | 5437.23 | NM | NM | NM | NM | NM | NM |
| **TW-15** | 15-Nov-10 | 5450.44 | | 13.24 | | 5437.20 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-16** | 16-Dec-08 | 5448.45 | | 8.76 | | 5439.69 | 6.71 | 6.593 | 1.64 | 14.90 | 7.3 | 1.25 |
| **TW-16** | 26-Jan-09 | 5448.45 | | 11.11 | | 5437.34 | NM | NM | NM | NM | NM | NM |
| **TW-16** | 20-Aug-09 | 5448.45 | | 11.85 | | 5436.60 | 7.40 | 6.025 | 3.66 | 16.57 | 285.2 | 1.00 |
| **TW-16** | 17-Feb-10 | 5448.45 | | 11.1 | | 5437.35 | NM | NM | NM | NM | NM | NM |
| **TW-16** | 17-May-10 | 5448.45 | | 11.25 | | 5437.2 | 7.33 | 3.684 | 2.19 | 13.64 | 227.1 | 3.75 |
| **TW-16** | 18-Aug-10 | 5448.45 | | 11.45 | | 5437.00 | NM | NM | NM | NM | NM | NM |
| **TW-16** | 15-Nov-10 | 5448.45 | | 11.52 | | 5436.93 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-17** | 16-Dec-08 | 5446.24 | | 9.99 | | 5436.25 | 6.68 | 6.643 | 1.26 | 14.10 | -31.3 | 1.25 |
| **TW-17** | 26-Jan-09 | 5446.24 | | 9.82 | | 5436.42 | NM | NM | NM | NM | NM | NM |
| **TW-17** | 21-Aug-09 | 5446.24 | | 10.31 | | 5435.93 | 7.13 | 6.100 | 8.37 | 17.86 | 289.9 | 3.00 |
| **TW-17** | 17-Feb-10 | 5446.24 | | 9.75 | | 5436.49 | NM | NM | NM | NM | NM | NM |
| **TW-17** | 10-May-10 | 5446.24 | | 9.83 | | 5436.41 | NM | NM | NM | NM | NM | NM |
| **TW-17** | 18-Aug-10 | 5446.24 | | 10.21 | | 5436.03 | NM | NM | NM | NM | NM | NM |
| **TW-17** | 15-Nov-10 | 5446.24 | | 10.18 | | 5436.06 | NM | NM | NM | NM | NM | NM |

TABLE 1

SUMMARY OF RECENT GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date | T.O.C. (ft amsl) | Depth to Product (ft) | Depth to Water (ft) | NAPL Thickness (ft) | Corrected GW Elev. (ft) | pH | Conductivity (mS) | Dissolved Oxygen (mg/L) | Temp. (°C) | ORP (mV) | Purge Volume (gallons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| **TW-18** | 16-Dec-08 | 5452.73 | | 16.40 | | 5436.33 | 6.65 | 5.094 | 0.88 | 16.42 | -170.9 | 1.25 |
| **TW-18** | 26-Jan-09 | 5452.73 | | 16.29 | | 5436.44 | NM | NM | NM | NM | NM | NM |
| **TW-18** | 21-Aug-09 | 5452.73 | | 16.48 | | 5436.25 | 6.94 | 5.273 | 7.64 | 17.32 | 285.8 | 4.00 |
| **TW-18** | 17-Feb-10 | 5452.73 | | 16.21 | | 5436.52 | 6.8 | 7.990 | 2.04 | 15.58 | 210 | 3.30 |
| **TW-18** | 10-May-10 | 5452.73 | | 16.11 | | 5436.62 | 7.1 | 4.830 | 0.75 | 15.40 | 222 | 3.75 |
| **TW-18** | 18-Aug-10 | 5452.73 | | 16.31 | | 5436.42 | NM | NM | NM | NM | NM | NM |
| **TW-18** | 16-Nov-10 | 5452.73 | | 16.50 | | 5436.23 | 7.1 | 4.730 | 0.82 | 16.85 | -19 | 3.00 |
| | | | | | | | | | | | | |
| **TW-19** | 16-Dec-08 | 5458.49 | 22.15 | 22.62 | 0.47 | 5436.26 | Not Sampled - NAPL Present | | | | | |
| **TW-19** | 26-Jan-09 | 5458.49 | 22.01 | 22.57 | 0.56 | 5436.38 | NM | NM | NM | NM | NM | NM |
| **TW-19** | 13-Aug-09 | 5458.49 | 22.13 | 22.86 | 0.73 | 5436.23 | Not Sampled - NAPL present | | | | | |
| **TW-19** | 11-Nov-09 | 5458.49 | TW damaged by demolition work | | | | | | | | | |
| **TW-19** | 15-Feb-10 | 5458.49 | TW damaged by demolition work | | | | | | | | | |
| **TW-19** | 07-May-10 | 5458.49 | 17.45 | 17.52 | 0.07 | 5441.03 | NM | NM | NM | NM | NM | NM |
| **TW-19** | 18-Aug-10 | 5458.49 | | 17.66 | Sheen | 5440.83 | NM | NM | NM | NM | NM | NM |
| **TW-19** | 15-Nov-10 | 5458.49 | 17.79 | 18.02 | 0.23 | 5440.66 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-20** | 17-Dec-08 | 5453.74 | 15.14 | 15.86 | 0.72 | 5438.48 | Not Sampled - NAPL Present | | | | | |
| **TW-20** | 26-Jan-09 | 5453.74 | 17.36 | 18.62 | 1.26 | 5436.16 | NM | NM | NM | NM | NM | NM |
| **TW-20** | 13-Aug-09 | 5453.74 | 17.64 | 19.17 | 1.53 | 5435.84 | Not Sampled - NAPL present | | | | | |
| **TW-20** | 11-Nov-09 | 5453.74 | 17.52 | 19.45 | 1.93 | 5435.89 | NM | NM | NM | NM | NM | NM |
| **TW-20** | 15-Feb-10 | 5453.74 | 17.4 | 18.73 | 1.33 | 5436.11 | NM | NM | NM | NM | NM | NM |

TABLE 1

SUMMARY OF RECENT GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date | T.O.C. (ft amsl) | Depth to Product (ft) | Depth to Water (ft) | NAPL Thickness (ft) | Corrected GW Elev. (ft) | pH | Conductivity (mS) | Dissolved Oxygen (mg/L) | Temp. (°C) | ORP (mV) | Purge Volume (gallons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TW-20** | 07-May-10 | 5453.74 | 17.28 | 18.25 | 0.97 | 5436.29 | NM | NM | NM | NM | NM | NM |
| **TW-20** | 07-May-10 | 5453.74 | 17.28 | 18.25 | 0.97 | 5436.29 | NM | NM | NM | NM | NM | NM |
| **TW-20** | 18-Aug-10 | 5453.74 | Attached to RSI Unit | | | | | | | | | |
| **TW-20** | 15-Nov-10 | 5453.74 | 17.56 | 18.88 | 1.32 | 5435.95 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-21** | 17-Dec-08 | 5451.85 | 15.42 | 17.19 | 1.77 | 5436.12 | Not Sampled - NAPL Present | | | | | |
| **TW-21** | 26-Jan-09 | 5451.85 | 16.35 | 16.94 | 0.59 | 5435.40 | NM | NM | NM | NM | NM | NM |
| **TW-21** | 13-Aug-09 | 5451.85 | 16.50 | 16.94 | 0.44 | 5435.27 | Not Sampled - NAPL present | | | | | |
| **TW-21** | 12-Nov-09 | 5451.85 | TW damaged by demolition work | | | | | | | | | |
| **TW-21** | 15-Feb-10 | 5451.85 | TW damaged by demolition work | | | | | | | | | |
| **TW-21** | 07-May-10 | 5451.85 | TW damaged by demolition work | | | | | | | | | |
| **TW-21** | 18-Aug-10 | 5451.85 | TW damaged by demolition work | | | | | | | | | |
| **TW-21** | 15-Nov-10 | 5451.85 | TW damaged by demolition work | | | | | | | | | |
| | | | | | | | | | | | | |
| **TW-22** | 17-Dec-08 | 5450.19 | 14.75 | 14.76 | 0.01 | 5435.44 | Not Sampled - NAPL Present | | | | | |
| **TW-22** | 26-Jan-09 | 5450.19 | 14.69 | 15.26 | 0.57 | 5435.40 | NM | NM | NM | NM | NM | NM |
| **TW-22** | 13-Aug-09 | 5450.19 | 14.79 | 15.39 | 0.60 | 5435.30 | Not Sampled - NAPL present | | | | | |
| **TW-22** | 12-Nov-09 | 5450.19 | 14.88 | 15.58 | 0.70 | 5435.19 | NM | NM | NM | NM | NM | NM |
| **TW-22** | 15-Feb-10 | 5450.19 | 14.72 | 15.03 | 0.31 | 5435.42 | NM | NM | NM | NM | NM | NM |
| **TW-22** | 07-May-10 | 5450.19 | 14.63 | 14.73 | 0.10 | 5435.54 | NM | NM | NM | NM | NM | NM |
| **TW-22** | 18-Aug-10 | 5450.19 | 14.74 | 15.01 | 0.27 | 5435.40 | NM | NM | NM | NM | NM | NM |
| **TW-22** | 15-Nov-10 | 5450.19 | 14.94 | 15.14 | 0.20 | 5435.22 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |

TABLE 1

SUMMARY OF RECENT GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date | T.O.C. (ft amsl) | Depth to Product (ft) | Depth to Water (ft) | NAPL Thickness (ft) | Corrected GW Elev. (ft) | pH | Conductivity (mS) | Dissolved Oxygen (mg/L) | Temp. (°C) | ORP (mV) | Purge Volume (gallons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TW-23** | 18-Dec-08 | 5443.64 | | 6.60 | | 5437.04 | 7.09 | 6.727 | 3.77 | 13.65 | -138.4 | 1.25 |
| **TW-23** | 26-Jan-08 | 5443.64 | | 8.73 | | 5434.91 | NM | NM | NM | NM | NM | NM |
| **TW-23** | 21-Aug-09 | 5443.64 | | 9.07 | | 5434.57 | 7.17 | 7.95 | 5.40 | 18.47 | 286.8 | 3.00 |
| **TW-23** | 17-Feb-10 | 5443.64 | | 8.61 | | 5435.03 | NM | NM | NM | NM | NM | NM |
| **TW-23** | 10-May-10 | 5443.64 | | 8.64 | | 5435.00 | NM | NM | NM | NM | NM | NM |
| **TW-23** | 18-Aug-10 | 5443.64 | | 8.94 | | 5434.70 | NM | NM | NM | NM | NM | NM |
| **TW-23** | 15-Nov-10 | 5443.64 | | 9.10 | | 5434.54 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-24** | 17-Dec-08 | 5444.79 | | 10.97 | | 5433.82 | 6.21 | 5.942 | 4.88 | 15.60 | -64.3 | 1.25 |
| **TW-24** | 26-Jan-09 | 5444.79 | 11.84 | 11.85 | 0.01 | 5432.95 | NM | NM | NM | NM | NM | NM |
| **TW-24** | 21-Aug-09 | 5444.79 | 11.10 | 11.22 | 0.12 | 5433.67 | Not Sampled - NAPL Present | | | | | |
| **TW-24** | 13-Nov-09 | 5444.79 | 11.07 | 11.15 | 0.08 | 5433.71 | NM | NM | NM | NM | NM | NM |
| **TW-24** | 17-Feb-10 | 5444.79 | | 10.78 | | 5434.01 | 6.62 | 7.86 | 0.74 | 13.77 | 436.8 | 3.00 |
| **TW-24** | 11-May-10 | 5444.79 | | 10.63 | | 5434.16 | 7.05 | 4.70 | 0.33 | 14.39 | 229 | 3.75 |
| **TW-24** | 18-Aug-10 | 5444.79 | | 11.09 | Sheen | 5433.70 | NM | NM | NM | NM | NM | NM |
| **TW-24** | 15-Nov-10 | 5444.79 | 11.17 | 11.30 | 0.13 | 5433.60 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-25** | 17-Dec-08 | 5448.80 | 14.13 | 14.62 | 0.49 | 5434.59 | Not Sampled - NAPL Present | | | | | |
| **TW-25** | 26-Jan-09 | 5448.80 | 14.05 | 14.41 | 0.36 | 5434.69 | NM | NM | NM | NM | NM | NM |
| **TW-25** | 13-Aug-09 | 5448.80 | 14.14 | 14.63 | 0.49 | 5434.58 | Not Sampled - NAPL present | | | | | |
| **TW-25** | 12-Nov-09 | 5448.80 | 14.24 | 14.91 | 0.67 | 5434.44 | NM | NM | NM | NM | NM | NM |
| **TW-25** | 15-Feb-10 | 5448.80 | 14.03 | 14.41 | 0.38 | 5434.70 | NM | NM | NM | NM | NM | NM |
| **TW-25** | 07-May-10 | 5448.80 | 13.88 | 14.18 | 0.30 | 5434.87 | NM | NM | NM | NM | NM | NM |

TABLE 1

SUMMARY OF RECENT GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date | T.O.C. (ft amsl) | Depth to Product (ft) | Depth to Water (ft) | NAPL Thickness (ft) | Corrected GW Elev. (ft) | pH | Conductivity (mS) | Dissolved Oxygen (mg/L) | Temp. (°C) | ORP (mV) | Purge Volume (gallons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TW-25** | 18-Aug-10 | 5448.80 | 14.00 | 14.39 | 0.39 | 5434.73 | NM | NM | NM | NM | NM | NM |
| **TW-25** | 15-Nov-10 | 5448.80 | 14.40 | 14.71 | 0.31 | 5434.35 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-26** | 17-Dec-08 | 5450.34 | 13.49 | 14.47 | 0.98 | 5436.68 | Not Sampled - NAPL Present | | | | | |
| **TW-26** | 26-Jan-09 | 5450.34 | 15.80 | 16.76 | 0.96 | 5434.37 | NM | NM | NM | NM | NM | NM |
| **TW-26** | 13-Aug-09 | 5450.34 | 15.83 | 17.29 | 1.46 | 5434.26 | Not Sampled - NAPL present | | | | | |
| **TW-26** | 12-Nov-09 | 5450.34 | 15.91 | 17.47 | 1.56 | 5434.16 | NM | NM | NM | NM | NM | NM |
| **TW-26** | 15-Feb-10 | 5450.34 | 15.81 | 16.86 | 1.05 | 5434.35 | NM | NM | NM | NM | NM | NM |
| **TW-26** | 07-May-10 | 5450.34 | 15.68 | 16.22 | 0.54 | 5434.57 | NM | NM | NM | NM | NM | NM |
| **TW-26** | 18-Aug-10 | 5450.34 | 15.75 | 16.75 | 1.00 | 5434.42 | NM | NM | NM | NM | NM | NM |
| **TW-26** | 15-Nov-10 | 5450.34 | 15.85 | 17.06 | 1.21 | 5434.28 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-28** | 17-Dec-08 | 5449.24 | 15.37 | 15.96 | 0.59 | 5433.77 | Not Sampled - NAPL Present | | | | | |
| **TW-28** | 26-Jan-09 | 5449.24 | 15.28 | 15.79 | 0.51 | 5433.87 | NM | NM | NM | NM | NM | NM |
| **TW-28** | 13-Aug-09 | 5449.24 | 15.27 | 16.31 | 1.04 | 5433.79 | Not Sampled - NAPL present | | | | | |
| **TW-28** | 12-Nov-09 | 5449.24 | 15.35 | 16.74 | 1.39 | 5433.65 | NM | NM | NM | NM | NM | NM |
| **TW-28** | 15-Feb-10 | 5449.24 | 15.22 | 16.10 | 0.88 | 5433.87 | NM | NM | NM | NM | NM | NM |
| **TW-28** | 07-May-10 | 5449.24 | 15.08 | 15.47 | 0.39 | 5434.09 | NM | NM | NM | NM | NM | NM |
| **TW-28** | 18-Aug-10 | 5449.24 | 15.12 | 16.09 | 0.97 | 5433.95 | NM | NM | NM | NM | NM | NM |
| **TW-28** | 15-Nov-10 | 5449.24 | 15.49 | 16.67 | 1.18 | 5433.55 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-29** | 17-Dec-08 | 5441.87 | 9.19 | 9.20 | 0.01 | 5432.68 | Not Sampled - NAPL Present | | | | | |
| **TW-29** | 26-Jan-09 | 5441.87 | 9.12 | 9.14 | 0.02 | 5432.75 | NM | NM | NM | NM | NM | NM |

TABLE 1
SUMMARY OF RECENT GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date | T.O.C. (ft amsl) | Depth to Product (ft) | Depth to Water (ft) | NAPL Thickness (ft) | Corrected GW Elev. (ft) | pH | Conductivity (mS) | Dissolved Oxygen (mg/L) | Temp. (°C) | ORP (mV) | Purge Volume (gallons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TW-29** | 13-Aug-09 | 5441.87 | 9.22 | 10.06 | 0.84 | 5432.50 | Not Sampled - NAPL present | | | | | |
| **TW-29** | 13-Nov-09 | 5441.87 | 9.25 | 9.91 | 0.66 | 5432.51 | NM | NM | NM | NM | NM | NM |
| **TW-29** | 17-Feb-10 | 5441.87 | | 8.96 | | 5432.91 | 6.00 | 8.583 | 0.60 | 13.79 | 357.9 | 3.60 |
| **TW-29** | 07-May-10 | 5441.87 | 8.91 | 8.96 | 0.05 | 5432.95 | NM | NM | NM | NM | NM | NM |
| **TW-29** | 18-Aug-10 | 5441.87 | 9.14 | 9.69 | 0.55 | 5432.63 | NM | NM | NM | NM | NM | NM |
| **TW-29** | 15-Nov-10 | 5441.87 | 9.43 | 10.23 | 0.80 | 5432.30 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-30** | 18-Dec-08 | 5437.93 | | 5.90 | | 5432.03 | 6.46 | 6.328 | 6.25* | 12.89 | -66.2 | 1.25 |
| **TW-30** | 26-Jan-09 | 5437.93 | | 5.69 | | 5432.24 | NM | NM | NM | NM | NM | NM |
| **TW-30** | 21-Aug-09 | 5437.93 | | 6.07 | | 5431.86 | 6.61 | 7.238 | 5.52 | 18.52 | 304.0 | 5.50 |
| **TW-30** | 17-Feb-10 | 5437.93 | | 5.65 | | 5432.28 | 6.26 | 8.169 | 1.47 | 11.21 | 476.9 | 5.60 |
| **TW-30** | 11-May-10 | 5437.93 | | 5.67 | | 5432.26 | 6.77 | 5.188 | 0.76 | 12.56 | 238.8 | 3.75 |
| **TW-30** | 18-Aug-10 | 5437.93 | | 5.99 | | 5431.94 | NM | NM | NM | NM | NM | NM |
| **TW-30** | 16-Nov-10 | 5437.93 | | 6.34 | | 5431.59 | 6.96 | 6.832 | 0.61 | 15.28 | -8.8 | 3.00 |
| | | | | | | | | | | | | |
| **TW-31** | 16-Dec-08 | 5438.54 | | 7.03 | | 5431.51 | 6.37 | 7.298 | 2.97 | 14.00 | 12.8 | 1.25 |
| **TW-31** | 26-Jan-09 | 5438.54 | | 6.94 | | 5431.60 | NM | NM | NM | NM | NM | NM |
| **TW-31** | 21-Aug-09 | 5438.54 | | 7.18 | | 5431.36 | 6.84 | 10.35 | 6.90 | 21.75 | 319.9 | 3.00 |
| **TW-31** | 17-Feb-10 | 5438.54 | | 6.82 | | 5431.72 | 6.63 | 9.906 | 3.95 | 9.75 | 358.8 | 3.00 |
| **TW-31** | 11-May-10 | 5438.54 | | 6.78 | | 5431.76 | 6.96 | 7.523 | 1.31 | 13.25 | 228.9 | 4.00 |
| **TW-31** | 18-Aug-10 | 5438.54 | | 6.98 | | 5431.56 | NM | NM | NM | NM | NM | NM |
| **TW-31** | 16-Nov-10 | 5438.54 | | 7.24 | | 5431.30 | 6.98 | 5.526 | 0.99 | 15.87 | -10.0 | 3.00 |
| | | | | | | | | | | | | |

TABLE 1
SUMMARY OF RECENT GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date | T.O.C. (ft amsl) | Depth to Product (ft) | Depth to Water (ft) | NAPL Thickness (ft) | Corrected GW Elev. (ft) | pH | Conductivity (mS) | Dissolved Oxygen (mg/L) | Temp. (°C) | ORP (mV) | Purge Volume (gallons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TW-32** | 17-Dec-08 | 5441.61 | 7.22 | 8.79 | 1.57 | 5434.12 | Not Sampled - NAPL Present | | | | | |
| **TW-32** | 26-Jan-09 | 5441.61 | 9.02 | 10.31 | 1.29 | 5432.37 | NM | NM | NM | NM | NM | NM |
| **TW-32** | 13-Aug-09 | 5441.61 | 9.12 | 10.86 | 1.74 | 5432.19 | Not Sampled - NAPL present | | | | | |
| **TW-32** | 12-Nov-09 | 5441.61 | 9.26 | 10.88 | 1.62 | 5432.07 | NM | NM | NM | NM | NM | NM |
| **TW-32** | 16-Feb-10 | 5441.61 | 8.97 | 9.98 | 1.01 | 5432.47 | NM | NM | NM | NM | NM | NM |
| **TW-32** | 07-May-10 | 5441.61 | 8.92 | 9.34 | 0.42 | 5432.62 | NM | NM | NM | NM | NM | NM |
| **TW-32** | 18-Aug-10 | 5441.61 | 9.00 | 10.18 | 1.18 | 5432.41 | NM | NM | NM | NM | NM | NM |
| **TW-32** | 15-Nov-10 | 5441.61 | 9.30 | 10.87 | 1.57 | 5432.04 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-33** | 17-Dec-08 | 5445.85 | 12.96 | 13.02 | 0.06 | 5432.88 | Not Sampled - NAPL Present | | | | | |
| **TW-33** | 26-Jan-09 | 5445.85 | 12.92 | 13.02 | 0.10 | 5432.91 | NM | NM | NM | NM | NM | NM |
| **TW-33** | 13-Aug-09 | 5445.85 | 12.96 | 13.10 | 0.14 | 5432.87 | Not Sampled - NAPL present | | | | | |
| **TW-33** | 12-Nov-09 | 5445.85 | 13.10 | 13.40 | 0.30 | 5432.70 | NM | NM | NM | NM | NM | NM |
| **TW-33** | 16-Feb-10 | 5445.85 | 12.89 | 12.93 | 0.04 | 5432.95 | NM | NM | NM | NM | NM | NM |
| **TW-33** | 07-May-10 | 5445.85 | 12.68 | 12.70 | 0.02 | 5433.17 | NM | NM | NM | NM | NM | NM |
| **TW-33** | 18-Aug-10 | 5445.85 | 12.81 | 12.99 | 0.18 | 5433.01 | NM | NM | NM | NM | NM | NM |
| **TW-33** | 15-Nov-10 | 5445.85 | 12.97 | 13.15 | 0.18 | 5432.85 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-34** | 18-Dec-08 | 5455.80 | | 19.82 | | 5435.98 | 7.48 | 6.744 | 3.97 | 14.29 | -183.8 | 1.25 |
| **TW-34** | 26-Jan-09 | 5455.80 | | 19.74 | | 5436.06 | NM | NM | NM | NM | NM | NM |
| **TW-34** | 19-Aug-09 | 5455.80 | | 20.23 | | 5435.57 | 7.06 | 10.07 | 6.19 | 15.43 | 303.7 | 3.00 |
| **TW-34** | 18-Feb-10 | 5455.80 | | 19.79 | | 5436.01 | 7.06 | 9.266 | 2.40 | 12.35 | -55.0 | 3.00 |
| **TW-34** | 12-May-10 | 5455.80 | | 19.6 | | 5436.20 | 7.03 | 5.825 | 2.18 | 13.57 | 133.5 | 3.75 |

TABLE 1
SUMMARY OF RECENT GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date | T.O.C. (ft amsl) | Depth to Product (ft) | Depth to Water (ft) | NAPL Thickness (ft) | Corrected GW Elev. (ft) | pH | Conductivity (mS) | Dissolved Oxygen (mg/L) | Temp. (°C) | ORP (mV) | Purge Volume (gallons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TW-34** | 18-Aug-10 | 5455.80 | | 20.1 | | 5435.70 | NM | NM | NM | NM | NM | NM |
| **TW-34** | 15-Nov-10 | 5455.80 | | 19.93 | | 5435.87 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-35** | 18-Dec-08 | 5449.14 | | 15.21 | | 5433.93 | 7.04 | 7.929 | 4.39 | 14.98 | -189.4 | 1.25 |
| **TW-35** | 26-Jan-09 | 5449.14 | | 15.12 | | 5434.02 | NM | NM | NM | NM | NM | NM |
| **TW-35** | 24-Aug-09 | 5449.14 | | 15.29 | | 5433.85 | 7.02 | 11.80 | 6.40 | 16.41 | 295.1 | 3.30 |
| **TW-35** | 18-Feb-10 | 5449.14 | | 15.15 | | 5433.99 | 7.20 | 11.52 | 2.91 | 12.99 | -283.0 | 3.60 |
| **TW-35** | 12-May-10 | 5449.14 | | 14.91 | | 5434.23 | 7.17 | 6.714 | 1.91 | 12.77 | 197.4 | 3.75 |
| **TW-35** | 18-Aug-10 | 5449.14 | | 15.08 | | 5434.06 | NM | NM | NM | NM | NM | NM |
| **TW-35** | 17-Nov-10 | 5449.14 | | 15.23 | | 5433.91 | 7.13 | 7.175 | 0.72 | 15.97 | -18.3 | 3.00 |
| | | | | | | | | | | | | |
| **TW-36** | 18-Dec-08 | 5441.91 | | 13.03 | | 5428.88 | 6.94 | 7.874 | 3.6 | 15.28 | -270.7 | 1.25 |
| **TW-36** | 26-Jan-09 | 5441.91 | 12.94 | 12.97 | 0.03 | 5428.96 | NM | NM | NM | NM | NM | NM |
| **TW-36** | 13-Aug-09 | 5441.91 | 13.17 | 13.35 | 0.18 | 5428.71 | Not Sampled - NAPL present | | | | | |
| **TW-36** | 13-Nov-09 | 5441.91 | 13.25 | 13.63 | 0.38 | 5428.59 | NM | NM | NM | NM | NM | NM |
| **TW-36** | 16-Feb-10 | 5441.91 | 12.96 | 12.98 | 0.02 | 5428.95 | NM | NM | NM | NM | NM | NM |
| **TW-36** | 12-May-10 | 5441.91 | | 12.70 | | 5429.21 | 7.08 | 6.193 | 1.42 | 12.75 | 388.4 | 3.75 |
| **TW-36** | 18-Aug-10 | 5441.91 | 13.10 | 13.18 | 0.08 | 5428.80 | NM | NM | NM | NM | NM | NM |
| **TW-36** | 15-Nov-10 | 5441.91 | 13.20 | 13.35 | 0.15 | 5428.68 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-37** | 17-Dec-08 | 5439.59 | | 10.57 | | 5429.02 | 6.51 | 4.698 | 3.5 | 14.02 | -221.3 | 1.25 |
| **TW-37** | 26-Jan-09 | 5439.59 | | 10.47 | | 5429.12 | NM | NM | NM | NM | NM | NM |
| **TW-37** | 21-Aug-09 | 5439.59 | | 10.71 | | 5428.88 | 7.22 | 6.162 | 4.35 | 18.77 | 296.1 | 3.00 |

TABLE 1
SUMMARY OF RECENT GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date | T.O.C. (ft amsl) | Depth to Product (ft) | Depth to Water (ft) | NAPL Thickness (ft) | Corrected GW Elev. (ft) | pH | Conductivity (mS) | Dissolved Oxygen (mg/L) | Temp. (°C) | ORP (mV) | Purge Volume (gallons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TW-37** | 16-Feb-10 | 5439.59 | | 10.44 | | 5429.15 | 6.77 | 6.700 | 1.11 | 12.18 | 430.5 | 3.00 |
| **TW-37** | 11-May-10 | 5439.59 | | 10.16 | | 5429.43 | 6.98 | 4.092 | 1.27 | 12.84 | 224.6 | 3.75 |
| **TW-37** | 19-Aug-10 | 5439.59 | | 10.53 | | 5429.06 | 7.05 | 4.268 | 0.41 | 18.90 | 324.2 | 1.50 |
| **TW-37** | 16-Nov-10 | 5439.59 | | 10.68 | | 5428.91 | 7.05 | 4.503 | 0.61 | 16.79 | -13.6 | 3.00 |
| | | | | | | | | | | | | |
| **TW-38** | 17-Dec-08 | 5442.11 | | 9.55 | | 5432.56 | 6.95 | 5.466 | 4.06 | 12.82 | -179.3 | 1.25 |
| **TW-38** | 26-Jan-09 | 5442.11 | | 11.36 | | 5430.75 | NM | NM | NM | NM | NM | NM |
| **TW-38** | 21-Aug-09 | 5442.11 | 11.57 | 11.58 | 0.01 | 5430.54 | Not Sampled - NAPL Present | | | | | |
| **TW-38** | 12-Nov-09 | 5442.11 | 11.64 | 11.70 | 0.06 | 5430.46 | NM | NM | NM | NM | NM | NM |
| **TW-38** | 18-Feb-10 | 5442.11 | | 11.28 | | 5430.83 | 6.73 | 7.314 | 0.57 | 12.54 | 549.0 | 2.10 |
| **TW-38** | 12-May-10 | 5442.11 | | 11.09 | | 5431.02 | 7.06 | 4.741 | 2.37 | 12.83 | 205.3 | 3.75 |
| **TW-38** | 19-Aug-10 | 5442.11 | | 11.30 | | 5430.81 | 6.99 | 4.573 | 0.48 | 18.42 | 353.8 | 2.50 |
| **TW-38** | 16-Nov-10 | 5442.11 | | 11.54 | | 5430.57 | 7.10 | 4.657 | 0.79 | 16.96 | -16.7 | 3.00 |
| | | | | | | | | | | | | |
| **TW-39** | 18-Dec-08 | 5438.43 | 7.7 | 7.71 | 0.01 | 5430.73 | Not Sampled - Sheen of NAPL Present | | | | | |
| **TW-39** | 26-Jan-09 | 5438.43 | | 7.44 | | 5430.99 | NM | NM | NM | NM | NM | NM |
| **TW-39** | 21-Aug-09 | 5438.43 | | 7.96 | | 5430.47 | 6.93 | 8.946 | 4.48 | 23.34 | 328.1 | 3.00 |
| **TW-39** | 17-Feb-10 | 5438.43 | | 7.11 | | 5431.32 | 6.64 | 6.092 | 1.22 | 8.11 | 244.4 | 2.10 |
| **TW-39** | 12-May-10 | 5438.43 | | 6.98 | | 5431.45 | 6.93 | 6.104 | 1.91 | 12.70 | 214.3 | 3.75 |
| **TW-39** | 19-Aug-10 | 5438.43 | | 7.42 | | 5431.01 | 7.19 | 3.956 | 0.30 | 22.67 | 359.2 | 2.50 |
| **TW-39** | 16-Nov-10 | 5438.43 | | 7.95 | | 5430.48 | 7.17 | 4.224 | 0.85 | 15.29 | -20.8 | 3.00 |
| | | | | | | | | | | | | |
| **TW-40** | 18-Dec-08 | 5437.50 | | 5.30 | | 5432.20 | Not Sampled - Sheen of NAPL Present | | | | | |

TABLE 1
SUMMARY OF RECENT GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date | T.O.C. (ft amsl) | Depth to Product (ft) | Depth to Water (ft) | NAPL Thickness (ft) | Corrected GW Elev. (ft) | pH | Conductivity (mS) | Dissolved Oxygen (mg/L) | Temp. (°C) | ORP (mV) | Purge Volume (gallons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TW-40** | 26-Jan-09 | 5437.50 | | 7.27 | | 5430.23 | NM | NM | NM | NM | NM | NM |
| **TW-40** | 13-Aug-09 | 5437.50 | 7.90 | 8.53 | 0.63 | 5429.49 | Not Sampled - NAPL present | | | | | |
| **TW-40** | 13-Nov-09 | 5437.50 | 7.93 | 8.49 | 0.56 | 5429.47 | NM | NM | NM | NM | NM | NM |
| **TW-40** | 16-Feb-10 | 5437.50 | 6.84 | 7.76 | 0.92 | 5430.50 | NM | NM | NM | NM | NM | NM |
| **TW-40** | 07-May-10 | 5437.50 | 6.78 | 7.90 | 1.12 | 5430.53 | NM | NM | NM | NM | NM | NM |
| **TW-40** | 18-Aug-10 | 5437.50 | 7.50 | 7.88 | 0.38 | 5429.93 | NM | NM | NM | NM | NM | NM |
| **TW-40** | 15-Nov-10 | 5437.50 | 7.97 | 8.51 | 0.54 | 5429.44 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-41** | 18-Dec-08 | 5434.77 | | 5.85 | | 5428.92 | 6.16 | 5.669 | 3.92 | 10.95 | -339.4 | 1.25 |
| **TW-41** | 26-Jan-09 | 5434.77 | | 5.59 | | 5429.18 | NM | NM | NM | NM | NM | NM |
| **TW-41** | 24-Aug-09 | 5434.77 | | 6.27 | | 5428.50 | 6.72 | 9.811 | 8.50 | 20.12 | 126.3 | 2.50 |
| **TW-41** | 16-Feb-10 | 5434.77 | | 5.34 | | 5429.43 | 6.06 | 8.192 | 0.46 | 8.01 | 461.4 | 3.00 |
| **TW-41** | 12-May-10 | 5434.77 | | 5.17 | | 5429.60 | 7.01 | 5.881 | 1.30 | 12.95 | 229.2 | 3.75 |
| **TW-41** | 20-Aug-10 | 5434.77 | | 5.70 | | 5429.07 | 7.07 | 5.434 | 0.52 | 20.38 | 197.0 | 2.50 |
| **TW-41** | 16-Nov-10 | 5434.77 | | 6.12 | | 5428.65 | 6.93 | 5.792 | 0.69 | 14.43 | -6.7 | 3.00 |
| | | | | | | | | | | | | |
| **TW-42** | 16-Dec-08 | 5433.76 | | 6.09 | | 5427.67 | 6.48 | 6.036 | 1.07 | 12.04 | 23.5 | 1.25 |
| **TW-42** | 26-Jan-09 | 5433.76 | | 5.97 | | 5427.79 | NM | NM | NM | NM | NM | NM |
| **TW-42** | 24-Aug-09 | 5433.76 | | 6.37 | | 5427.39 | 7.23 | 10.81 | 6.43 | 19.48 | 219.0 | 2.50 |
| **TW-42** | 16-Feb-10 | 5433.76 | | 5.84 | | 5427.92 | 6.43 | 7.885 | 2.50 | 7.78 | 456.9 | 3.00 |
| **TW-42** | 12-May-10 | 5433.76 | | 5.55 | | 5428.21 | 7.27 | 5.816 | 2.60 | 12.54 | 233.5 | 3.75 |
| **TW-42** | 20-Aug-10 | 5433.76 | | 6.05 | | 5427.71 | 7.34 | 6.146 | 1.34 | 19.81 | 266.2 | 2.50 |
| **TW-42** | 16-Nov-10 | 5433.76 | | 6.21 | | 5427.55 | 7.26 | 6.589 | 1.84 | 14.17 | -25.8 | 3.00 |

TABLE 1

SUMMARY OF RECENT GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date | T.O.C. (ft amsl) | Depth to Product (ft) | Depth to Water (ft) | NAPL Thickness (ft) | Corrected GW Elev. (ft) | pH | Conductivity (mS) | Dissolved Oxygen (mg/L) | Temp. (°C) | ORP (mV) | Purge Volume (gallons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| **TW-43** | 16-Dec-08 | 5440.42 | | 12.19 | | 5428.23 | 6.35 | 6.716 | 1.01 | 14.39 | 7.0 | 1.25 |
| **TW-43** | 26-Jan-09 | 5440.42 | | 12.10 | | 5428.32 | NM | NM | NM | NM | NM | NM |
| **TW-43** | 24-Aug-09 | 5440.42 | | 12.44 | | 5427.98 | 6.94 | 8.834 | 6.92 | 17.73 | 204.1 | 3.00 |
| **TW-43** | 16-Feb-10 | 5440.42 | | 12.11 | | 5428.31 | 6.79 | 7.655 | 3.56 | 12.46 | 431.3 | 3.00 |
| **TW-43** | 12-May-10 | 5440.42 | | 11.82 | | 5428.60 | 7.01 | 4.736 | 1.60 | 12.89 | 225.4 | 3.75 |
| **TW-43** | 20-Aug-10 | 5440.42 | | 12.29 | | 5428.13 | 6.98 | 4.873 | 1.00 | 17.72 | 299.0 | 2.50 |
| **TW-43** | 16-Nov-10 | 5440.42 | | 12.34 | | 5428.08 | 6.94 | 5.273 | 0.84 | 16.58 | -7.3 | 3.00 |
| | | | | | | | | | | | | |
| **TW-44** | 17-Dec-08 | 5444.08 | | 12.66 | | 5431.42 | 6.71 | 6.494 | 2.75 | 15.75 | -43.4 | 1.25 |
| **TW-44** | 26-Jan-09 | 5444.08 | | 14.93 | | 5429.15 | NM | NM | NM | NM | NM | NM |
| **TW-44** | 24-Aug-09 | 5444.08 | | 15.15 | | 5428.93 | 6.74 | 9.788 | 6.47 | 16.80 | 248.3 | 1.50 |
| **TW-44** | 18-Feb-10 | 5444.08 | 15.02 | 15.04 | 0.02 | 5429.06 | NM | NM | NM | NM | NM | NM |
| **TW-44** | 07-May-10 | 5444.08 | 14.66 | 14.68 | 0.02 | 5429.42 | NM | NM | NM | NM | NM | NM |
| **TW-44** | 18-Aug-10 | 5444.08 | 14.98 | 15.00 | 0.02 | 5429.10 | NM | NM | NM | NM | NM | NM |
| **TW-44** | 15-Nov-10 | 5444.08 | 15.12 | 15.15 | 0.03 | 5428.95 | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-45** | 13-May-10 | TBS | | 6.58 | | | 7.01 | 5.204 | 4.93 | 11.52 | 179.0 | 3.75 |
| **TW-45** | 20-Aug-10 | TBS | | 7.06 | | | 6.98 | 5.245 | 1.84 | 19.10 | 234.6 | 2.50 |
| **TW-45** | 17-Nov-10 | TBS | | 7.09 | | | 6.93 | 5.564 | 0.97 | 14.24 | -7.2 | 0.50 |
| | | | | | | | | | | | | |
| **TW-46** | 13-May-10 | TBS | | 6.86 | | | 7.15 | 4.889 | 4.72 | 12.28 | 206.5 | 3.75 |
| **TW-46** | 20-Aug-10 | TBS | | 7.31 | | | 7.13 | 5.262 | 1.14 | 19.45 | 241.2 | 0.50 |

TABLE 1

SUMMARY OF RECENT GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date | T.O.C. (ft amsl) | Depth to Product (ft) | Depth to Water (ft) | NAPL Thickness (ft) | Corrected GW Elev. (ft) | pH | Conductivity (mS) | Dissolved Oxygen (mg/L) | Temp. (°C) | ORP (mV) | Purge Volume (gallons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TW-46** | 15-Nov-10 | TBS | | 7.41 | | | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-47** | 13-May-10 | TBS | | 6.04 | | | 7.23 | 11.86 | 3.36 | 12.89 | 214.8 | 3.75 |
| **TW-47** | 20-Aug-10 | TBS | | 6.67 | | | 7.20 | 11.46 | 1.16 | 20.71 | 241.0 | 0.50 |
| **TW-47** | 17-Nov-10 | TBS | | 6.93 | | | 7.08 | 10.79 | 2.09 | 14.87 | -15.4 | 0.50 |
| | | | | | | | | | | | | |
| **TW-48** | 12-May-10 | TBS | | 6.90 | | | 6.95 | 5.924 | 3.43 | 13.25 | 231.8 | 3.75 |
| **TW-48** | 19-Aug-10 | TBS | | 7.18 | | | 6.85 | 5.861 | 1.75 | 21.73 | 405.2 | 2.50 |
| **TW-48** | 15-Nov-10 | TBS | | 7.39 | | | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-49** | 17-May-10 | TBS | | 5.32 | | | 7.73 | 6.88 | 3.06 | 15.48 | 228.50 | 0.00 |
| **TW-49** | 20-Aug-10 | TBS | | 5.84 | | | NM | NM | NM | NM | NM | NM |
| **TW-49** | 15-Nov-10 | TBS | | 6.36 | | | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **TW-50** | 12-May-10 | TBS | | 7.30 | | | 6.92 | 5.815 | 1.25 | 13.27 | 231.5 | 3.75 |
| **TW-50** | 19-Aug-10 | TBS | | 7.67 | | | 6.96 | 5.946 | 0.45 | 22.26 | 334.4 | 2.50 |
| **TW-50** | 15-Nov-10 | TBS | | 8.06 | | | NM | NM | NM | NM | NM | NM |
| | | | | | | | | | | | | |
| **MW-5** | 19-Dec-08 | 5428.97 | | 5.04 | | 5423.93 | 6.76 | 7.748 | 4.02 | 11.73 | | 0.25 |
| **MW-5** | 19-Dec-08 | 5428.97 | | 5.04 | | 5423.93 | 6.76 | 7.748 | 4.02 | 11.73 | | 0.25 |
| **MW-5** | 18-Feb-10 | 5428.97 | | 4.73 | | 5424.24 | 7.39 | 8.422 | 3.30 | 9.93 | 403.1 | 3.00 |
| **MW-5** | 12-May-10 | 5428.97 | | 4.32 | | 5424.65 | 7.35 | 6.146 | 2.68 | 11.52 | 225.3 | 3.75 |
| **MW-5** | 18-Aug-10 | 5428.97 | | 4.99 | | 5423.98 | NM | NM | NM | NM | NM | NM |

TABLE 1
SUMMARY OF RECENT GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date | T.O.C. (ft amsl) | Depth to Product (ft) | Depth to Water (ft) | NAPL Thickness (ft) | Corrected GW Elev. (ft) | pH | Conductivity (mS) | Dissolved Oxygen (mg/L) | Temp. (°C) | ORP (mV) | Purge Volume (gallons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-5 | 17-Nov-10 | 5428.97 | | 5.17 | | 5423.80 | 7.62 | 6.121 | 1.36 | 14.15 | -46.2 | 3.00 |
| | | | | | | | | | | | | |
| MW-7 | 1-Feb-02 | 5435.28 | | 5.32 | | 37288.00 | | | | | | No Sample |
| MW-7 | 29-Jul-02 | 5435.28 | | 6.11 | | 37466.00 | | | | | | No Sample |
| MW-7 | 6-Jun-03 | 5435.28 | | 9.06 | | 37778.00 | | | | | | No Sample |
| MW-7 | 19-Jan-04 | 5435.28 | | 9.06 | | 38005.00 | 7.0 | 2.827 | 0.93 | 49.7 | | P |
| MW-7 | 25-May-04 | 5435.28 | | 9.14 | | 38132.00 | 6.8 | 3.76 | 0.27 | 63.2 | | 3 |
| MW-7 | 27-Jul-04 | 5435.28 | | 9.08 | | 38195.00 | 7.3 | 5.32 | | 72.8 | | B |
| MW-7 | 28-Dec-04 | 5435.28 | | 9.05 | | 38349.00 | 7.8 | | | | | MP |
| MW-7 | 31-Mar-05 | 5435.28 | | 7.67 | | 38442.00 | 6.5 | 3.011 | 0.5 | 52 | | MP |
| MW-7 | 19-Sep-05 | 5435.28 | | 9.20 | | 38614.00 | 7.0 | 4.802 | 0.41 | 70.8 | | |
| MW-7 | 4-Jan-06 | 5435.28 | | 8.14 | | 38721.00 | 7.0 | 3.625 | 0.48 | 14.5 | | 3 |
| MW-7 | 02-Jan-07 | 5435.28 | | 8.75 | | 39084.00 | NM | NM | NM | NM | | No Sample |
| MW-7 | 19-Dec-07 | 5435.28 | | 8.43 | | 39435.00 | NM | NM | NM | NM | | No Sample |
| MW-7 | 17-May-10 | 5435.28 | | 8.5 | | 5426.78 | 6.95 | 6.66 | 3.08 | 13.83 | 217.6 | 3.75 |
| MW-7 | 19-Aug-10 | 5435.28 | | 8.2 | | 5427.08 | 7.07 | 5.994 | 1.33 | 20.45 | 325.3 | 2.50 |
| MW-7 | 15-Nov-10 | 5435.28 | | 8.83 | | 5426.45 | NM | NM | NM | NM | NM | No Sample |
| | | | | | | | | | | | | |
| MW-20 | 31-Jan-02 | 5430.45 | | 6.04 | | | | | | | | P |
| MW-20 | 26-Jul-02 | 5430.45 | | 6.31 | | | 7.2 | 2.95 | 1.22 | 79.6 | | P |
| MW-20 | 20-Nov-02 | 5430.45 | | 5.85 | | | 7.1 | 1.9 | 0.30 | 55.0 | | P |
| MW-20 | 5-Jun-03 | 5430.45 | | 5.89 | | | 7.1 | 3.43 | 1.58 | 58.1 | | |
| MW-20 | 20-Jan-04 | 5430.45 | | 6.08 | | | 7.5 | 0.35 | 3.23 | 51.8 | | P |

TABLE 1

SUMMARY OF RECENT GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date | T.O.C. (ft amsl) | Depth to Product (ft) | Depth to Water (ft) | NAPL Thickness (ft) | Corrected GW Elev. (ft) | pH | Conductivity (mS) | Dissolved Oxygen (mg/L) | Temp. (°C) | ORP (mV) | Purge Volume (gallons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-20** | 25-May-04 | 5430.45 | | 5.90 | | | 7.1 | 4.01 | 1.2 | 72.3 | | 1.5 |
| **MW-20** | 27-Jul-04 | 5430.45 | | 6.29 | | | 7.0 | 5.12 | | 66.1 | | B |
| **MW-20** | 29-Dec-04 | 5430.45 | | 6.07 | | | | | | | | MP |
| **MW-20** | 1-Apr-05 | 5430.45 | | 5.69 | | | 6.5 | 2.378 | 0.55 | 54.4 | | |
| **MW-20** | 19-Sep-05 | 5430.45 | | 6.02 | | | 7.0 | 3.466 | 0.37 | 66.1 | | |
| **MW-20** | 4-Jan-06 | 5430.45 | | 5.85 | | | 7.0 | 3.47 | 0.6 | 12.3 | | 3 |
| **MW-20** | 28-Jun-06 | 5430.45 | | 6.18 | | | 6.7 | 4.979 | 0.34 | 17.8 | | 3 |
| **MW-20** | 28-Dec-06 | 5430.45 | | 5.50 | | | 7.0 | 8.505 | 0.51 | 8.9 | | 3 |
| **MW-20** | 2-Jul-07 | 5430.45 | | 5.75 | | | 7.0 | 4.841 | 1.32 | 16.09 | | 2.6 |
| **MW-20** | 18-Dec-07 | 5430.45 | | 5.89 | | | 7.05 | 5.621 | 2.89 | 12.10 | | 1.25 |
| **MW-20** | 21-Jan-09 | 5430.45 | | 5.86 | | | 6.73 | 5.996 | 3.58 | 8.34 | | 0.5 |
| **MW-20** | 18-Feb-10 | 5430.45 | | 5.81 | | 5424.64 | 6.67 | 7.249 | 3.67 | 8.20 | 395.0 | 2.50 |
| **MW-20** | 13-May-10 | 5430.45 | | 5.52 | | 5424.93 | 6.96 | 4.948 | 2.09 | 10.89 | 216.9 | 3.75 |
| **MW-20** | 20-Aug-10 | 5430.45 | | 6.01 | | 5424.44 | 7.12 | 4.836 | 1.09 | 18.44 | 236.4 | 2.50 |
| **MW-20** | 17-Nov-10 | 5430.45 | | 6.05 | | 5424.4 | 6.94 | 5.167 | 0.40 | 13.63 | -7.7 | 0.50 |
| | | | | | | | | | | | | |
| **MW-21** | 30-Jan-02 | 5428.62 | | 3.41 | | | | | | | | P |
| **MW-21** | 26-Jul-02 | 5428.62 | | 4.15 | | | | | | | | |
| **MW-21** | 22-Nov-02 | 5428.62 | | 3.51 | | | 7.1 | 7.58 | 0.55 | 55.0 | | P |
| **MW-21** | 5-Jun-03 | 5428.62 | | 3.21 | | | 7.2 | 7.79 | 0.95 | 65.4 | | |
| **MW-21** | 20-Jan-04 | 5428.62 | | 3.57 | | | 7.4 | 0.31 | 3.40 | 46.7 | | P |
| **MW-21** | 25-May-04 | 5428.62 | | 3.49 | | | 7.2 | 7.56 | 0.49 | 64.5 | | 2.5 |
| **MW-21** | 28-Jul-04 | 5428.62 | | 4.12 | | | 7.3 | 11.42 | | 67.1 | | B |

TABLE 1

SUMMARY OF RECENT GROUNDWATER MEASUREMENTS AND WATER QUALITY DATA

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date | T.O.C. (ft amsl) | Depth to Product (ft) | Depth to Water (ft) | NAPL Thickness (ft) | Corrected GW Elev. (ft) | pH | Conductivity (mS) | Dissolved Oxygen (mg/L) | Temp. (°C) | ORP (mV) | Purge Volume (gallons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-21** | 29-Dec-04 | 5428.62 | | 3.36 | | | | | | | | MP |
| **MW-21** | 1-Apr-05 | 5428.62 | | 2.77 | | | 6.7 | 5.747 | 0.28 | 50.9 | | |
| **MW-21** | 19-Sep-05 | 5428.62 | | 3.84 | | | 7.2 | 8.598 | 0.39 | 67.8 | | |
| **MW-21** | 4-Jan-06 | 5428.62 | | 3.27 | | | 7.1 | 6.118 | 0.77 | 11.9 | | 3 |
| **MW-21** | 28-Jun-06 | 5428.62 | | 3.81 | | | 6.8 | 9.223 | 0.32 | 19.8 | | 3 |
| **MW-21** | 02-Jan-07 | 5428.62 | | 3.23 | | | 6.7 | 9.393 | 0.9 | 8.2 | | 3 |
| **MW-21** | 02-Jul-07 | 5428.62 | | 3.54 | | | 7.0 | 9.066 | 0.86 | 18.74 | | 2.7 |
| **MW-21** | 18-Dec-07 | 5428.62 | | 3.54 | | | 7.12 | 8.043 | 0.62 | 12.90 | | 3.25 |
| **MW-21** | 19-Dec-08 | 5428.62 | | 3.43 | | | 6.79 | 7.562 | 9.78 | 11.04 | | 1.25 |
| **MW-21** | 18-Feb-10 | 5428.62 | | 2.86 | | 5425.76 | 6.82 | 9.049 | 8.21 | 7.91 | 367.2 | 3.00 |
| **MW-21** | 13-May-10 | 5428.62 | | 2.69 | | 5425.93 | 7.06 | 7.075 | 1.74 | 12.41 | 224.9 | 3.75 |
| **MW-21** | 20-Aug-10 | 5428.62 | | 3.31 | | 5425.31 | 7.06 | 6.836 | 1.09 | 21.23 | 234.4 | NM |
| **MW-21** | 17-Nov-10 | 5428.62 | | 3.68 | | 5424.94 | 7.02 | 7.817 | 0.56 | 15.42 | -12.0 | 0.50 |

**NOTES:** NM - Not Measured

* Denotes erroneous DO measurement - sensor malfunction

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICALS
(VOCs ,TOTAL PETROLEUM HYDROCARBONS, and TDS)
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date Sampled | Benzene | Toluene | Ethyl-benzene | Xylenes | MTBE | Naph-thalene | GRO C6-C10 | DRO C10-C22 | MRO | Total Dissolved Solids |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | mg/L | mg/L | mg/L | mg/L |
| Sample Method | | EPA Method 8260 | | | | | | EPA Method 8015M | | | 2540C |
| NM WQCC STANDARD | | 10 | 750 | 750 | 620 | 100 | 30 | NE | NE | NE | 1,000 |
| TW-1 | 15-Dec-08 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <10 | <0.050 | <1.0 | <5.0 | NA |
| TW-1 | 19-Aug-09 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <2.0 | <0.050 | <1.0 | <5.0 | **2,530** |
| | | | | | | | | | | | |
| TW-2 | 15-Dec-08 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <10 | <0.050 | <1.0 | <5.0 | NA |
| TW-2 | 19-Aug-09 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <2.0 | <0.050 | <1.0 | <5.0 | **4,020** |
| | | | | | | | | | | | |
| TW-3 | 15-Dec-08 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <10 | <0.050 | <1.0 | <5.0 | NA |
| TW-3 | 19-Aug-09 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <2.0 | <0.050 | <1.0 | <5.0 | **4,170** |
| | | | | | | | | | | | |
| TW-4 | 16-Dec-08 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <10 | <0.050 | <1.0 | <5.0 | NA |
| TW-4 | 19-Aug-09 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <2.0 | <0.050 | <1.0 | <5.0 | **6,530** |
| | | | | | | | | | | | |
| TW-5 | 15-Dec-08 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <10 | <0.050 | <1.0 | <5.0 | NA |
| TW-5 | 19-Aug-09 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <2.0 | <0.050 | <1.0 | <5.0 | **3,180** |
| | | | | | | | | | | | |
| TW-6 | 15-Dec-08 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <10 | <0.050 | <1.0 | <5.0 | NA |
| TW-6 | 19-Aug-09 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <2.0 | <0.050 | <1.0 | <5.0 | **4,020** |
| | | | | | | | | | | | |
| TW-7 | 15-Dec-08 | **67** | **1,700** | 710 | **4,200** | <10 | **308** | 15 | 2.1 | <5.0 | NA |
| TW-7 | 19-Aug-09 | 3.8 | 11 | 98 | 15 | <1.0 | 19 | 0.79 | <1.0 | <5.0 | **3,930** |
| | | | | | | | | | | | |
| TW-8 | 16-Dec-08 | **120** | 15 | 330 | **950** | <5.0 | **92** | 8.9 | 1.4 | <5.0 | NA |
| TW-8 | 19-Aug-09 | **26** | <1.0 | 82 | 130 | <1.0 | <2.0 | 1.7 | <1.0 | <5.0 | **4,490** |

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICALS
(VOCs ,TOTAL PETROLEUM HYDROCARBONS, and TDS)
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date Sampled | Benzene | Toluene | Ethyl-benzene | Xylenes | MTBE | Naph-thalene | GRO C6-C10 | DRO C10-C22 | MRO | Total Dissolved Solids |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | mg/L | mg/L | mg/L | mg/L |
| Sample Method | | EPA Method 8260 | | | | | | EPA Method 8015M | | | 2540C |
| NM WQCC STANDARD | | 10 | 750 | 750 | 620 | 100 | 30 | NE | NE | NE | 1,000 |
| | | | | | | | | | | | |
| TW-9 | 16-Dec-08 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <10 | <0.050 | <1.0 | <5.0 | NA |
| TW-9 | 20-Aug-09 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <2.0 | <0.050 | <1.0 | <5.0 | **2,070** |
| | | | | | | | | | | | |
| TW-10 | 16-Dec-08 | 1.4 | <1.0 | 3.9 | 9.9 | <1.0 | <10 | 0.29 | <1.0 | <5.0 | NA |
| TW-10 | 20-Aug-09 | <1.0 | <1.0 | 1.1 | <1.5 | <1.0 | <2.0 | <0.050 | <1.0 | <5.0 | **3,250** |
| | | | | | | | | | | | |
| TW-11 | 16-Dec-08 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <10 | <0.050 | <1.0 | <5.0 | NA |
| TW-11 | 20-Aug-09 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <2.0 | <0.050 | <1.0 | <5.0 | **6,290** |
| TW-11 | 17-Feb-10 | <1.0 | <1.0 | <1.0 | <2.0 | <1.0 | <2.0 | <0.050 | <1.0 | <5.0 | **6,260** |
| TW-11 | 11-May-10 | <1.0 | <1.0 | <1.0 | <2.0 | <1.0 | <2.0 | <0.050 | <1.0 | <5.0 | **6,400** |
| | | | | | | | | | | | |
| TW-12 | 15-Dec-08 | 6.9 | 33 | 670 | **1,700** | <5.0 | **317** | 3.4 | 1.9 | <5.0 | NA |
| TW-12 | 20-Aug-09 | <1.0 | <1.0 | 19 | 25 | <1.0 | <2.0 | 0.25 | <1.0 | <5.0 | **3,490** |
| TW-12 | 17-Feb-10 | 1.3 | <1.0 | 35 | 48 | <1.0 | 2.4 | 0.43 | <1.0 | <5.0 | **3,470** |
| TW-12 | 11-May-10 | 1.7 | 2.0 | 49 | 72 | <1.0 | <2.0 | 0.18 | 1.2 | <5.0 | **3,340** |
| TW-12 | 19-Aug-10 | 1.4 | <1.0 | 53 | 65 | <1.0 | <2.0 | 0.40 | <1.0 | <5.0 | **3,300** |
| | | | | | | | | | | | |
| TW-13 | 17-Dec-08 | **Not Sampled-NAPL present** | | | | | | | | | |
| TW-13 | 21-Aug-09 | **Not Sampled-NAPL present** | | | | | | | | | |
| TW-13 | 17-Feb-10 | **Not Sampled-NAPL present** | | | | | | | | | |
| TW-13 | 7-May-10 | **Not Sampled-NAPL present** | | | | | | | | | |
| TW-13 | 18-Aug-10 | **Not Sampled-NAPL present** | | | | | | | | | |

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICALS
(VOCs ,TOTAL PETROLEUM HYDROCARBONS, and TDS)
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date Sampled | Benzene | Toluene | Ethyl-benzene | Xylenes | MTBE | Naph-thalene | GRO C6-C10 | DRO C10-C22 | MRO | Total Dissolved Solids |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | mg/L | mg/L | mg/L | mg/L |
| Sample Method | | EPA Method 8260 | | | | | | EPA Method 8015M | | | 2540C |
| NM WQCC STANDARD | | 10 | 750 | 750 | 620 | 100 | 30 | NE | NE | NE | 1,000 |
| TW-13 | 15-Nov-10 | Not Sampled-NAPL present | | | | | | | | | |
| | | | | | | | | | | | |
| TW-14 | 17-Dec-08 | Not Sampled-NAPL present | | | | | | | | | |
| TW-14 | 21-Aug-09 | Not Sampled-NAPL present | | | | | | | | | |
| TW-14 | 17-Feb-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-14 | 11-May-10 | Not Sampled-NAPL present (sheen) | | | | | | | | | |
| TW-14 | 18-Aug-10 | Not Sampled-NAPL present | | | | | | | | | |
| | | | | | | | | | | | |
| TW-15 | 16-Dec-08 | **22** | 9.2 | 190 | 10 | <1.0 | 10 | 1.1 | 1.2 | <5.0 | NA |
| TW-15 | 20-Aug-09 | 6.2 | 1.7 | 94 | <1.5 | <1.0 | <2.0 | 0.69 | <1.0 | <5.0 | **5,240** |
| | | | | | | | | | | | |
| TW-16 | 16-Dec-08 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <10 | <0.050 | <1.0 | <5.0 | NA |
| TW-16 | 20-Aug-09 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <2.0 | <0.050 | <1.0 | <5.0 | **4,240** |
| | | | | | | | | | | | |
| TW-17 | 16-Dec-08 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <10 | <0.050 | <1.0 | <5.0 | NA |
| TW-17 | 21-Aug-09 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <2.0 | <0.050 | <1.0 | <5.0 | **4,640** |
| | | | | | | | | | | | |
| TW-18 | 16-Dec-08 | 8.9 | <1.0 | 31 | 18 | 1.9 | <10 | 0.70 | <1.0 | <5.0 | NA |
| TW-18 | 21-Aug-09 | 2.5 | <1.0 | 12 | <1.5 | 3.2 | <2.0 | 0.11 | <1.0 | <5.0 | **4,440** |
| TW-18 | 17-Feb-10 | 8.0 | <1.0 | 38 | 12 | 1.2 | <2.0 | 0.37 | <1.0 | <5.0 | **4,440** |
| TW-18 | 11-May-10 | 3.1 | <1.0 | 21 | <2.0 | 2.5 | <2.0 | 0.21 | <1.0 | <5.0 | **4,860** |
| TW-18 | 16-Nov-10 | 1.8 | 5.5 | 15 | <1.5 | 1.6 | <2.0 | 0.12 | <1.0 | <5.0 | **4,790** |
| | | | | | | | | | | | |

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICALS
(VOCs ,TOTAL PETROLEUM HYDROCARBONS, and TDS)
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date Sampled | Benzene | Toluene | Ethyl-benzene | Xylenes | MTBE | Naph-thalene | GRO C6-C10 | DRO C10-C22 | MRO | Total Dissolved Solids |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | mg/L | mg/L | mg/L | mg/L |
| Sample Method | | EPA Method 8260 | | | | | | EPA Method 8015M | | | 2540C |
| NM WQCC STANDARD | | 10 | 750 | 750 | 620 | 100 | 30 | NE | NE | NE | 1,000 |
| TW-19 | 17-Dec-08 | Not Sampled-NAPL present | | | | | | | | | |
| TW-19 | 21-Aug-09 | Not Sampled-NAPL present | | | | | | | | | |
| TW-19 | 17-Feb-10 | Not Sampled-Surface Casing Damaged | | | | | | | | | |
| TW-19 | 7-May-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-19 | 18-Aug-10 | Not Sampled-NAPL present (sheen) | | | | | | | | | |
| TW-19 | 15-Nov-10 | Not Sampled-NAPL present | | | | | | | | | |
| | | | | | | | | | | | |
| TW-20 | 17-Dec-08 | Not Sampled-NAPL present | | | | | | | | | |
| TW-20 | 21-Aug-09 | Not Sampled-NAPL present | | | | | | | | | |
| TW-20 | 17-Feb-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-20 | 7-May-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-20 | 18-Aug-10 | Attached to RSI Unit | | | | | | | | | |
| TW-20 | 18-Aug-10 | Not Sampled-NAPL present | | | | | | | | | |
| | | | | | | | | | | | |
| TW-21 | 17-Dec-08 | Not Sampled-NAPL present | | | | | | | | | |
| TW-21 | 21-Aug-09 | Not Sampled-NAPL present | | | | | | | | | |
| TW-21 | 17-Feb-10 | Not Sampled-Surface Casing Damaged | | | | | | | | | |
| TW-21 | 7-May-10 | Not Sampled-Surface Casing Damaged | | | | | | | | | |
| TW-21 | 18-Aug-10 | Not Sampled-Surface Casing Damaged | | | | | | | | | |
| TW-21 | 15-Nov-10 | Not Sampled-Surface Casing Damaged | | | | | | | | | |
| | | | | | | | | | | | |
| TW-22 | 17-Dec-08 | Not Sampled-NAPL present | | | | | | | | | |
| TW-22 | 21-Aug-09 | Not Sampled-NAPL present | | | | | | | | | |

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICALS
(VOCs ,TOTAL PETROLEUM HYDROCARBONS, and TDS)
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date Sampled | Benzene | Toluene | Ethyl-benzene | Xylenes | MTBE | Naph-thalene | GRO C6-C10 | DRO C10-C22 | MRO | Total Dissolved Solids |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | mg/L | mg/L | mg/L | mg/L |
| Sample Method | | EPA Method 8260 | | | | | | EPA Method 8015M | | | 2540C |
| NM WQCC STANDARD | | 10 | 750 | 750 | 620 | 100 | 30 | NE | NE | NE | 1,000 |
| TW-22 | 17-Feb-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-22 | 7-May-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-22 | 18-Aug-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-22 | 15-Nov-10 | Not Sampled-NAPL present | | | | | | | | | |
| | | | | | | | | | | | |
| TW-23 | 18-Dec-08 | <1.0 | <1.0 | 93 | <1.5 | <1.0 | <10 | 0.77 | 1.4 | <5.0 | NA |
| TW-23 | 21-Aug-09 | <1.0 | <1.0 | 24 | <1.5 | <1.0 | <2.0 | 0.34 | <1.0 | <5.0 | **5,440** |
| | | | | | | | | | | | |
| TW-24 | 17-Dec-08 | 7.5 | <1.0 | 10 | <1.5 | 5.6 | 2.6 | 0.26 | <1.0 | <5.0 | NA |
| TW-24 | 21-Aug-09 | Not Sampled-NAPL present | | | | | | | | | |
| TW-24 | 17-Feb-10 | 1.7 | <1.0 | 7.0 | <2.0 | 4.3 | <2.0 | 0.62 | 2.4 | <5.0 | **4,170** |
| TW-24 | 11-May-10 | 9.1 | <1.0 | 25 | <2.0 | 3.8 | 3.0 | 0.92 | 8.7 | <5.0 | **4,280** |
| TW-24 | 18-Aug-10 | Not Sampled-NAPL present (sheen) | | | | | | | | | |
| TW-24 | 15-Nov-10 | Not Sampled-NAPL present | | | | | | | | | |
| | | | | | | | | | | | |
| TW-25 | 17-Dec-08 | Not Sampled-NAPL present | | | | | | | | | |
| TW-25 | 21-Aug-09 | Not Sampled-NAPL present | | | | | | | | | |
| TW-25 | 17-Feb-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-25 | 7-May-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-25 | 18-Aug-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-25 | 15-Nov-10 | Not Sampled-NAPL present | | | | | | | | | |
| | | | | | | | | | | | |
| TW-26 | 17-Dec-08 | Not Sampled-NAPL present | | | | | | | | | |

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICALS
(VOCs ,TOTAL PETROLEUM HYDROCARBONS, and TDS)
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date Sampled | Benzene | Toluene | Ethyl-benzene | Xylenes | MTBE | Naph-thalene | GRO C6-C10 | DRO C10-C22 | MRO | Total Dissolved Solids |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | mg/L | mg/L | mg/L | mg/L |
| Sample Method | | EPA Method 8260 | | | | | | EPA Method 8015M | | | 2540C |
| NM WQCC STANDARD | | 10 | 750 | 750 | 620 | 100 | 30 | NE | NE | NE | 1,000 |
| TW-26 | 21-Aug-09 | Not Sampled-NAPL present | | | | | | | | | |
| TW-26 | 17-Feb-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-26 | 7-May-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-26 | 18-Aug-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-26 | 15-Nov-10 | Not Sampled-NAPL present | | | | | | | | | |
| | | | | | | | | | | | |
| TW-28 | 17-Dec-08 | Not Sampled-NAPL present | | | | | | | | | |
| TW-28 | 21-Aug-09 | Not Sampled-NAPL present | | | | | | | | | |
| TW-28 | 17-Feb-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-28 | 7-May-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-28 | 18-Aug-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-28 | 15-Nov-10 | Not Sampled-NAPL present | | | | | | | | | |
| | | | | | | | | | | | |
| TW-29 | 17-Dec-08 | Not Sampled-NAPL present | | | | | | | | | |
| TW-29 | 21-Aug-09 | Not Sampled-NAPL present | | | | | | | | | |
| TW-29 | 17-Feb-10 | **34** | <1.0 | 16 | 260 | 7.9 | **40** | 2.7 | 13 | <5.0 | **3,250** |
| TW-29 | 7-May-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-29 | 18-Aug-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-29 | 15-Nov-10 | Not Sampled-NAPL present | | | | | | | | | |
| | | | | | | | | | | | |
| TW-30 | 18-Dec-08 | <1.0 | <1.0 | <1.0 | <1.5 | 24 | <10 | 0.087 | 2.8 | <5.0 | NA |
| TW-30 | 21-Aug-09 | <1.0 | <1.0 | <1.0 | <1.5 | 20 | <2.0 | 0.055 | <1.0 | <5.0 | **4,550** |
| TW-30 | 17-Feb-10 | <1.0 | <1.0 | <1.0 | <2.0 | 21 | <2.0 | 0.056 | <1.0 | <5.0 | **4,290** |

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICALS
(VOCs ,TOTAL PETROLEUM HYDROCARBONS, and TDS)
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date Sampled | Benzene | Toluene | Ethyl-benzene | Xylenes | MTBE | Naph-thalene | GRO C6-C10 | DRO C10-C22 | MRO | Total Dissolved Solids |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | mg/L | mg/L | mg/L | mg/L |
| Sample Method | | EPA Method 8260 | | | | | | EPA Method 8015M | | | 2540C |
| NM WQCC STANDARD | | 10 | 750 | 750 | 620 | 100 | 30 | NE | NE | NE | 1,000 |
| TW-30 | 11-May-10 | <1.0 | <1.0 | <1.0 | <2.0 | 21 | <2.0 | 0.071 | <1.0 | <5.0 | **4,310** |
| TW-30 | 15-Nov-10 | 3.8 | <1.0 | <1.0 | <1.5 | 14 | <2.0 | 0.15 | <1.0 | <5.0 | **5,630** |
| | | | | | | | | | | | |
| TW-31 | 16-Dec-08 | <1.0 | <1.0 | <1.0 | <1.5 | 12 | <10 | <0.050 | <1.0 | <5.0 | NA |
| TW-31 | 21-Aug-09 | <1.0 | <1.0 | <1.0 | <1.5 | 16 | <2.0 | <0.050 | <1.0 | <5.0 | **4,790** |
| TW-31 | 17-Feb-10 | <1.0 | <1.0 | <1.0 | <2.0 | 10 | <2.0 | <0.050 | <1.0 | <5.0 | **4,690** |
| TW-31 | 11-May-10 | <1.0 | <1.0 | <1.0 | <2.0 | 9.2 | <2.0 | <0.050 | <1.0 | <5.0 | **5,280** |
| TW-31 | 16-Nov-10 | <1.0 | <1.0 | <1.0 | <1.5 | 6.5 | <2.0 | <0.050 | <1.0 | <5.0 | **4,680** |
| | | | | | | | | | | | |
| TW-32 | 17-Dec-08 | **Not Sampled-NAPL present** | | | | | | | | | |
| TW-32 | 21-Aug-09 | **Not Sampled-NAPL present** | | | | | | | | | |
| TW-32 | 17-Feb-10 | **Not Sampled-NAPL present** | | | | | | | | | |
| TW-32 | 7-May-10 | **Not Sampled-NAPL present** | | | | | | | | | |
| TW-32 | 18-Aug-10 | **Not Sampled-NAPL present** | | | | | | | | | |
| TW-32 | 15-Nov-10 | **Not Sampled-NAPL present** | | | | | | | | | |
| | | | | | | | | | | | |
| TW-33 | 17-Dec-08 | **Not Sampled-NAPL present** | | | | | | | | | |
| TW-33 | 21-Aug-09 | **Not Sampled-NAPL present** | | | | | | | | | |
| TW-33 | 17-Feb-10 | **Not Sampled-NAPL present** | | | | | | | | | |
| TW-33 | 7-May-10 | **Not Sampled-NAPL present** | | | | | | | | | |
| TW-33 | 18-Aug-10 | **Not Sampled-NAPL present** | | | | | | | | | |
| TW-33 | 15-Nov-10 | **Not Sampled-NAPL present** | | | | | | | | | |
| | | | | | | | | | | | |

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICALS
(VOCs ,TOTAL PETROLEUM HYDROCARBONS, and TDS)
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date Sampled | Benzene | Toluene | Ethyl-benzene | Xylenes | MTBE | Naph-thalene | GRO C6-C10 | DRO C10-C22 | MRO | Total Dissolved Solids |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | mg/L | mg/L | mg/L | mg/L |
| Sample Method | | EPA Method 8260 | | | | | | EPA Method 8015M | | | 2540C |
| NM WQCC STANDARD | | 10 | 750 | 750 | 620 | 100 | 30 | NE | NE | NE | 1,000 |
| TW-34 | 18-Dec-08 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <10 | <0.050 | <1.0 | <5.0 | NA |
| TW-34 | 24-Aug-09 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <2.0 | <0.050 | <1.0 | <5.0 | **5,460** |
| TW-34 | 18-Feb-10 | <1.0 | <1.0 | <1.0 | <2.0 | <1.0 | <2.0 | <0.050 | <1.0 | <5.0 | **5,520** |
| TW-34 | 12-May-10 | <1.0 | <1.0 | <1.0 | <2.0 | <1.0 | <2.0 | <0.050 | <1.0 | <5.0 | **5,470** |
| | | | | | | | | | | | |
| TW-35 | 18-Dec-08 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <10 | <0.050 | <1.0 | <5.0 | NA |
| TW-35 | 24-Aug-09 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <2.0 | <0.050 | <1.0 | <5.0 | **6,700** |
| TW-35 | 18-Feb-10 | <1.0 | <1.0 | <1.0 | <2.0 | <1.0 | <2.0 | <0.050 | <1.0 | <5.0 | **6,870** |
| TW-35 | 12-May-10 | <1.0 | <1.0 | <1.0 | <2.0 | <1.0 | <2.0 | <0.050 | <1.0 | <5.0 | **6,250** |
| TW-35 | 17-Nov-10 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <2.0 | <0.050 | <1.0 | <5.0 | **6,770** |
| | | | | | | | | | | | |
| TW-36 | 18-Dec-08 | <1.0 | <1.0 | 16 | 22 | <1.0 | **91.9** | 0.30 | 4.3 | <5.0 | |
| TW-36 | 21-Aug-09 | **Not Sampled-NAPL present** | | | | | | | | | |
| TW-36 | 17-Feb-10 | **Not Sampled-NAPL present** | | | | | | | | | |
| TW-36 | 12-May-10 | <1.0 | <1.0 | 6.5 | 11 | <1.0 | <2.0 | 0.18 | 6.1 | <5.0 | **5,750** |
| TW-36 | 18-Aug-10 | **Not Sampled-NAPL present** | | | | | | | | | |
| TW-36 | 15-Nov-10 | **Not Sampled-NAPL present** | | | | | | | | | |
| | | | | | | | | | | | |
| TW-37 | 17-Dec-08 | **820** | <50 | 560 | **1,800** | **180** | <500 | 8.4 | 19 | <5.0 | NA |
| TW-37 | 21-Aug-09 | **250** | <5.0 | 51 | 32 | **180** | <10 | 1.7 | 1.2 | <5.0 | **3,740** |
| TW-37 | 18-Feb-10 | **290** | <5.0 | 53 | 61 | **130** | <10 | 2.0 | 1.4 | <5.0 | **3,400** |
| TW-37 | 11-May-10 | **490** | <5.0 | 150 | 140 | **150** | <10 | 3.8 | 4.3 | <5.0 | **3,250** |
| TW-37 | 19-Aug-10 | **310** | <5.0 | 65 | 53 | **140** | <10 | 3.2 | 22 | 9.6 | **3,360** |

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICALS
(VOCs ,TOTAL PETROLEUM HYDROCARBONS, and TDS)
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date Sampled | Benzene | Toluene | Ethyl-benzene | Xylenes | MTBE | Naph-thalene | GRO C6-C10 | DRO C10-C22 | MRO | Total Dissolved Solids |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | mg/L | mg/L | mg/L | mg/L |
| Sample Method | | EPA Method 8260 | | | | | | EPA Method 8015M | | | 2540C |
| NM WQCC STANDARD | | 10 | 750 | 750 | 620 | 100 | 30 | NE | NE | NE | 1,000 |
| TW-37 | 16-Nov-10 | **280** | <1.0 | 58 | 46 | **120** | <2.0 | 1.9 | 2.3 | <5.0 | **3,380** |
| | | | | | | | | | | | |
| TW-38 | 17-Dec-08 | **140** | <5.0 | 36 | 220 | **190** | <50 | 0.99 | <1.0 | <5.0 | NA |
| TW-38 | 21-Aug-09 | Not Sampled-NAPL present | | | | | | | | | |
| TW-38 | 18-Feb-10 | **26** | <1.0 | 6.3 | 18 | 88 | <2.0 | 0.50 | <1.0 | <5.0 | **4,070** |
| TW-38 | 12-May-10 | **63** | <1.0 | 15 | 50 | **110** | 3.5 | 0.67 | <1.0 | <5.0 | **4,210** |
| TW-38 | 19-Aug-10 | **140** | <1.0 | 30 | 58 | 95 | 2.2 | 1.20 | <1.0 | <5.0 | **3,910** |
| TW-38 | 16-Nov-10 | **140** | <1.0 | 41 | 71 | 83 | <2.0 | 1.1 | <1.0 | <5.0 | **3,930** |
| | | | | | | | | | | | |
| TW-39 | 17-Dec-08 | Not Sampled-NAPL present | | | | | | | | | |
| TW-39 | 21-Aug-09 | 1.7 | <1.0 | 2.8 | <1.5 | 16 | <2.0 | 0.47 | <1.0 | <5.0 | **4,460** |
| TW-39 | 17-Feb-10 | 2.6 | <1.0 | 2.5 | 3.5 | 9.8 | <2.0 | 0.45 | <1.0 | <5.0 | **3,580** |
| TW-39 | 12-May-10 | **17** | <1.0 | 32 | 14 | 19 | <2.0 | 0.45 | <1.0 | <5.0 | **4,740** |
| TW-39 | 19-Aug-10 | **87** | <1.0 | 77 | 100 | 1.5 | 2.9 | 1.2 | <1.0 | <5.0 | **3,290** |
| TW-39 | 16-Nov-10 | **92** | <1.0 | 110 | 1.8 | 5.9 | <2.0 | 1.4 | <1.0 | <5.0 | **3,070** |
| | | | | | | | | | | | |
| TW-40 | 17-Dec-08 | Not Sampled-NAPL present | | | | | | | | | |
| TW-40 | 21-Aug-09 | Not Sampled-NAPL present | | | | | | | | | |
| TW-40 | 17-Feb-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-40 | 7-May-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-40 | 18-Aug-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-40 | 15-Nov-10 | Not Sampled-NAPL present | | | | | | | | | |
| | | | | | | | | | | | |

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICALS
(VOCs ,TOTAL PETROLEUM HYDROCARBONS, and TDS)
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date Sampled | Benzene | Toluene | Ethyl-benzene | Xylenes | MTBE | Naph-thalene | GRO C6-C10 | DRO C10-C22 | MRO | Total Dissolved Solids |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | mg/L | mg/L | mg/L | mg/L |
| Sample Method | | EPA Method 8260 | | | | | | EPA Method 8015M | | | 2540C |
| NM WQCC STANDARD | | 10 | 750 | 750 | 620 | 100 | 30 | NE | NE | NE | 1,000 |
| TW-41 | 18-Dec-08 | **480** | <50 | 570 | **4,000** | <50 | <500 | 8.4 | 2.0 | <5.0 | NA |
| TW-41 | 24-Aug-09 | **170** | 6.6 | 400 | **2,000** | 24 | **49** | 7.0 | 1.1 | <5.0 | **3,510** |
| TW-41 | 18-Feb-10 | **140** | <10 | 400 | **2,500** | 24 | **49** | 7.7 | 1.5 | <5.0 | **4,230** |
| TW-41 | 12-May-10 | **180** | <10 | 530 | **2,300** | 20 | **41** | 6.9 | <3.0 | <15 | **4,590** |
| TW-41 | 20-Aug-10 | **190** | <10 | 420 | **1,400** | 24 | **43** | 8.2 | <1.0 | <5.0 | **3,880** |
| TW-41 | 16-Nov-10 | **96** | <10 | 480 | **2,200** | 17 | **55** | 6.6 | 1.4 | <5.0 | **3,670** |
| | | | | | | | | | | | |
| TW-42 | 16-Dec-08 | <1.0 | <1.0 | 31 | <1.5 | **130** | <10 | 0.18 | 1.2 | <5.0 | NA |
| TW-42 | 24-Aug-09 | <1.0 | <1.0 | <1.0 | <1.5 | 70 | <2.0 | 0.10 | <1.0 | <5.0 | **4,260** |
| TW-42 | 18-Feb-10 | <1.0 | <1.0 | <1.0 | <2.0 | 75 | <2.0 | 0.15 | <1.0 | <5.0 | **4,070** |
| TW-42 | 12-May-10 | <1.0 | <1.0 | <1.0 | <2.0 | 39 | <2.0 | 0.15 | <1.0 | <5.0 | **4,510** |
| TW-42 | 20-Aug-10 | <1.0 | <1.0 | <1.0 | <2.0 | 57 | <2.0 | 0.16 | <1.0 | <5.0 | **4,920** |
| TW-42 | 16-Nov-10 | <1.0 | <1.0 | <1.0 | <1.5 | 53 | <2.0 | 0.16 | <1.0 | <5.0 | **5,040** |
| | | | | | | | | | | | |
| TW-43 | 16-Dec-08 | <1.0 | <1.0 | 31 | <1.5 | **1,700** | <10 | 0.80 | <1.0 | <5.0 | |
| TW-43 | 24-Aug-09 | <1.0 | <1.0 | <1.0 | <1.5 | **500** | <10 | 0.17 | <1.0 | <5.0 | **4,610** |
| TW-43 | 18-Feb-10 | <1.0 | <1.0 | <1.0 | <2.0 | **430** | <2.0 | 0.37 | <1.0 | <5.0 | **4,390** |
| TW-43 | 12-May-10 | <1.0 | <1.0 | <1.0 | <2.0 | **380** | <2.0 | 0.31 | <1.0 | <5.0 | **4,200** |
| TW-43 | 20-Aug-10 | <1.0 | <1.0 | <1.0 | <2.0 | **380** | <2.0 | 0.38 | <1.0 | <5.0 | **4,510** |
| TW-43 | 16-Nov-10 | <1.0 | <1.0 | <1.0 | <1.5 | **370** | <2.0 | 0.48 | <1.0 | <5.0 | **4,450** |
| | | | | | | | | | | | |
| TW-44 | 17-Dec-08 | **58** | <5.0 | 69 | 340 | **330** | **245** | 2.0 | 1.8 | <5.0 | NA |
| TW-44 | 24-Aug-09 | **56** | <1.0 | 6.9 | 7.3 | **360** | <2.0 | 0.20 | 1.2 | <5.0 | **5,520** |

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICALS
(VOCs ,TOTAL PETROLEUM HYDROCARBONS, and TDS)
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date Sampled | Benzene | Toluene | Ethyl-benzene | Xylenes | MTBE | Naph-thalene | GRO C6-C10 | DRO C10-C22 | MRO | Total Dissolved Solids |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | mg/L | mg/L | mg/L | mg/L |
| Sample Method | | EPA Method 8260 | | | | | | EPA Method 8015M | | | 2540C |
| NM WQCC STANDARD | | 10 | 750 | 750 | 620 | 100 | 30 | NE | NE | NE | 1,000 |
| TW-44 | 18-Feb-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-44 | 7-May-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-44 | 18-Aug-10 | Not Sampled-NAPL present | | | | | | | | | |
| TW-44 | 15-Nov-10 | Not Sampled-NAPL present | | | | | | | | | |
| | | | | | | | | | | | |
| TW-45 | 13-May-10 | <1.0 | <1.0 | <1.0 | <2.0 | **160** | <2.0 | 0.20 | <1.0 | <5.0 | **4,480** |
| TW-45 | 20-Aug-10 | <1.0 | <1.0 | <1.0 | <2.0 | **300** | <2.0 | 0.33 | <1.0 | <5.0 | **4,750** |
| TW-45 | 17-Nov-10 | <1.0 | <1.0 | <1.0 | <1.5 | **170** | <2.0 | 0.23 | <1.0 | <5.0 | **4,530** |
| | | | | | | | | | | | |
| TW-46 | 13-May-10 | <1.0 | <1.0 | <1.0 | <2.0 | **110** | <2.0 | 0.14 | <1.0 | <5.0 | **4,080** |
| TW-46 | 20-Aug-10 | <1.0 | <1.0 | <1.0 | <2.0 | 88 | <2.0 | 0.13 | <1.0 | <5.0 | **4,430** |
| | | | | | | | | | | | |
| TW-47 | 13-May-10 | <1.0 | <1.0 | <1.0 | <2.0 | 9.4 | <2.0 | <0.050 | <1.0 | <5.0 | **10,000** |
| TW-47 | 20-Aug-10 | <1.0 | <1.0 | <1.0 | <2.0 | 18 | <2.0 | <0.050 | <1.0 | <5.0 | **9,940** |
| TW-47 | 17-Nov-10 | <1.0 | <1.0 | <1.0 | <1.5 | 8.2 | <2.0 | <0.050 | <1.0 | <5.0 | **8,800** |
| | | | | | | | | | | | |
| TW-48 | 12-May-10 | <1.0 | <1.0 | <1.0 | <2.0 | 13 | <2.0 | 0.061 | <1.0 | <5.0 | **4,560** |
| TW-48 | 19-Aug-10 | <1.0 | <1.0 | <1.0 | <2.0 | 16 | <2.0 | 0.067 | <1.0 | <5.0 | **4,440** |
| | | | | | | | | | | | |
| TW-49 | 17-May-10 | <1.0 | <1.0 | <1.0 | <2.0 | 17 | <2.0 | <0.050 | <1.0 | <5.0 | **5,580** |
| TW-49 | 20-Aug-10 | <1.0 | <1.0 | <1.0 | <2.0 | 14 | <2.0 | <0.050 | <1.0 | <5.0 | **8,120** |
| TW-49 | 17-Nov-10 | <1.0 | <1.0 | <1.0 | <1.5 | 28 | <2.0 | 0.12 | <1.0 | <5.0 | **7,470** |
| | | | | | | | | | | | |

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICALS
(VOCs ,TOTAL PETROLEUM HYDROCARBONS, and TDS)
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date Sampled | Benzene | Toluene | Ethyl-benzene | Xylenes | MTBE | Naph-thalene | GRO C6-C10 | DRO C10-C22 | MRO | Total Dissolved Solids |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | mg/L | mg/L | mg/L | mg/L |
| Sample Method | | EPA Method 8260 | | | | | | EPA Method 8015M | | | 2540C |
| NM WQCC STANDARD | | 10 | 750 | 750 | 620 | 100 | 30 | NE | NE | NE | 1,000 |
| TW-50 | 12-May-10 | **72** | <10 | 260 | **1,200** | 16 | **63** | 7.7 | 4.0 | <5.0 | **4,320** |
| TW-50 | 19-Aug-10 | **6.9** | <5.0 | 69 | 100 | 19 | <10 | 2.4 | <1.0 | <5.0 | **4,500** |
| | | | | | | | | | | | |
| MW-5 | 30-Jan-02 | 5.1 | <0.5 | <0.5 | <1.50 | 43 | NA | NA | NA | NA | NA |
| MW-5 | 25-Jul-02 | 4.7 | ND | ND | ND | 51 | NA | NA | NA | NA | NA |
| MW-5 | 26-Nov-02 | 5.1 | ND | ND | ND | 47 | NA | NA | NA | NA | NA |
| MW-5 | 5-Jun-03 | 1.5 | ND | ND | ND | 25 | NA | NA | NA | NA | NA |
| MW-5 | 3-Nov-03 | ND | ND | ND | ND | 26 | NA | NA | NA | NA | NA |
| MW-5 | 19-Jan-04 | 3.8 | 0.9 | <0.5 | 1.4 | 44 | NA | NA | NA | NA | NA |
| MW-5 | 25-May-04 | 1.8 | 0.5 | <0.5 | <1.0 | 36 | NA | 0.14 | NA | NA | NA |
| MW-5 | 27-Jul-04 | <0.5 | <0.5 | <0.5 | <1.0 | 29 | NA | <0.10 | NA | NA | NA |
| MW-5 | 28-Dec-04 | <0.5 | <0.5 | <0.5 | <1.0 | 27 | NA | <0.10 | NA | NA | NA |
| MW-5 | 27-Jun-06 | 1.5 | <0.5 | <0.5 | <2.0 | 37 | NA | <0.10 | <2.5 | NA | NA |
| MW-5 | 28-Dec-06 | <0.5 | <0.5 | <0.5 | <2.0 | 37 | NA | <0.10 | <1.0 | NA | NA |
| MW-5 | 5-Jul-07* | 2.4 | <0.5 | 0.8 | <2.0 | 28* | NA | 0.14 | <2.0 | NA | NA |
| MW-5 | 19-Dec-08 | <1.0 | <1.0 | <1.0 | <1.5 | 46 | <10 | 0.066 | <1.0 | <5.0 | NA |
| MW-5 | 18-Feb-10 | <1.0 | <1.0 | <1.0 | <2.0 | 49 | <2.0 | 0.12 | <1.0 | <5.0 | **4,350** |
| MW-5 | 12-May-10 | <1.0 | <1.0 | <1.0 | <2.0 | 63 | <2.0 | 0.10 | <1.0 | <5.0 | **4,590** |
| MW-5 | 17-Nov-10 | <1.0 | <1.0 | <1.0 | <1.5 | 54 | <2.0 | 0.11 | <1.0 | <5.0 | **4,630** |
| | | | | | | | | | | | |
| MW-7 | 4-Jan-06* | 1.9 | <0.5 | 1.7 | 2.1 | **120** | NA | 0.16 | <1.0 | NA | NA |
| MW-7 | 17-May-10 | **17** | <1.0 | <1.0 | <2.0 | 23 | <2.0 | 0.14 | <1.0 | <5.0 | **5,480** |
| MW-7 | 19-Aug-10 | 6.9 | <1.0 | <1.0 | <2.0 | 74 | <2.0 | 0.22 | <1.0 | <5.0 | **4,720** |

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICALS
(VOCs ,TOTAL PETROLEUM HYDROCARBONS, and TDS)
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date Sampled | Benzene | Toluene | Ethyl-benzene | Xylenes | MTBE | Naph-thalene | GRO C6-C10 | DRO C10-C22 | MRO | Total Dissolved Solids |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | mg/L | mg/L | mg/L | mg/L |
| Sample Method | | EPA Method 8260 | | | | | | EPA Method 8015M | | | 2540C |
| NM WQCC STANDARD | | 10 | 750 | 750 | 620 | 100 | 30 | NE | NE | NE | 1,000 |
| | | | | | | | | | | | |
| **MW-20** | 30-Jan-02 | 1.6 | 3.7 | 6.3 | 1.2 | **670** | NA | NA | NA | NA | NA |
| **MW-20** | 26-Jul-02 | ND | ND | ND | ND | **950** | NA | NA | NA | NA | NA |
| **MW-20** | 26-Nov-02 | 1.6 | ND | ND | 2 | **350** | NA | NA | NA | NA | NA |
| **MW-20** | 5-Jun-03 | 7 | ND | 7.1 | 7.2 | **630** | NA | NA | NA | NA | NA |
| **MW-20** | 4-Nov-03 | 3.2 | ND | ND | 5.1 | **480** | NA | NA | NA | NA | NA |
| **MW-20** | 19-Jan-04 | 2.8 | <0.5 | 1.4 | 3.3 | **680** | NA | NA | NA | NA | NA |
| **MW-20** | 25-May-04 | 1.9 | <0.5 | 3.3 | 7.6 | **400** | NA | 0.82 | NA | NA | NA |
| **MW-20** | 27-Jul-04 | 2.1 | <0.5 | <0.5 | 2.3 | **590** | NA | 0.91 | NA | NA | NA |
| **MW-20** | 29-Dec-04 | 2.0 | <0.5 | <0.5 | 7.2 | **300** | NA | 0.89 | NA | NA | NA |
| **MW-20** | 19-Sep-05 | <2.5 | <2.5 | <2.5 | 5.4 | **160** | NA | 1.2 | NA | NA | NA |
| **MW-20** | 4-Jan-06 | <0.5 | <0.5 | <0.5 | <2.0 | **400** | NA | 0.50 | <1.0 | NA | NA |
| **MW-20** | 28-Jun-06 | 0.6 | <0.5 | <0.5 | <2.0 | **310** | NA | 0.23 | 3.2 | NA | NA |
| **MW-20** | 28-Dec-06 | <5.0 | 20 | <5.0 | <20 | **170** | NA | 1.6 | <1.0 | NA | NA |
| **MW-20** | 3-Jul-07 | <1.0 | 4.0 | 1.7 | <4.0 | **180*** | NA | 0.34 | <2.0 | NA | NA |
| **MW-20** | 18-Dec-07* | <0.5 | 8.3 | <0.5 | 3.6 | **360** | NA | 0.52 | <2.0 | NA | NA |
| **MW-20** | 21-Jan-09 | <1.0 | <1.0 | <1.0 | <1.5 | **170** | <10 | 0.47 | 1.8 | <5.0 | NA |
| **MW-20** | 18-Feb-10 | 2.5 | <1.0 | <1.0 | <2.0 | **190** | <2.0 | 0.32 | <1.0 | <5.0 | **4,420** |
| **MW-20** | 13-May-10 | 1.7 | <1.0 | <1.0 | <2.0 | **180** | <2.0 | 0.60 | <1.0 | <5.0 | **4,180** |
| **MW-20** | 20-Aug-10 | <1.0 | <1.0 | <1.0 | <2.0 | **200** | <2.0 | 0.50 | <1.0 | <5.0 | **4,190** |
| **MW-20** | 17-Nov-10 | 1.6 | <1.0 | <1.0 | <1.5 | **160** | <2.0 | 1.0 | <1.0 | <5.0 | **3,950** |
| | | | | | | | | | | | |
| **MW-21** | 30-Jan-02 | <0.5 | <0.5 | <0.5 | <1.5 | 44 | NA | NA | NA | NA | NA |

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICALS
(VOCs ,TOTAL PETROLEUM HYDROCARBONS, and TDS)
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date Sampled | Benzene | Toluene | Ethyl-benzene | Xylenes | MTBE | Naph-thalene | GRO C6-C10 | DRO C10-C22 | MRO | Total Dissolved Solids |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | mg/L | mg/L | mg/L | mg/L |
| Sample Method | | EPA Method 8260 | | | | | | EPA Method 8015M | | | 2540C |
| NM WQCC STANDARD | | 10 | 750 | 750 | 620 | 100 | 30 | NE | NE | NE | 1,000 |
| MW-21 | 26-Jul-02 | ND | ND | ND | ND | 34 | NA | NA | NA | NA | NA |
| MW-21 | 26-Nov-02 | 1.4 | ND | ND | ND | 34 | NA | NA | NA | NA | NA |
| MW-21 | 5-Jun-03 | ND | ND | ND | ND | 14 | NA | NA | NA | NA | NA |
| MW-21 | 4-Nov-03 | ND | ND | ND | ND | 25 | NA | NA | NA | NA | NA |
| MW-21 | 19-Jan-04 | <0.5 | <0.5 | <0.5 | <1.0 | <2.5 | NA | NA | NA | NA | NA |
| MW-21 | 25-May-04 | <0.5 | <0.5 | <0.5 | <1.0 | 18 | NA | 0.11 | NA | NA | NA |
| MW-21 | 28-Jul-04 | <0.5 | <0.5 | <0.5 | <1.0 | 24 | NA | <0.10 | NA | NA | NA |
| MW-21 | 29-Dec-04 | <0.5 | <0.5 | <0.5 | <1.0 | 25 | NA | <0.10 | NA | NA | NA |
| MW-21 | 19-Sep-05 | <0.5 | <0.5 | <0.5 | <1.0 | 29 | NA | <0.10 | NA | NA | NA |
| MW-21 | 4-Jan-06 | <0.5 | <0.5 | <0.5 | <2.0 | 24 | NA | <0.10 | <1.0 | NA | NA |
| MW-21 | 28-Jun-06 | 2.9 | <0.5 | <0.5 | <2.0 | 17 | NA | <0.10 | <2.5 | NA | NA |
| MW-21 | 2-Jan-07 | <0.5 | <0.5 | <0.5 | <2.0 | 29 | NA | <0.10 | <1.0 | NA | NA |
| MW-21 | 3-Jul-07 | <0.5 | <0.5 | <0.5 | <2.0 | 39* | NA | <0.10 | <2.0 | NA | NA |
| MW-21 | 18-Dec-07* | <0.5 | <0.5 | <0.5 | <2.0 | 79 | NA | <0.10 | <2.0 | NA | NA |
| MW-21 | 19-Dec-08 | <1.0 | <1.0 | <1.0 | <1.5 | **100** | <10 | 0.11 | <1.0 | <5.0 | NA |
| MW-21 | 18-Feb-10 | <1.0 | <1.0 | <1.0 | <2.0 | 85 | <2.0 | 0.11 | <1.0 | <5.0 | **5,220** |
| MW-21 | 13-May-10 | <1.0 | <1.0 | <1.0 | <2.0 | 82 | <2.0 | 0.10 | <1.0 | <5.0 | **5,840** |
| MW-21 | 20-Aug-10 | <1.0 | <1.0 | <1.0 | <2.0 | **120** | <2.0 | 0.12 | <1.0 | <5.0 | **5,520** |
| MW-21 | 17-Nov-10 | <1.0 | <1.0 | <1.0 | <1.5 | 83 | <2.0 | 0.12 | <1.0 | <5.0 | **6,270** |

***Notes:***

* **Sample analyzed per EPA Method 8021 instead of EPA Method 8260**
< **Analyte not detected above listed method limit**
*NA* **Not analyzed**
NE **Not established**

TABLE 2

SUMMARY OF GROUNDWATER ANALYTICALS

(VOCs ,TOTAL PETROLEUM HYDROCARBONS, and TDS)

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Date Sampled | Benzene | Toluene | Ethyl-benzene | Xylenes | MTBE | Naph-thalene | GRO C6-C10 | DRO C10-C22 | MRO | Total Dissolved Solids |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | mg/L | mg/L | mg/L | mg/L |
| Sample Method | | EPA Method 8260 | | | | | | EPA Method 8015M | | | 2540C |
| NM WQCC STANDARD | | 10 | 750 | 750 | 620 | 100 | 30 | NE | NE | NE | 1,000 |

ug/L Micrograms per liter (ppb)
mg/L Milligrams per liter (ppm)
GRO Gasoline range organics
DRO Diesel range organics
MRO Motor oil range organics

TABLE 3

SUMMARY OF GROUNDWATER RCRA 8 METALS ANALYTICAL RESULTS

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| *Well ID* | *Sample Date* | *Arsenic* | *Barium* | *Cadmium* | *Chromium* | *Lead* | *Mercury* | *Selenium* | *Silver* |
|---|---|---|---|---|---|---|---|---|---|
| | | *mg/L* | *mg/L* | *mg/L* | *mg/L* | *mg/L* | *mg/L* | *mg/L* | *mg/L* |
| *Analytical Method* | | *6010B* | *6010B* | *6010B* | *6010B* | *6010B* | *7470* | *6010B* | *6010B* |
| *NM WQCC Standard* | | *0.10* | *1.0* | *0.01* | *0.05* | *0.05* | *0.002* | *0.05* | *0.005* |
| **TW-1** | 19-Aug-09 | <0.020 | 0.036 | <0.0020 | 0.01 | 0.018 | <0.00020 | <0.050 | <0.0050 |
| **TW-2** | 19-Aug-09 | <0.020 | <0.020 | <0.0020 | <0.0060 | 0.0053 | <0.00020 | <0.050 | <0.0050 |
| **TW-3** | 19-Aug-09 | <0.020 | <0.020 | <0.0020 | <0.0060 | 0.0058 | <0.00020 | <0.050 | <0.0050 |
| **TW-4** | 19-Aug-09 | <0.020 | <0.020 | <0.0020 | <0.0060 | 0.0053 | <0.00020 | <0.050 | <0.0050 |
| **TW-5** | 19-Aug-09 | <0.020 | <0.020 | <0.0020 | <0.0060 | 0.0050 | <0.00020 | <0.050 | <0.0050 |
| **TW-6** | 19-Aug-09 | <0.020 | <0.020 | <0.0020 | <0.0060 | 0.011 | <0.00020 | <0.050 | <0.0050 |
| **TW-7** | 19-Aug-09 | <0.020 | <0.020 | <0.0020 | <0.0060 | 0.011 | <0.00020 | <0.050 | <0.0050 |
| **TW-8** | 20-Aug-09 | <0.020 | 0.021 | <0.0020 | <0.0060 | <0.0050 | <0.00020 | <0.050 | <0.0050 |
| **TW-9** | 20-Aug-09 | <0.020 | 0.033 | <0.0020 | <0.0060 | 0.0077 | <0.00020 | <0.050 | <0.0050 |
| **TW-10** | 20-Aug-09 | <0.020 | 0.038 | <0.0020 | <0.0060 | 0.021 | <0.00020 | <0.050 | <0.0050 |
| **TW-11** | 20-Aug-09 | <0.20 | <0.20 | <0.020 | <0.060 | <0.050 | <0.00020 | <0.50 | <0.050 |
| **TW-12** | 20-Aug-09 | <0.020 | 0.020 | <0.0020 | <0.0060 | 0.0072 | <0.00020 | <0.050 | <0.0050 |
| **TW-15** | 20-Aug-09 | <0.020 | <0.020 | <0.0020 | <0.0060 | 0.0092 | <0.00020 | <0.050 | <0.0050 |

TABLE 3

SUMMARY OF GROUNDWATER RCRA 8 METALS ANALYTICAL RESULTS

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Sample Date | Arsenic | Barium | Cadmium | Chromium | Lead | Mercury | Selenium | Silver |
|---|---|---|---|---|---|---|---|---|---|
| | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Analytical Method | | 6010B | 6010B | 6010B | 6010B | 6010B | 7470 | 6010B | 6010B |
| NM WQCC Standard | | 0.10 | 1.0 | 0.01 | 0.05 | 0.05 | 0.002 | 0.05 | 0.005 |
| TW-16 | 20-Aug-09 | <0.020 | 0.047 | <0.0020 | <0.0060 | 0.0095 | <0.00020 | <0.050 | <0.0050 |
| TW-17 | 21-Aug-09 | 0.063 | <0.020 | <0.0020 | <0.0060 | 0.0083 | <0.00020 | <0.050 | <0.0050 |
| TW-18 | 21-Aug-09 | <0.020 | <0.020 | <0.0020 | <0.0060 | <0.0050 | <0.00020 | <0.050 | <0.0050 |
| TW-18 | 16-Nov-10 | <0.020 | <0.020 | <0.0020 | <0.0060 | 0.0055 | <0.00020 | <0.050 | <0.0050 |
| TW-23 | 21-Aug-09 | <0.020 | 0.023 | <0.0020 | <0.0060 | <0.0050 | <0.00020 | <0.050 | <0.0050 |
| TW-30 | 21-Aug-09 | 0.032 | 0.039 | <0.0020 | <0.0060 | 0.019 | <0.00020 | <0.050 | <0.0050 |
| TW-30 | 16-Nov-10 | <0.020 | <0.020 | <0.0020 | <0.0060 | 0.0071 | <0.00020 | <0.050 | <0.0050 |
| TW-31 | 21-Aug-09 | 0.066 | 0.064 | <0.0020 | <0.0060 | 0.015 | <0.00020 | <0.050 | <0.0050 |
| TW-31 | 16-Nov-10 | 0.034 | 0.025 | <0.0020 | <0.0060 | <0.0050 | <0.00020 | <0.050 | <0.0050 |
| TW-34 | 24-Aug-09 | <0.020 | <0.020 | <0.0020 | <0.0060 | <0.0050 | <0.00020 | <0.050 | <0.0050 |
| TW-35 | 24-Aug-09 | <0.020 | <0.020 | <0.0020 | <0.0060 | 0.0061 | <0.00020 | <0.050 | <0.0050 |
| TW-35 | 17-Nov-10 | <0.020 | <0.020 | <0.0020 | <0.0060 | <0.0050 | <0.00020 | <0.050 | <0.0050 |
| TW-37 | 21-Aug-09 | <0.020 | 0.041 | <0.0020 | <0.0060 | <0.0050 | <0.00020 | <0.050 | <0.0050 |
| TW-37 | 16-Nov-10 | <0.020 | 0.061 | <0.0020 | <0.0060 | <0.0050 | <0.00020 | <0.050 | <0.0050 |
| TW-38 | 16-Nov-10 | <0.020 | 0.023 | <0.0020 | <0.0060 | <0.0050 | <0.00020 | <0.050 | <0.0050 |
| TW-39 | 21-Aug-09 | <0.020 | 0.08 | <0.0020 | 0.0077 | <0.0050 | <0.00020 | <0.050 | <0.0050 |

TABLE 3
SUMMARY OF GROUNDWATER RCRA 8 METALS ANALYTICAL RESULTS
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| *Well ID* | *Sample Date* | *Arsenic* | *Barium* | *Cadmium* | *Chromium* | *Lead* | *Mercury* | *Selenium* | *Silver* |
|---|---|---|---|---|---|---|---|---|---|
| | | *mg/L* | *mg/L* | *mg/L* | *mg/L* | *mg/L* | *mg/L* | *mg/L* | *mg/L* |
| *Analytical Method* | | *6010B* | *6010B* | *6010B* | *6010B* | *6010B* | *7470* | *6010B* | *6010B* |
| *NM WQCC Standard* | | *0.10* | *1.0* | *0.01* | *0.05* | *0.05* | *0.002* | *0.05* | *0.005* |
| **TW-39** | 16-Nov-10 | <0.020 | 0.029 | <0.0020 | <0.0060 | <0.0050 | <0.00020 | <0.050 | <0.0050 |
| | | | | | | | | | |
| **TW-41** | 24-Aug-09 | <0.020 | 0.11 | <0.0020 | <0.0060 | <0.0050 | <0.00020 | <0.050 | <0.0050 |
| **TW-41** | 16-Nov-10 | <0.020 | 0.069 | <0.0020 | <0.0060 | <0.0050 | <0.00020 | <0.050 | <0.0050 |
| | | | | | | | | | |
| **TW-42** | 24-Aug-09 | <0.020 | 0.042 | <0.0020 | <0.0060 | <0.0050 | <0.00020 | <0.050 | <0.0050 |
| **TW-42** | 16-Nov-10 | <0.020 | <0.020 | <0.0020 | <0.0060 | <0.0050 | <0.00020 | <0.050 | <0.0050 |
| | | | | | | | | | |
| **TW-43** | 24-Aug-09 | <0.020 | <0.020 | <0.0020 | <0.0060 | 0.0061 | <0.00020 | <0.050 | <0.0050 |
| **TW-43** | 16-Nov-10 | <0.020 | <0.020 | <0.0020 | <0.0060 | 0.0073 | <0.00020 | <0.050 | <0.0050 |
| | | | | | | | | | |
| **TW-44** | 24-Aug-09 | <0.020 | 0.043 | <0.0020 | <0.0060 | <0.0050 | <0.00020 | <0.050 | <0.0050 |
| | | | | | | | | | |
| **TW-45** | 17-Nov-10 | 0.070 | <0.020 | <0.0020 | <0.0060 | <0.0050 | <0.00020 | <0.050 | <0.0050 |
| | | | | | | | | | |
| **TW-47** | 17-Nov-10 | <0.10 | <0.10 | <0.010 | <0.030 | <0.025 | <0.00020 | <0.25 | <0.025 |
| | | | | | | | | | |
| **TW-49** | 17-Nov-10 | <0.10 | <0.10 | <0.010 | <0.030 | <0.025 | <0.00020 | <0.25 | <0.025 |
| | | | | | | | | | |
| **MW-5** | 17-Nov-10 | <0.020 | <0.020 | <0.0020 | <0.0060 | <0.0050 | <0.00020 | <0.050 | <0.0050 |
| | | | | | | | | | |
| **MW-20** | 17-Nov-10 | <0.020 | 0.02 | <0.0020 | <0.0060 | <0.0050 | <0.00020 | <0.050 | <0.0050 |
| | | | | | | | | | |
| **MW-21** | 17-Nov-10 | 0.040 | <0.020 | <0.0020 | <0.0060 | <0.0050 | <0.00020 | <0.050 | <0.0050 |

***Notes:*** **< Analyte not detected above listed method limit**
**mg/L Milligrams per liter (ppm)**

TABLE 4

SUMMARY OF GROUNDWATER DISSOLVED CATIONS, ANIONS, SPECIFIC CONDUCTANCE, HARDNESS, AND TOTAL DISSOLVED SOLIDS ANALYTICAL RESULTS

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Sample Date | Calcium | Magnesium | Potassium | Sodium | Bromide | Chloride | Fluoride | Sulfate | Specifice Conductance | Hardness as ($CaCO_3$) | TDS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | µmhos/cm | mg/L | mg/L |
| *Analytical Method* | | *6010B* | *6010B* | *6010B* | *6010B* | *300.0* | *300.0* | *300.0* | *300.0* | *120.1* | *6010B* | *SM 2540C* |
| *NM WQCC Standard* | | *NE* | *NE* | *NE* | *NE* | *NE* | *250* | *1.6* | *600* | *NE* | *NE* | *1,000* |
| **TW-1** | 19-Aug-09 | 500 | 37 | 2.8 | 300 | 0.12 | 18 | 0.82 | **1,700** | 2,900 | 1,400 | **2,530** |
| **TW-2** | 19-Aug-09 | 470 | 46 | 3.7 | 660 | 0.27 | 24 | 1.0 | **2,600** | 4,100 | 1,400 | **4,020** |
| **TW-3** | 19-Aug-09 | 500 | 45 | 2.7 | 710 | 0.28 | 26 | 0.80 | **2,600** | 4,200 | 1,400 | **4,170** |
| **TW-4** | 19-Aug-09 | 470 | 54 | 4.2 | 1,600 | 0.79 | 120 | 0.78 | **4,100** | 6,500 | 1,400 | **6,530** |
| **TW-5** | 19-Aug-09 | 510 | 36 | 3.1 | 400 | 0.23 | 20 | 0.86 | **2,000** | 3,300 | 1,400 | **3,180** |
| **TW-6** | 19-Aug-09 | 480 | 47 | 3.4 | 720 | 0.28 | 28 | 1.1 | **2,700** | 4,200 | 1,400 | **4,020** |
| **TW-7** | 19-Aug-09 | 480 | 46 | 2.3 | 750 | 0.28 | 24 | 0.78 | **2,700** | 4,200 | 1,400 | **3,930** |
| **TW-8** | 20-Aug-09 | 450 | 57 | 3.6 | 910 | 1.3 | 190 | 0.67 | **2,600** | 4,700 | 1,400 | **4,490** |
| **TW-9** | 20-Aug-09 | 250 | 21 | 2.4 | 410 | 1.2 | 170 | 0.87 | 530 | 2,600 | 710 | **2,070** |
| **TW-10** | 20-Aug-09 | 420 | 36 | 3.6 | 640 | 1.1 | 160 | 0.72 | **940** | 3,700 | 1,200 | **3,250** |
| **TW-11** | 20-Aug-09 | 470 | 53 | 3.6 | 1,500 | 0.46 | 70 | 0.85 | **4,000** | 6,100 | 1,400 | **6,290** |
| **TW-12** | 20-Aug-09 | 470 | 56 | 2.5 | 500 | 0.28 | 27 | 0.85 | **2,100** | 3,500 | 1,400 | **3,490** |
| **TW-15** | 20-Aug-09 | 460 | 47 | 2.6 | 1,200 | 0.99 | 140 | 0.74 | **3,100** | 5,300 | 1,300 | **5,240** |
| **TW-16** | 20-Aug-09 | 360 | 32 | 8.5 | 1,100 | 1.1 | 150 | 0.75 | **2,600** | 4,800 | 1,000 | **4,240** |

TABLE 4

SUMMARY OF GROUNDWATER DISSOLVED CATIONS, ANIONS, SPECIFIC CONDUCTANCE, HARDNESS, AND TOTAL DISSOLVED SOLIDS ANALYTICAL RESULTS

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Sample Date | Calcium | Magnesium | Potassium | Sodium | Bromide | Chloride | Fluoride | Sulfate | Specifice Conductance | Hardness as ($CaCO_3$) | TDS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | µmhos/cm | mg/L | mg/L |
| Analytical Method | | 6010B | 6010B | 6010B | 6010B | 300.0 | 300.0 | 300.0 | 300.0 | 120.1 | 6010B | SM 2540C |
| NM WQCC Standard | | NE | NE | NE | NE | NE | 250 | 1.6 | 600 | NE | NE | 1,000 |
| | | | | | | | | | | | | |

TABLE 4
SUMMARY OF GROUNDWATER DISSOLVED CATIONS, ANIONS, SPECIFIC CONDUCTANCE, HARDNESS, AND TOTAL DISSOLVED SOLIDS ANALYTICAL RESULTS
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Sample Date | Calcium | Magnesium | Potassium | Sodium | Bromide | Chloride | Fluoride | Sulfate | Specifice Conductance | Hardness as ($CaCO_3$) | TDS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | µmhos/cm | mg/L | mg/L |
| Analytical Method | | 6010B | 6010B | 6010B | 6010B | 300.0 | 300.0 | 300.0 | 300.0 | 120.1 | 6010B | SM 2540C |
| NM WQCC Standard | | NE | NE | NE | NE | NE | 250 | 1.6 | 600 | NE | NE | 1,000 |
| TW-17 | 21-Aug-09 | 350 | 43 | 4.2 | 1,200 | 1.2 | 170 | 0.80 | **3,100** | 4,700 | 1,100 | **4,640** |
| | | | | | | | | | | | | |
| TW-18 | 21-Aug-09 | 500 | 54 | 3.6 | 830 | 0.43 | 52 | 0.77 | **2,800** | 4,300 | 1,500 | **4,440** |
| TW-18 | 16-Nov-10 | 490 | 52 | 4.6 | 910 | 0.28 | 54 | 1 | **3,700** | 5,000 | 1,400 | **4,790** |
| | | | | | | | | | | | | |
| TW-23 | 21-Aug-09 | 470 | 49 | 3.5 | 1,400 | 1.1 | 150 | 1.1 | **3,600** | 5,500 | 1,400 | **5,440** |
| | | | | | | | | | | | | |
| TW-30 | 21-Aug-09 | 700 | 57 | 5.9 | 1,100 | 3.7 | **860** | 0.56 | **2,000** | 5,000 | 2,000 | **4,550** |
| TW-30 | 16-Nov-10 | 550 | 60 | 8.8 | 1,200 | 1.9 | **1,400** | 0.54 | **2,100** | 6,500 | 1,600 | **5,630** |
| | | | | | | | | | | | | |
| TW-31 | 21-Aug-09 | 460 | 68 | 4.9 | 1,300 | 3.9 | **1,700** | 0.43 | **1,200** | 5,800 | 1,400 | **4,790** |
| TW-31 | 16-Nov-10 | 520 | 66 | 6.9 | 940 | 0.65 | **750** | 0.67 | **2,000** | 5,500 | 1,600 | **4,680** |
| | | | | | | | | | | | | |
| TW-34 | 24-Aug-09 | 450 | 76 | 4.7 | 1,200 | 0.36 | 59 | 1.0 | **3,500** | 5,100 | 1,400 | **5,460** |
| | | | | | | | | | | | | |
| TW-35 | 24-Aug-09 | 440 | 88 | 8.3 | 1,600 | 0.40 | 65 | 0.74 | **4,400** | 6,100 | 1,500 | **6,700** |
| TW-35 | 17-Nov-10 | 480 | 84 | 8.6 | 1,600 | 0.26 | 70 | 0.81 | **4,700** | 6,600 | 1,600 | **6,770** |
| | | | | | | | | | | | | |
| TW-37 | 21-Aug-09 | 380 | 46 | 3.7 | 870 | 3.5 | **330** | 0.59 | **1,700** | 4,200 | 1,100 | **3,740** |
| TW-37 | 16-Nov-10 | 340 | 45 | 3.5 | 760 | 0.49 | **310** | 0.51 | **1,500** | 4,200 | 1,000 | **3,380** |
| | | | | | | | | | | | | |
| TW-38 | 16-Nov-10 | 490 | 45 | 3.5 | 700 | 0.38 | 210 | 0.77 | **1,900** | 4,400 | 1,400 | **3,930** |
| | | | | | | | | | | | | |
| TW-39 | 21-Aug-09 | 600 | 54 | 7.1 | 1,100 | 2.3 | **1,300** | 0.44 | **990** | 5,200 | 1,700 | **4,460** |
| TW-39 | 16-Nov-10 | 370 | 43 | 4.9 | 660 | 0.47 | **540** | 0.42 | **1,000** | 4,100 | 1,100 | **3,070** |
| | | | | | | | | | | | | |
| TW-41 | 24-Aug-19 | 330 | 57 | 6.5 | 1,000 | 1.7 | **970** | <0.50 | 500 | 4,600 | 1,100 | **3,510** |

TABLE 4
SUMMARY OF GROUNDWATER DISSOLVED CATIONS, ANIONS, SPECIFIC CONDUCTANCE, HARDNESS, AND TOTAL DISSOLVED SOLIDS ANALYTICAL RESULTS
Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| Well ID | Sample Date | Calcium | Magnesium | Potassium | Sodium | Bromide | Chloride | Fluoride | Sulfate | Specifice Conductance | Hardness as ($CaCO_3$) | TDS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | µmhos/cm | mg/L | mg/L |
| Analytical Method | | 6010B | 6010B | 6010B | 6010B | 300.0 | 300.0 | 300.0 | 300.0 | 120.1 | 6010B | SM 2540C |
| NM WQCC Standard | | NE | NE | NE | NE | NE | 250 | 1.6 | 600 | NE | NE | 1,000 |
| TW-41 | 16-Nov-10 | 300 | 58 | 5.8 | 910 | 1.0 | **1,100** | 0.23 | **610** | 5,200 | 980 | **3,670** |
| TW-42 | 24-Aug-09 | 250 | 75 | 6.3 | 1,200 | 3.8 | **690** | 0.43 | **1,400** | 5,000 | 940 | **4,260** |
| TW-42 | 16-Nov-10 | 370 | 110 | 6.8 | 1,200 | 0.86 | **840** | 0.47 | **2,300** | 5,900 | 1,400 | **5,040** |
| TW-43 | 24-Aug-09 | 570 | 55 | 5.0 | 930 | 0.6 | 140 | 0.74 | **2,500** | 4,500 | 1,600 | **4,610** |
| TW-43 | 16-Nov-10 | 540 | 53 | 4.8 | 820 | 0.44 | 150 | 0.98 | **2,800** | 4,800 | 1,600 | **4,450** |
| TW-44 | 24-Aug-09 | 610 | 56 | 8.1 | 1,100 | 3.7 | 81 | 0.38 | **2,800** | 5,100 | 1,800 | **5,520** |
| TW-45 | 17-Nov-10 | 550 | 53 | 3.9 | 860 | 0.47 | **320** | 0.78 | **2,600** | 5,000 | 1,600 | **4,530** |
| TW-47 | 17-Nov-10 | 490 | 120 | 8.6 | 2,300 | 0.93 | **1,200** | 0.57 | **5,300** | 8,800 | 1,700 | **8,800** |
| TW-49 | 17-Nov-10 | 630 | 92 | 14.0 | 1,700 | 2.1 | **3,400** | 0.51 | **7,000** | 8,000 | 1,900 | **7,470** |
| MW-5 | 17-Nov-10 | 150 | 29 | 6.1 | 1,200 | 0.77 | **310** | <2.0 | **3,000** | 5,400 | 500 | **4,630** |
| MW-20 | 17-Nov-10 | 410 | 47 | 4.1 | 840 | 0.72 | **430** | <0.50 | **2,000** | 4,700 | 1,200 | **3,950** |
| MW-21 | 17-Nov-10 | 460 | 64 | 7.4 | 1,400 | 0.87 | **820** | 0.64 | **3,500** | 6,700 | 1,400 | **6,270** |

TABLE 4

SUMMARY OF GROUNDWATER DISSOLVED CATIONS, ANIONS, SPECIFIC CONDUCTANCE, HARDNESS, AND TOTAL DISSOLVED SOLIDS ANALYTICAL RESULTS

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| *Well ID* | *Sample Date* | *Calcium* | *Magnesium* | *Potassium* | *Sodium* | *Bromide* | *Chloride* | *Fluoride* | *Sulfate* | *Specifice Conductance* | *Hardness as ($CaCO_3$)* | *TDS* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *mg/L* | *mg/L* | *mg/L* | *mg/L* | *mg/L* | *mg/L* | *mg/L* | *mg/L* | *µmhos/cm* | *mg/L* | *mg/L* |
| *Analytical Method* | | *6010B* | *6010B* | *6010B* | *6010B* | *300.0* | *300.0* | *300.0* | *300.0* | *120.1* | *6010B* | *SM 2540C* |
| *NM WQCC Standard* | | *NE* | *NE* | *NE* | *NE* | *NE* | *250* | *1.6* | *600* | *NE* | *NE* | *1,000* |

*Notes:*

| | |
|---|---|
| < | Analyte not detected above listed method limit |
| NE | Not established |
| mg/L | Milligrams per liter (ppm) |
| µmhos/cm | Micromhos per centimeter |

TABLE 5

SUMMARY OF RECENT GROUNDWATER MEASUREMENTS OF PHASE 1 , 2, and 3 MPE WELLS

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| *Well ID* | *Date* | *T.O.C. (ft amsl)* | *Depth to Product (ft)* | *Depth to Water (ft)* | *NAPL Thickness (ft)* |
|---|---|---|---|---|---|
| *Phase 1 Wells* | | | | | |
| **MPE-1** | 03-Mar-10 | TBD | | 23.63 | |
| **MPE-1** | 10-May-10 | TBD | | 23.46 | |
| **MPE-1** | 17-Aug-10 | TBD | | 23.65 | |
| **MPE-1** | 11-Nov-10 | TBD | | 23.82 | |
| | | | | | |
| **MPE-2** | 03-Mar-10 | TBD | 21.51 | 21.54 | 0.03 |
| **MPE-2** | 18-May-10 | TBD | | 21.29 | |
| **MPE-2** | 17-Aug-10 | TBD | 21.61 | 21.62 | 0.01 |
| **MPE-2** | 11-Nov-10 | TBD | 21.69 | 21.78 | 0.09 |
| | | | | | |
| **MPE-3** | 03-Mar-10 | TBD | | 20.79 | |
| **MPE-3** | 10-May-10 | TBD | | 20.63 | |
| **MPE-3** | 17-Aug-10 | TBD | | 20.83 | |
| **MPE-3** | 11-Nov-10 | TBD | | 21.01 | |
| | | | | | |
| **MPE-4** | 03-Mar-10 | TBD | | 19.95 | |
| **MPE-4** | 10-May-10 | TBD | | 19.80 | |
| **MPE-4** | 17-Aug-10 | TBD | | 20.01 | |
| **MPE-4** | 11-Nov-10 | TBD | | 20.20 | |
| | | | | | |
| **MPE-5** | 03-Mar-10 | TBD | 19.30 | 19.41 | 0.11 |
| **MPE-5** | 18-May-10 | TBD | | 19.00 | |
| **MPE-5** | 17-Aug-10 | TBD | 19.32 | 19.50 | 0.18 |
| **MPE-5** | 11-Nov-10 | TBD | 19.54 | 19.69 | 0.15 |
| | | | | | |
| **MPE-6** | 03-Mar-10 | TBD | | 19.66 | |
| **MPE-6** | 10-May-10 | TBD | | NM | |
| **MPE-6** | 17-Aug-10 | TBD | | 19.70 | |
| **MPE-6** | 11-Nov-10 | TBD | | 19.91 | |
| | | | | | |
| **MPE-7** | 03-Mar-10 | TBD | | 20.46 | |
| **MPE-7** | 10-May-10 | TBD | | NM | |

TABLE 5

SUMMARY OF RECENT GROUNDWATER MEASUREMENTS OF PHASE 1 , 2, and 3 MPE WELLS

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| *Well ID* | *Date* | *T.O.C. (ft amsl)* | *Depth to Product (ft)* | *Depth to Water (ft)* | *NAPL Thickness (ft)* |
|---|---|---|---|---|---|
| **MPE-7** | 17-Aug-10 | TBD | | 20.49 | |
| **MPE-7** | 11-Nov-10 | TBD | | 20.68 | |
| | | | | | |
| **MPE-8** | 03-Mar-10 | TBD | | 21.74 | |
| **MPE-8** | 10-May-10 | TBD | | 21.60 | |
| **MPE-8** | 17-Aug-10 | TBD | | 21.81 | |
| **MPE-8** | 11-Nov-10 | TBD | | 21.98 | |
| | | | | | |
| **MPE-9** | 03-Mar-10 | TBD | | 23.44 | |
| **MPE-9** | 10-May-10 | TBD | | 23.29 | |
| **MPE-9** | 17-Aug-10 | TBD | | 23.51 | |
| **MPE-9** | 11-Nov-10 | TBD | | 23.66 | |
| | | | | | |
| **MPE-10** | 03-Mar-10 | TBD | | 23.28 | |
| **MPE-10** | 10-May-10 | TBD | | 23.10 | |
| **MPE-10** | 17-Aug-10 | TBD | | 23.34 | |
| **MPE-10** | 11-Nov-10 | TBD | | 23.46 | |
| | | | | | |
| **MPE-11** | 03-Mar-10 | TBD | | 21.83 | |
| **MPE-11** | 10-May-10 | TBD | | 21.68 | |
| **MPE-11** | 17-Aug-10 | TBD | NM-Roots in Well | | |
| **MPE-11** | 11-Nov-10 | TBD | NM-Roots in Well | | |
| | | | | | |
| **MPE-12** | 03-Mar-10 | TBD | | 22.34 | |
| **MPE-12** | 10-May-10 | TBD | | 22.20 | |
| **MPE-12** | 17-Aug-10 | TBD | | 22.45 | |
| **MPE-12** | 11-Nov-10 | TBD | NM-Roots in Well | | |
| | | | | | |
| **MPE-13** | 03-Mar-10 | TBD | | 22.70 | |
| **MPE-13** | 10-May-10 | TBD | | 22.57 | |
| **MPE-13** | 17-Aug-10 | TBD | 22.78 | 22.82 | 0.04 |
| **MPE-13** | 11-Nov-10 | TBD | 22.9 | 22.96 | 0.06 |
| | | | | | |

TABLE 5

SUMMARY OF RECENT GROUNDWATER MEASUREMENTS OF PHASE 1 , 2, and 3 MPE WELLS

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| *Well ID* | *Date* | *T.O.C. (ft amsl)* | *Depth to Product (ft)* | *Depth to Water (ft)* | *NAPL Thickness (ft)* |
|---|---|---|---|---|---|
| **MPE-14** | 03-Mar-10 | TBD | | 21.80 | |
| **MPE-14** | 10-May-10 | TBD | | 21.65 | |
| **MPE-14** | 17-Aug-10 | TBD | 21.84 | 21.85 | 0.01 |
| **MPE-14** | 11-Nov-10 | TBD | | 22.00 | |
| | | | | | |
| **MPE-16** | 03-Mar-10 | TBD | | 19.92 | |
| **MPE-16** | 10-May-10 | TBD | | 19.78 | |
| **MPE-16** | 17-Aug-10 | TBD | | 19.96 | |
| **MPE-16** | 11-Nov-10 | TBD | | 20.14 | |
| | | | | | |
| **MPE-17** | 03-Mar-10 | TBD | | 20.11 | |
| **MPE-17** | 10-May-10 | TBD | | 19.98 | |
| **MPE-17** | 17-Aug-10 | TBD | | 20.04 | |
| **MPE-17** | 11-Nov-10 | TBD | | 20.34 | |
| | | | | | |
| **MPE-18** | 03-Mar-10 | TBD | | 19.23 | |
| **MPE-18** | 10-May-10 | TBD | | NM | |
| **MPE-18** | 17-Aug-10 | TBD | 19.27 | 19.28 | 0.01 |
| **MPE-18** | 11-Nov-10 | TBD | | 19.34 | |
| | | | | | |
| **MPE-19** | 03-Mar-10 | TBD | | 19.02 | |
| **MPE-19** | 10-May-10 | TBD | | 18.86 | |
| **MPE-19** | 17-Aug-10 | TBD | | 19.06 | |
| **MPE-19** | 11-Nov-10 | TBD | | 19.25 | |
| | | | | | |
| ***Phase 2 Wells*** | | | | | |
| **MPE-20** | 03-Mar-10 | TBD | | 18.72 | |
| **MPE-20** | 10-May-10 | TBD | | 18.58 | |
| **MPE-20** | 17-Aug-10 | TBD | | 18.75 | |
| **MPE-20** | 11-Nov-10 | TBD | | 18.96 | |
| | | | | | |
| **MPE-21** | 03-Mar-10 | TBD | 19.88 | 19.99 | 0.11 |
| **MPE-21** | 18-May-10 | TBD | | 19.50 | |

TABLE 5

SUMMARY OF RECENT GROUNDWATER MEASUREMENTS OF PHASE 1 , 2, and 3 MPE WELLS

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| *Well ID* | *Date* | *T.O.C. (ft amsl)* | *Depth to Product (ft)* | *Depth to Water (ft)* | *NAPL Thickness (ft)* |
|---|---|---|---|---|---|
| **MPE-21** | 09-Jun-10 | TBD | | 19.75 | |
| **MPE-21** | 17-Aug-10 | TBD | 19.90 | 19.91 | 0.01 |
| **MPE-21** | 11-Nov-10 | TBD | 20.12 | 20.21 | 0.09 |
| | | | | | |
| **MPE-22** | 03-Mar-10 | TBD | 20.73 | 20.81 | 0.08 |
| **MPE-22** | 18-May-10 | TBD | | NM | |
| **MPE-22** | 09-Jun-10 | TBD | 20.4 | 20.90 | 0.50 |
| **MPE-22** | 16-Jun-10 | TBD | | 20.53 | |
| **MPE-22** | 17-Aug-10 | TBD | 20.71 | 20.88 | 0.17 |
| **MPE-22** | 11-Nov-10 | TBD | 20.94 | 20.95 | 0.01 |
| | | | | | |
| **MPE-23** | 03-Mar-10 | TBD | | 21.10 | |
| **MPE-23** | 10-May-10 | TBD | | 20.97 | |
| **MPE-23** | 17-Aug-10 | TBD | | 21.14 | |
| **MPE-23** | 11-Nov-10 | TBD | | 21.33 | |
| | | | | | |
| **MPE-24** | 03-Mar-10 | TBD | | 22.69 | |
| **MPE-24** | 10-May-10 | TBD | | 22.53 | |
| **MPE-24** | 17-Aug-10 | TBD | | 22.70 | |
| **MPE-24** | 11-Nov-10 | TBD | | 22.88 | |
| | | | | | |
| **MPE-25** | 03-Mar-10 | TBD | | 23.02 | |
| **MPE-25** | 10-May-10 | TBD | | 22.87 | |
| **MPE-25** | 17-Aug-10 | TBD | | 23.12 | |
| **MPE-25** | 11-Nov-10 | TBD | | 23.23 | |
| | | | | | |
| **MPE-26** | 03-Mar-10 | TBD | 22.75 | 23.41 | 0.66 |
| **MPE-26** | 18-May-10 | TBD | 22.58 | 23.38 | 0.80 |
| **MPE-26** | 28-May-10 | TBD | 22.55 | 23.42 | 0.87 |
| **MPE-26** | 09-Jun-10 | TBD | 22.56 | 23.73 | 1.17 |
| **MPE-26** | 17-Aug-10 | TBD | 22.94 | 23.34 | 0.40 |
| **MPE-26** | 11-Nov-10 | TBD | 23.04 | 23.59 | 0.55 |
| | | | | | |

TABLE 5

SUMMARY OF RECENT GROUNDWATER MEASUREMENTS OF PHASE 1 , 2, and 3 MPE WELLS

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| *Well ID* | *Date* | *T.O.C. (ft amsl)* | *Depth to Product (ft)* | *Depth to Water (ft)* | *NAPL Thickness (ft)* |
|---|---|---|---|---|---|
| **MPE-27** | 03-Mar-10 | TBD | | 21.92 | |
| **MPE-27** | 10-May-10 | TBD | | 21.76 | |
| **MPE-27** | 17-Aug-10 | TBD | | 22.03 | |
| **MPE-27** | 11-Nov-10 | TBD | | 22.06 | |
| | | | | | |
| **MPE-28** | 03-Mar-10 | TBD | | 21.54 | |
| **MPE-28** | 10-May-10 | TBD | | 21.39 | |
| **MPE-28** | 17-Aug-10 | TBD | | 21.70 | |
| **MPE-28** | 11-Nov-10 | TBD | NM-Roots in Well | | |
| | | | | | |
| **MPE-29** | 03-Mar-10 | TBD | | 20.54 | |
| **MPE-29** | 10-May-10 | TBD | | 20.39 | |
| **MPE-29** | 17-Aug-10 | TBD | | 20.73 | |
| **MPE-29** | 11-Nov-10 | TBD | | 21.72 | |
| | | | | | |
| **MPE-30** | 03-Mar-10 | TBD | | 21.19 | |
| **MPE-30** | 10-May-10 | TBD | | 20.03 | |
| **MPE-30** | 17-Aug-10 | TBD | | 21.33 | |
| **MPE-30** | 12-Nov-10 | TBD | | 21.36 | |
| | | | | | |
| **MPE-31** | 03-Mar-10 | TBD | | 22.46 | |
| **MPE-31** | 10-May-10 | TBD | | 22.30 | |
| **MPE-31** | 17-Aug-10 | TBD | | 22.57 | |
| **MPE-31** | 12-Nov-10 | TBD | | 22.64 | |
| | | | | | |
| **MPE-33** | 03-Mar-10 | TBD | | 22.34 | |
| **MPE-33** | 10-May-10 | TBD | | 22.19 | |
| **MPE-33** | 17-Aug-10 | TBD | | 22.39 | |
| **MPE-33** | 12-Nov-10 | TBD | | 22.54 | |
| | | | | | |
| **MPE-34** | 03-Mar-10 | TBD | | 22.16 | |
| **MPE-34** | 10-May-10 | TBD | | 22.01 | |
| **MPE-34** | 17-Aug-10 | TBD | | 22.20 | |

TABLE 5

SUMMARY OF RECENT GROUNDWATER MEASUREMENTS OF PHASE 1 , 2, and 3 MPE WELLS

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| *Well ID* | *Date* | *T.O.C. (ft amsl)* | *Depth to Product (ft)* | *Depth to Water (ft)* | *NAPL Thickness (ft)* |
|---|---|---|---|---|---|
| **MPE-34** | 12-Nov-10 | TBD | | 22.37 | |
| | | | | | |
| **MPE-35** | 24-Feb-10 | TBD | 20.71 | 20.95 | 0.24 |
| **MPE-35** | 03-Mar-10 | TBD | 20.64 | 20.98 | 0.34 |
| **MPE-35** | 18-May-10 | TBD | 20.34 | 20.67 | 0.33 |
| **MPE-35** | 09-Jun-10 | TBD | 20.26 | 20.79 | 0.53 |
| **MPE-35** | 16-Jun-10 | TBD | | 20.46 | |
| **MPE-35** | 17-Aug-10 | TBD | NM-Attached to RSI Unit | | |
| **MPE-35** | 12-Nov-10 | TBD | 20.86 | 21.27 | 0.41 |
| | | | | | |
| **MPE-36** | 03-Mar-10 | TBD | | 19.91 | |
| **MPE-36** | 10-May-10 | TBD | | NM | |
| **MPE-36** | 16-Jun-10 | TBD | | 19.72 | |
| **MPE-36** | 17-Aug-10 | TBD | | 19.94 | |
| **MPE-36** | 12-Nov-10 | TBD | | 20.11 | |
| | | | | | |
| **MPE-37** | 03-Mar-10 | TBD | 20.11 | 20.67 | 0.56 |
| **MPE-37** | 18-May-10 | TBD | | 19.98 | |
| **MPE-37** | 16-Jun-10 | TBD | | 20.07 | |
| **MPE-37** | 17-Aug-10 | TBD | | 20.31 | |
| **MPE-37** | 12-Nov-10 | TBD | | 20.51 | |
| | | | | | |
| **MPE-38** | 03-Mar-10 | TBD | 19.80 | 19.83 | 0.03 |
| **MPE-38** | 18-May-10 | TBD | 19.49 | 20.40 | 0.91 |
| **MPE-38** | 09-Jun-10 | TBD | 19.51 | 20.31 | 0.80 |
| **MPE-38** | 16-Jun-10 | TBD | 19.61 | 20.30 | 0.69 |
| **MPE-38** | 17-Aug-10 | TBD | NM-Attached to RSI Unit | | |
| **MPE-38** | 12-Nov-10 | TBD | 19.99 | 20.59 | 0.60 |
| | | | | | |
| ***Phase 3 Wells*** | | | | | |
| **MPE-39** | 18-Jun-10 | TBD | | 17.29 | |
| **MPE-39** | 17-Aug-10 | TBD | | 17.44 | |
| **MPE-39** | 12-Nov-10 | TBD | | 17.64 | |

TABLE 5

SUMMARY OF RECENT GROUNDWATER MEASUREMENTS OF PHASE 1 , 2, and 3 MPE WELLS

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| *Well ID* | *Date* | *T.O.C. (ft amsl)* | *Depth to Product (ft)* | *Depth to Water (ft)* | *NAPL Thickness (ft)* |
|---|---|---|---|---|---|
| | | | | | |
| **MPE-40** | 18-Jun-10 | TBD | | 17.46 | |
| **MPE-40** | 17-Aug-10 | TBD | | 17.63 | |
| **MPE-40** | 12-Nov-10 | TBD | | 17.83 | |
| | | | | | |
| **MPE-41** | 18-Jun-10 | TBD | | 18.14 | |
| **MPE-41** | 17-Aug-10 | TBD | NM-Attached to RSI Unit | | |
| **MPE-41** | 12-Nov-10 | TBD | | 18.51 | |
| | | | | | |
| **MPE-42** | 18-Jun-10 | TBD | | 18.90 | |
| **MPE-42** | 17-Aug-10 | TBD | NM-Attached to RSI Unit | | |
| **MPE-42** | 12-Nov-10 | TBD | | 19.25 | |
| | | | | | |
| **MPE-43** | 18-Jun-10 | TBD | | 19.75 | |
| **MPE-43** | 17-Aug-10 | TBD | NM-Attached to RSI Unit | | |
| **MPE-43** | 12-Nov-10 | TBD | | 20.1 | |
| | | | | | |
| **MPE-44** | 18-Jun-10 | TBD | | 19.95 | |
| **MPE-44** | 17-Aug-10 | TBD | NM-Attached to RSI Unit | | |
| **MPE-44** | 12-Nov-10 | TBD | | 20.29 | |
| | | | | | |
| **MPE-45** | 18-Jun-10 | TBD | | 20.05 | sheen |
| **MPE-45** | 17-Aug-10 | TBD | NM-Attached to RSI Unit | | |
| **MPE-45** | 12-Nov-10 | TBD | | 20.38 | |
| | | | | | |
| **MPE-46** | 18-Jun-10 | TBD | | 21.16 | |
| **MPE-46** | 17-Aug-10 | TBD | NM-Attached to RSI Unit | | |
| **MPE-46** | 12-Nov-10 | TBD | | 21.46 | |
| | | | | | |
| **MPE-47** | 18-Jun-10 | TBD | | 20.68 | |
| **MPE-47** | 17-Aug-10 | TBD | | 20.92 | |
| **MPE-47** | 12-Nov-10 | TBD | 20.87 | 21.28 | 0.41 |
| | | | | | |

TABLE 5

SUMMARY OF RECENT GROUNDWATER MEASUREMENTS OF PHASE 1 , 2, and 3 MPE WELLS

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| *Well ID* | *Date* | *T.O.C. (ft amsl)* | *Depth to Product (ft)* | *Depth to Water (ft)* | *NAPL Thickness (ft)* |
|---|---|---|---|---|---|
| **MPE-48** | 18-Jun-10 | TBD | | 19.94 | |
| **MPE-48** | 17-Aug-10 | TBD | | 20.22 | |
| **MPE-48** | 12-Nov-10 | TBD | | 20.11 | |
| | | | | | |
| **MPE-49** | 18-Jun-10 | TBD | | 19.13 | |
| **MPE-49** | 17-Aug-10 | TBD | | 19.44 | |
| **MPE-49** | 12-Nov-10 | TBD | | 19.32 | |
| | | | | | |
| **MPE-50** | 18-Jun-10 | TBD | | 20.24 | |
| **MPE-50** | 17-Aug-10 | TBD | NM-Attached to RSI Unit | | |
| **MPE-50** | 12-Nov-10 | TBD | | 20.49 | |
| | | | | | |
| **MPE-51** | 18-Jun-10 | TBD | | 20.70 | |
| **MPE-51** | 17-Aug-10 | TBD | | 20.68 | |
| **MPE-51** | 12-Nov-10 | TBD | | 20.99 | |
| | | | | | |
| **MPE-52** | 18-Jun-10 | TBD | | 20.49 | |
| **MPE-52** | 17-Aug-10 | TBD | | 20.64 | |
| **MPE-52** | 12-Nov-10 | TBD | | 20.84 | |
| | | | | | |
| **MPE-53** | 18-Jun-10 | TBD | | 19.23 | |
| **MPE-53** | 17-Aug-10 | TBD | | 19.38 | |
| **MPE-53** | 12-Nov-10 | TBD | | 19.55 | |
| | | | | | |
| **MPE-54** | 18-Jun-10 | TBD | | 18.85 | |
| **MPE-54** | 17-Aug-10 | TBD | | 19.02 | |
| **MPE-54** | 12-Nov-10 | TBD | | 19.19 | |
| | | | | | |
| **MPE-55** | 18-Jun-10 | TBD | | 18.36 | |
| **MPE-55** | 17-Aug-10 | TBD | | 18.51 | |
| **MPE-55** | 12-Nov-10 | TBD | | 18.70 | |
| | | | | | |
| **MPE-56** | 18-Jun-10 | TBD | | 13.80 | |

TABLE 5

SUMMARY OF RECENT GROUNDWATER MEASUREMENTS OF PHASE 1 , 2, and 3 MPE WELLS

Thriftway Refinery, 626 CR 5500, Bloomfield, New Mexico

| *Well ID* | *Date* | *T.O.C. (ft amsl)* | *Depth to Product (ft)* | *Depth to Water (ft)* | *NAPL Thickness (ft)* |
|---|---|---|---|---|---|
| **MPE-56** | 17-Aug-10 | TBD | | 13.94 | |
| **MPE-56** | 12-Nov-10 | TBD | | 14.14 | |
| | | | | | |
| **MPE-57** | 18-Jun-10 | TBD | | -- | |
| **MPE-57** | 17-Aug-10 | TBD | | 14.63 | |
| **MPE-57** | 12-Nov-10 | TBD | | 14.75 | |
| | | | | | |
| **MPE-58** | 18-Jun-10 | TBD | | -- | |
| **MPE-58** | 17-Aug-10 | TBD | | 14.86 | |
| **MPE-58** | 12-Nov-10 | TBD | | 14.99 | |

# FIGURE 1

## GENERAL SITE PLAN

THRIFTWAY REFINERY
626 ROAD 5500
BLOOMFIELD, NEW MEXICO


Animas Environmental Services, LLC

| | |
|---|---|
| **DRAWN BY:** N. Willis | **DATE DRAWN:** February 2, 2009 |
| **REVISIONS BY:** C. Lameman | **DATE REVISED:** December 2, 2010 |
| **CHECKED BY:** R. Kennemer | **DATE CHECKED:** January 10, 2011 |
| **APPROVED BY:** R. Kennemer | **DATE APPROVED:** January 10, 2011 |

**LEGEND**

MONITOR WELL LOCATIONS

N

SCALE

200 100 0 200

50

(1 INCH = 200 FEET)

S:\ANIMAS 2000\2011 PROJECTS\THRIFTWAY\810 REFINERY\MAPS AND DRAWINGS\DECEMBER 2010 QMR DRAWINGS\FIGURE 1 GENERAL SITE PLAN

# FIGURE 2

## GROUNDWATER ELEVATION CONTOURS NOVEMBER 2010

THRIFTWAY REFINERY
626 ROAD 5500
BLOOMFIELD, NEW MEXICO

Animas Environmental Services, LLC

| | |
|---|---|
| **DRAWN BY:** N. Willis | **DATE DRAWN:** February 2, 2009 |
| **REVISIONS BY:** C. Lameman | **DATE REVISED:** December 2, 2010 |
| **CHECKED BY:** R. Kennemer | **DATE CHECKED:** January 10, 2011 |
| **APPROVED BY:** R. Kennemer | **DATE APPROVED:** January 10, 2011 |

**LEGEND**

- MONITOR WELL LOCATIONS
- 5440.94 GROUNDWATER ELEVATION IN FEET (AMSL)
- —5439— GROUNDWATER ELEVATION CONTOUR IN FEET (AMSL)

*NOTE: GROUNDWATER MEASUREMENTS WERE MADE ON NOVEMBER 15 - 17, 2010. LOCATIONS OF TW-45 THROUGH TW-50 ARE APPROXIMATE.*

SCALE
200 100 0 200
50
(1 INCH = 200 FEET)

S:\ANIMAS 2000\2011 PROJECTS\THRIFTWAY\810 REFINERY\MAPS AND DRAWINGS\DECEMBER 2010 QMR DRAWINGS\FIGURE 2 GROUNDWATER ELEVATION CONTOURS

# FIGURE 3

## FREE PRODUCT THICKNESS CONTOURS NOVEMBER 2010

THRIFTWAY REFINERY
626 ROAD 5500
BLOOMFIELD, NEW MEXICO

Animas Environmental Services, LLC

| | |
|---|---|
| **DRAWN BY:** N. Willis | **DATE DRAWN:** February 2, 2009 |
| **REVISIONS BY:** C. Lameman | **DATE REVISED:** December 2, 2010 |
| **CHECKED BY:** R. Kennemer | **DATE CHECKED:** January 10, 2011 |
| **APPROVED BY:** R. Kennemer | **DATE APPROVED:** January 10, 2011 |

**LEGEND**

- MONITOR WELL LOCATIONS
- MPE REMEDIATION WELL
- 0.60 FREE PRODUCT THICKNESS IN FEET
- —0.25— FREE PRODUCT THICKNESS CONTOUR IN FEET

*NOTE: ALL MEASUREMENTS WERE MADE ON NOVEMBER 15 - 17, 2010. LOCATIONS OF TW-45 THROUGH TW-50 ARE APPROXIMATE.*

SCALE
200 100 0 200
50
(1 INCH = 200 FEET)

KUTZ WASH

ARROYO

CR 5500

PROCESS WATER EVAPORATION LAGOONS

HYDROCRACKER REFORMER (REMOVED)

FIRE WATER POND (REMOVED)

SHOP

REFINERY OFFICE

DISPATCH OFFICE

GATE

DAMAGED

NM

# FIGURE 4

## DISSOLVED BENZENE CONCENTRATION CONTOURS NOVEMBER 2010

THRIFTWAY REFINERY
626 ROAD 5500
BLOOMFIELD, NEW MEXICO

Animas Environmental Services, LLC

| | |
|---|---|
| **DRAWN BY:** N. Willis | **DATE DRAWN:** February 2, 2009 |
| **REVISIONS BY:** C. Lameman | **DATE REVISED:** December 16, 2010 |
| **CHECKED BY:** R. Kennemer | **DATE CHECKED:** January 10, 2011 |
| **APPROVED BY:** R. Kennemer | **DATE APPROVED:** January 10, 2011 |

**LEGEND**

- MONITOR WELL LOCATIONS
- MPE REMEDIATION WELL
- FREE PRODUCT PLUME
- 1.4 BENZENE CONCENTRATIONS IN µg/L
- —200— BENZENE CONCENTRATION CONTOUR IN µg/L
- NS NOT SAMPLED

*NOTE: ALL SAMPLES WERE COLLECTED ON NOVEMBER 15 - 17, 2010. LOCATIONS OF TW-45 THROUGH TW-50 ARE APPROXIMATE.*

N

SCALE
200 100 0 200
50
(1 INCH = 200 FEET)

S:\ANIMAS 2000\2011 PROJECTS\THRIFTWAY\810 REFINERY\MAPS AND DRAWINGS\DECEMBER 2010 QMR DRAWINGS\FIGURE 4 DISSOLVED BEZENE CONCENTRATION CONTOURS

# FIGURE 5

## DISSOLVED MTBE CONCENTRATION CONTOURS NOVEMBER 2010

THRIFTWAY REFINERY
626 ROAD 5500
BLOOMFIELD, NEW MEXICO

Animas Environmental Services, LLC

| | |
|---|---|
| **DRAWN BY:** N. Willis | **DATE DRAWN:** February 2, 2009 |
| **REVISIONS BY:** C. Lameman | **DATE REVISED:** December 16, 2010 |
| **CHECKED BY:** R. Kennemer | **DATE CHECKED:** January 10, 2011 |
| **APPROVED BY:** R. Kennemer | **DATE APPROVED:** January 10, 2011 |

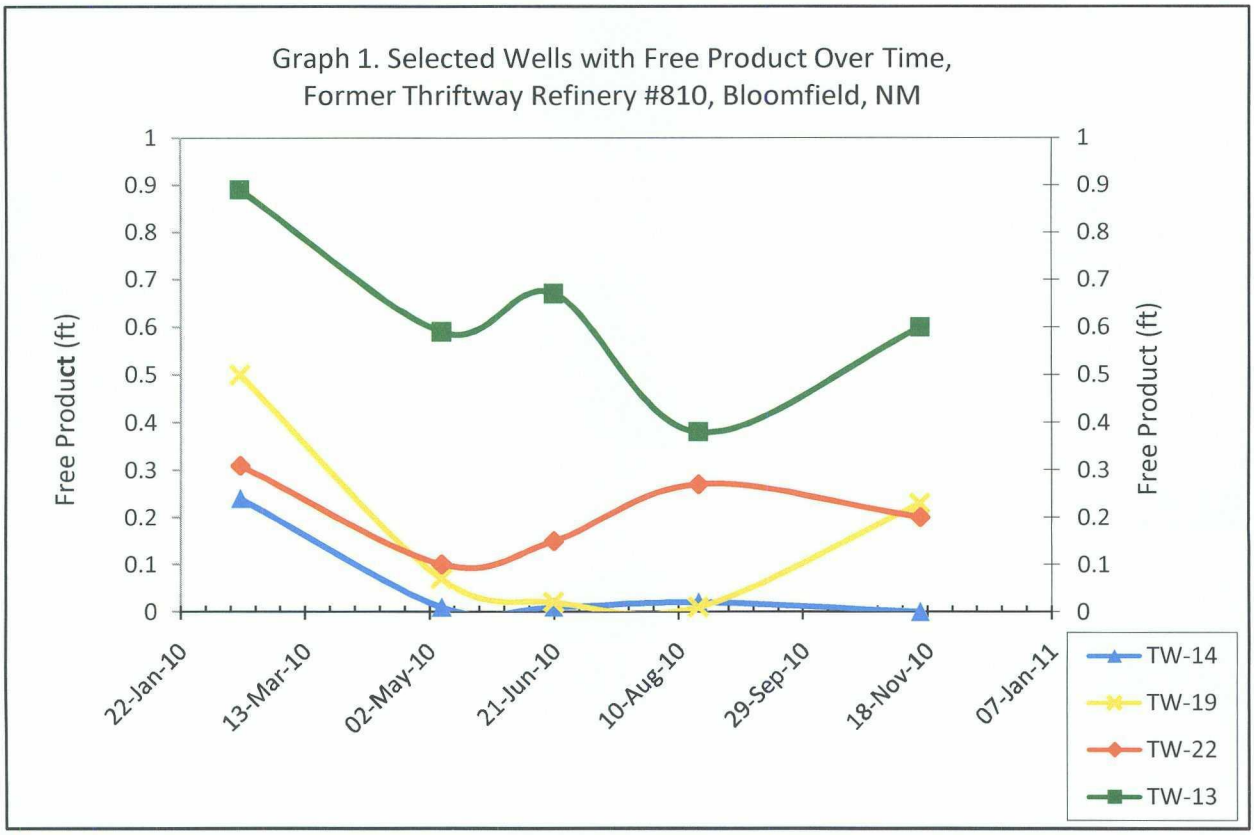
**LEGEND**

- MONITOR WELL LOCATIONS
- MPE REMEDIATION WELLS
- FREE PRODUCT PLUME
- 6.5 MTBE CONCENTRATIONS IN µg/L
- —100— MTBE CONCENTRATION CONTOUR IN µg/L
- NS NOT SAMPLED

*NOTE: ALL SAMPLES WERE MADE ON NOVEMBER 15 - 17, 2010. LOCATIONS OF TW-45 THROUGH TW-50 ARE APPROXIMATE.*

SCALE
200 100 0 200
50
(1 INCH = 200 FEET)

S:\ANIMAS 2000\2011 PROJECTS\THRIFTWAY\810 REFINERY\MAPS AND DRAWINGS\DECEMBER 2010 QMR DRAWINGS\FIGURE 5 DISSOLVED MTBE CONCENTRATION CONTOURS


Graph 1. Selected Wells with Free Product Over Time,
Former Thriftway Refinery #810, Bloomfield, NM
Free Product (ft)
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
22-Jan-10
13-Mar-10
02-May-10
21-Jun-10
10-Aug-10
29-Sep-10
18-Nov-10
07-Jan-11
TW-14
TW-19
TW-22
TW-13

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

# COVER LETTER

Wednesday, December 08, 2010

Ross Kennemer
Animas Environmental Services
624 East Comanche
Farmington, NM 87401

TEL: (505) 486-1776
FAX (505) 324-2022

RE: TW 810 Refinery

Order No.: 1011766

Dear Ross Kennemer:

Hall Environmental Analysis Laboratory, Inc. received 10 sample(s) on 11/18/2010 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901
AZ license # AZ0682
ORELAP Lab # NM100001
Texas Lab# T104704424-08-TX

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-18 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 10:00:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-01 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | ND | 1.0 | | mg/L | 1 | 11/20/2010 9:15:03 PM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 11/20/2010 9:15:03 PM |
| Surr: DNOP | 118 | 86.9-151 | | %REC | 1 | 11/20/2010 9:15:03 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 0.12 | 0.050 | | mg/L | 1 | 11/25/2010 1:12:29 AM |
| Surr: BFB | 106 | 84.5-118 | | %REC | 1 | 11/25/2010 1:12:29 AM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | 1.0 | 0.10 | | mg/L | 1 | 11/29/2010 12:49:53 PM |
| Chloride | 54 | 10 | | mg/L | 20 | 11/29/2010 1:42:08 PM |
| Bromide | 0.28 | 0.10 | | mg/L | 1 | 11/29/2010 12:49:53 PM |
| Sulfate | 3700 | 50 | | mg/L | 100 | 12/1/2010 2:51:19 AM |
| **EPA 6010B: HARDNESS** | | | | | | Analyst: **RAGS** |
| Hardness (As CaCO3) | 1400 | 1.0 | | mg/L | 1 | 11/30/2010 |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **ELS** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 11/29/2010 12:26:33 PM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **RAGS** |
| Calcium | 490 | 20 | | mg/L | 20 | 12/3/2010 11:01:40 AM |
| Magnesium | 52 | 1.0 | | mg/L | 1 | 11/30/2010 10:40:05 AM |
| Potassium | 4.6 | 1.0 | | mg/L | 1 | 11/30/2010 10:40:05 AM |
| Sodium | 910 | 20 | | mg/L | 20 | 12/3/2010 11:01:40 AM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Arsenic | ND | 0.020 | | mg/L | 1 | 11/30/2010 2:01:56 PM |
| Barium | ND | 0.020 | | mg/L | 1 | 11/30/2010 2:01:56 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/30/2010 2:01:56 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 11/30/2010 2:01:56 PM |
| Lead | 0.0055 | 0.0050 | | mg/L | 1 | 11/30/2010 2:01:56 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/30/2010 2:01:56 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/30/2010 2:01:56 PM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Benzene | 1.8 | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Toluene | 5.5 | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Ethylbenzene | 15 | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Methyl tert-butyl ether (MTBE) | 1.6 | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | MCL | Maximum Contaminant Level |
| NC | Non-Chlorinated | ND | Not Detected at the Reporting Limit |
| PQL | Practical Quantitation Limit | S | Spike recovery outside accepted recovery limits |

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-18 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 10:00:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-01 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| 1,2,4-Trimethylbenzene | 3.9 | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Acetone | 45 | 10 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Isopropylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 11/21/2010 4:06:15 AM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-18 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 10:00:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-01 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| n-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| n-Propylbenzene | 2.4 | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Styrene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Xylenes, Total | ND | 1.5 | | µg/L | 1 | 11/21/2010 4:06:15 AM |
| Surr: 1,2-Dichloroethane-d4 | 100 | 77.7-113 | | %REC | 1 | 11/21/2010 4:06:15 AM |
| Surr: 4-Bromofluorobenzene | 105 | 76.4-106 | | %REC | 1 | 11/21/2010 4:06:15 AM |
| Surr: Dibromofluoromethane | 99.4 | 91.6-125 | | %REC | 1 | 11/21/2010 4:06:15 AM |
| Surr: Toluene-d8 | 102 | 92.3-107 | | %REC | 1 | 11/21/2010 4:06:15 AM |
| **EPA 120.1: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **IC** |
| Specific Conductance | 5000 | 0.010 | | µmhos/cm | 1 | 11/23/2010 12:57:00 PM |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** |
| Total Dissolved Solids | 4790 | 40.0 | | mg/L | 1 | 11/26/2010 8:21:00 PM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-30 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 10:45:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-02 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | ND | 1.0 | | mg/L | 1 | 11/20/2010 9:49:10 PM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 11/20/2010 9:49:10 PM |
| Surr: DNOP | 119 | 86.9-151 | | %REC | 1 | 11/20/2010 9:49:10 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 0.15 | 0.050 | | mg/L | 1 | 11/25/2010 1:41:22 AM |
| Surr: BFB | 104 | 84.5-118 | | %REC | 1 | 11/25/2010 1:41:22 AM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | 0.54 | 0.10 | | mg/L | 1 | 11/29/2010 1:59:33 PM |
| Chloride | 1400 | 50 | | mg/L | 100 | 12/1/2010 3:02:33 AM |
| Bromide | 1.9 | 0.10 | | mg/L | 1 | 11/29/2010 1:59:33 PM |
| Sulfate | 2100 | 50 | | mg/L | 100 | 12/1/2010 3:02:33 AM |
| **EPA 6010B: HARDNESS** | | | | | | Analyst: **RAGS** |
| Hardness (As CaCO3) | 1600 | 1.0 | | mg/L | 1 | 11/30/2010 |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **ELS** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 11/29/2010 12:28:22 PM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **RAGS** |
| Calcium | 550 | 20 | | mg/L | 20 | 12/3/2010 11:04:06 AM |
| Magnesium | 60 | 1.0 | | mg/L | 1 | 11/30/2010 10:44:30 AM |
| Potassium | 8.8 | 1.0 | | mg/L | 1 | 11/30/2010 10:44:30 AM |
| Sodium | 1200 | 20 | | mg/L | 20 | 12/3/2010 11:04:06 AM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Arsenic | ND | 0.020 | | mg/L | 1 | 11/30/2010 2:06:05 PM |
| Barium | ND | 0.020 | | mg/L | 1 | 11/30/2010 2:06:05 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/30/2010 2:06:05 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 11/30/2010 2:06:05 PM |
| Lead | 0.0071 | 0.0050 | | mg/L | 1 | 11/30/2010 2:06:05 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/30/2010 2:06:05 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/30/2010 2:06:05 PM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Benzene | 3.8 | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Toluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Methyl tert-butyl ether (MTBE) | 14 | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |

Qualifiers:

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- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-30 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 10:45:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-02 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Acetone | ND | 10 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 1,2-Dichlorobenzene | 1.3 | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Isopropylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 11/21/2010 4:33:54 AM |

**Qualifiers:**

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- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-30 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 10:45:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-02 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| n-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| n-Propylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Styrene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Vinyl chloride | 9.7 | 1.0 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Xylenes, Total | ND | 1.5 | | µg/L | 1 | 11/21/2010 4:33:54 AM |
| Surr: 1,2-Dichloroethane-d4 | 100 | 77.7-113 | | %REC | 1 | 11/21/2010 4:33:54 AM |
| Surr: 4-Bromofluorobenzene | 108 | 76.4-106 | S | %REC | 1 | 11/21/2010 4:33:54 AM |
| Surr: Dibromofluoromethane | 104 | 91.6-125 | | %REC | 1 | 11/21/2010 4:33:54 AM |
| Surr: Toluene-d8 | 98.8 | 92.3-107 | | %REC | 1 | 11/21/2010 4:33:54 AM |
| **EPA 120.1: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **IC** |
| Specific Conductance | 6500 | 0.010 | | µmhos/cm | 1 | 11/23/2010 12:59:00 PM |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** |
| Total Dissolved Solids | 5630 | 100 | | mg/L | 1 | 11/26/2010 8:21:00 PM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
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- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-31 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 11:18:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-03 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | ND | 1.0 | | mg/L | 1 | 11/20/2010 10:23:18 PM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 11/20/2010 10:23:18 PM |
| Surr: DNOP | 116 | 86.9-151 | | %REC | 1 | 11/20/2010 10:23:18 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | ND | 0.050 | | mg/L | 1 | 11/25/2010 2:10:19 AM |
| Surr: BFB | 100 | 84.5-118 | | %REC | 1 | 11/25/2010 2:10:19 AM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | 0.67 | 0.10 | | mg/L | 1 | 11/29/2010 3:26:36 PM |
| Chloride | 750 | 50 | | mg/L | 100 | 12/1/2010 3:13:47 AM |
| Bromide | 0.65 | 0.10 | | mg/L | 1 | 11/29/2010 3:26:36 PM |
| Sulfate | 2000 | 50 | | mg/L | 100 | 12/1/2010 3:13:47 AM |
| **EPA 6010B: HARDNESS** | | | | | | Analyst: **RAGS** |
| Hardness (As CaCO3) | 1600 | 1.0 | | mg/L | 1 | 11/30/2010 |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **ELS** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 11/29/2010 12:30:11 PM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **RAGS** |
| Calcium | 520 | 20 | | mg/L | 20 | 12/3/2010 11:06:31 AM |
| Magnesium | 66 | 1.0 | | mg/L | 1 | 11/30/2010 10:48:48 AM |
| Potassium | 6.9 | 1.0 | | mg/L | 1 | 11/30/2010 10:48:48 AM |
| Sodium | 940 | 20 | | mg/L | 20 | 12/3/2010 11:06:31 AM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Arsenic | 0.034 | 0.020 | | mg/L | 1 | 11/30/2010 2:10:11 PM |
| Barium | 0.025 | 0.020 | | mg/L | 1 | 11/30/2010 2:10:11 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/30/2010 2:10:11 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 11/30/2010 2:10:11 PM |
| Lead | ND | 0.0050 | | mg/L | 1 | 11/30/2010 2:10:11 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/30/2010 2:10:11 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/30/2010 2:10:11 PM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Benzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Toluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Methyl tert-butyl ether (MTBE) | 6.5 | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-31 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 11:18:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-03 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Acetone | ND | 10 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Isopropylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 11/21/2010 5:01:27 AM |

*Qualifiers:*

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
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- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-31 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 11:18:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-03 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| n-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| n-Propylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Styrene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Xylenes, Total | ND | 1.5 | | µg/L | 1 | 11/21/2010 5:01:27 AM |
| Surr: 1,2-Dichloroethane-d4 | 98.7 | 77.7-113 | | %REC | 1 | 11/21/2010 5:01:27 AM |
| Surr: 4-Bromofluorobenzene | 100 | 76.4-106 | | %REC | 1 | 11/21/2010 5:01:27 AM |
| Surr: Dibromofluoromethane | 102 | 91.6-125 | | %REC | 1 | 11/21/2010 5:01:27 AM |
| Surr: Toluene-d8 | 101 | 92.3-107 | | %REC | 1 | 11/21/2010 5:01:27 AM |
| **EPA 120.1: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **IC** |
| Specific Conductance | 5500 | 0.010 | | µmhos/cm | 1 | 11/23/2010 1:01:00 PM |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** |
| Total Dissolved Solids | 4680 | 100 | | mg/L | 1 | 11/26/2010 8:21:00 PM |

**Qualifiers:**

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- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-37 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 2:06:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-04 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | 2.3 | 1.0 | | mg/L | 1 | 11/20/2010 10:57:10 PM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 11/20/2010 10:57:10 PM |
| Surr: DNOP | 119 | 86.9-151 | | %REC | 1 | 11/20/2010 10:57:10 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 1.9 | 0.050 | | mg/L | 1 | 11/25/2010 2:39:13 AM |
| Surr: BFB | 217 | 84.5-118 | S | %REC | 1 | 11/25/2010 2:39:13 AM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | 0.51 | 0.10 | | mg/L | 1 | 11/29/2010 5:11:04 PM |
| Chloride | 310 | 25 | | mg/L | 50 | 12/1/2010 3:25:01 AM |
| Bromide | 0.49 | 0.10 | | mg/L | 1 | 11/29/2010 5:11:04 PM |
| Sulfate | 1500 | 25 | | mg/L | 50 | 12/1/2010 3:25:01 AM |
| **EPA 6010B: HARDNESS** | | | | | | Analyst: **RAGS** |
| Hardness (As CaCO3) | 1000 | 1.0 | | mg/L | 1 | 11/30/2010 |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **ELS** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 11/29/2010 12:32:01 PM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **RAGS** |
| Calcium | 340 | 20 | | mg/L | 20 | 12/3/2010 11:08:59 AM |
| Magnesium | 45 | 1.0 | | mg/L | 1 | 11/30/2010 10:53:19 AM |
| Potassium | 3.5 | 1.0 | | mg/L | 1 | 11/30/2010 10:53:19 AM |
| Sodium | 760 | 20 | | mg/L | 20 | 12/3/2010 11:08:59 AM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Arsenic | ND | 0.020 | | mg/L | 1 | 11/30/2010 2:14:12 PM |
| Barium | 0.061 | 0.020 | | mg/L | 1 | 11/30/2010 2:14:12 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/30/2010 2:14:12 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 11/30/2010 2:14:12 PM |
| Lead | ND | 0.0050 | | mg/L | 1 | 11/30/2010 2:14:12 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/30/2010 2:14:12 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/30/2010 2:14:12 PM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Benzene | 280 | 10 | | µg/L | 10 | 11/22/2010 4:43:37 PM |
| Toluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Ethylbenzene | 58 | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Methyl tert-butyl ether (MTBE) | 120 | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |

**Qualifiers:**

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- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-37 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 2:06:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-04 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| 1,2,4-Trimethylbenzene | 44 | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 1-Methylnaphthalene | 5.5 | 4.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Acetone | ND | 10 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Isopropylbenzene | 14 | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 4-Isopropyltoluene | 3.0 | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 11/21/2010 5:28:56 AM |

**Qualifiers:**

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- E Estimated value
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- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-37 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 2:06:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-04 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| n-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| n-Propylbenzene | 16 | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| sec-Butylbenzene | 4.6 | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Styrene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| tert-Butylbenzene | 1.2 | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Xylenes, Total | 46 | 1.5 | | µg/L | 1 | 11/21/2010 5:28:56 AM |
| Surr: 1,2-Dichloroethane-d4 | 111 | 77.7-113 | | %REC | 1 | 11/21/2010 5:28:56 AM |
| Surr: 4-Bromofluorobenzene | 93.1 | 76.4-106 | | %REC | 1 | 11/21/2010 5:28:56 AM |
| Surr: Dibromofluoromethane | 97.7 | 91.6-125 | | %REC | 1 | 11/21/2010 5:28:56 AM |
| Surr: Toluene-d8 | 104 | 92.3-107 | | %REC | 1 | 11/21/2010 5:28:56 AM |
| **EPA 120.1: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **IC** |
| Specific Conductance | 4200 | 0.010 | | µmhos/cm | 1 | 11/23/2010 1:03:00 PM |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** |
| Total Dissolved Solids | 3380 | 40.0 | | mg/L | 1 | 11/26/2010 8:21:00 PM |

**Qualifiers:**

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- B Analyte detected in the associated Method Blank
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- MCL Maximum Contaminant Level
- NC Non-Chlorinated
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- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-38 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 1:25:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-05 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | ND | 1.0 | | mg/L | 1 | 11/20/2010 11:31:00 PM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 11/20/2010 11:31:00 PM |
| Surr: DNOP | 120 | 86.9-151 | | %REC | 1 | 11/20/2010 11:31:00 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 1.1 | 0.050 | | mg/L | 1 | 11/25/2010 3:36:58 AM |
| Surr: BFB | 132 | 84.5-118 | S | %REC | 1 | 11/25/2010 3:36:58 AM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | 0.77 | 0.10 | | mg/L | 1 | 11/29/2010 5:45:53 PM |
| Chloride | 210 | 10 | | mg/L | 20 | 11/29/2010 6:03:17 PM |
| Bromide | 0.38 | 0.10 | | mg/L | 1 | 11/29/2010 5:45:53 PM |
| Sulfate | 1900 | 50 | | mg/L | 100 | 12/1/2010 3:36:15 AM |
| **EPA 6010B: HARDNESS** | | | | | | Analyst: **RAGS** |
| Hardness (As CaCO3) | 1400 | 1.0 | | mg/L | 1 | 11/30/2010 |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **ELS** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 11/29/2010 12:37:33 PM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **RAGS** |
| Calcium | 490 | 20 | | mg/L | 20 | 12/3/2010 11:28:47 AM |
| Magnesium | 45 | 1.0 | | mg/L | 1 | 11/30/2010 10:57:50 AM |
| Potassium | 3.5 | 1.0 | | mg/L | 1 | 11/30/2010 10:57:50 AM |
| Sodium | 700 | 20 | | mg/L | 20 | 12/3/2010 11:28:47 AM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Arsenic | ND | 0.020 | | mg/L | 1 | 11/30/2010 2:20:08 PM |
| Barium | 0.023 | 0.020 | | mg/L | 1 | 11/30/2010 2:20:08 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/30/2010 2:20:08 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 11/30/2010 2:20:08 PM |
| Lead | ND | 0.0050 | | mg/L | 1 | 11/30/2010 2:20:08 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/30/2010 2:20:08 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/30/2010 2:20:08 PM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Benzene | 140 | 5.0 | | µg/L | 5 | 11/22/2010 5:11:20 PM |
| Toluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Ethylbenzene | 41 | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Methyl tert-butyl ether (MTBE) | 83 | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-38 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 1:25:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-05 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| 1,2,4-Trimethylbenzene | 29 | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 1,3,5-Trimethylbenzene | 6.0 | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Acetone | ND | 10 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Isopropylbenzene | 2.5 | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 11/21/2010 5:56:29 AM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-38 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 1:25:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-05 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| n-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| n-Propylbenzene | 2.7 | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Styrene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Xylenes, Total | 71 | 1.5 | | µg/L | 1 | 11/21/2010 5:56:29 AM |
| Surr: 1,2-Dichloroethane-d4 | 106 | 77.7-113 | | %REC | 1 | 11/21/2010 5:56:29 AM |
| Surr: 4-Bromofluorobenzene | 102 | 76.4-106 | | %REC | 1 | 11/21/2010 5:56:29 AM |
| Surr: Dibromofluoromethane | 100 | 91.6-125 | | %REC | 1 | 11/21/2010 5:56:29 AM |
| Surr: Toluene-d8 | 103 | 92.3-107 | | %REC | 1 | 11/21/2010 5:56:29 AM |
| **EPA 120.1: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **IC** |
| Specific Conductance | 4400 | 0.010 | | µmhos/cm | 1 | 11/23/2010 1:05:00 PM |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** |
| Total Dissolved Solids | 3930 | 40.0 | | mg/L | 1 | 11/26/2010 8:21:00 PM |

**Qualifiers:**

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- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-39 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 11:57:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-06 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | ND | 1.0 | | mg/L | 1 | 11/21/2010 12:38:42 AM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 11/21/2010 12:38:42 AM |
| Surr: DNOP | 118 | 86.9-151 | | %REC | 1 | 11/21/2010 12:38:42 AM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 1.4 | 0.050 | | mg/L | 1 | 11/25/2010 4:34:35 AM |
| Surr: BFB | 250 | 84.5-118 | S | %REC | 1 | 11/25/2010 4:34:35 AM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | 0.42 | 0.10 | | mg/L | 1 | 11/29/2010 6:55:32 PM |
| Chloride | 540 | 25 | | mg/L | 50 | 12/1/2010 3:47:29 AM |
| Bromide | 0.47 | 0.10 | | mg/L | 1 | 11/29/2010 6:55:32 PM |
| Sulfate | 1000 | 10 | | mg/L | 20 | 11/29/2010 7:12:57 PM |
| **EPA 6010B: HARDNESS** | | | | | | Analyst: **RAGS** |
| Hardness (As CaCO3) | 1100 | 1.0 | | mg/L | 1 | 11/30/2010 |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **ELS** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 11/29/2010 12:39:23 PM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **RAGS** |
| Calcium | 370 | 20 | | mg/L | 20 | 12/3/2010 11:31:14 AM |
| Magnesium | 43 | 1.0 | | mg/L | 1 | 11/30/2010 11:03:55 AM |
| Potassium | 4.9 | 1.0 | | mg/L | 1 | 11/30/2010 11:03:55 AM |
| Sodium | 660 | 20 | | mg/L | 20 | 12/3/2010 11:31:14 AM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Arsenic | ND | 0.020 | | mg/L | 1 | 11/30/2010 2:24:19 PM |
| Barium | 0.029 | 0.020 | | mg/L | 1 | 11/30/2010 2:24:19 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/30/2010 2:24:19 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 11/30/2010 2:24:19 PM |
| Lead | ND | 0.0050 | | mg/L | 1 | 11/30/2010 2:24:19 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/30/2010 2:24:19 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/30/2010 2:24:19 PM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Benzene | 92 | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Toluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Ethylbenzene | 110 | 5.0 | | µg/L | 5 | 11/22/2010 5:38:49 PM |
| Methyl tert-butyl ether (MTBE) | 5.9 | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |

**Qualifiers:**

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- E Estimated value
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- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-39 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 11:57:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-06 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Acetone | ND | 10 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Isopropylbenzene | 16 | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 11/21/2010 6:24:05 AM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-39 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 11:57:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-06 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| n-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| n-Propylbenzene | 11 | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| sec-Butylbenzene | 4.0 | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Styrene | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| tert-Butylbenzene | 1.1 | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Xylenes, Total | 1.8 | 1.5 | | µg/L | 1 | 11/21/2010 6:24:05 AM |
| Surr: 1,2-Dichloroethane-d4 | 109 | 77.7-113 | | %REC | 1 | 11/21/2010 6:24:05 AM |
| Surr: 4-Bromofluorobenzene | 98.6 | 76.4-106 | | %REC | 1 | 11/21/2010 6:24:05 AM |
| Surr: Dibromofluoromethane | 98.8 | 91.6-125 | | %REC | 1 | 11/21/2010 6:24:05 AM |
| Surr: Toluene-d8 | 103 | 92.3-107 | | %REC | 1 | 11/21/2010 6:24:05 AM |
| **EPA 120.1: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **IC** |
| Specific Conductance | 4100 | 0.010 | | µmhos/cm | 1 | 11/23/2010 1:07:00 PM |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** |
| Total Dissolved Solids | 3070 | 40.0 | | mg/L | 1 | 11/26/2010 8:21:00 PM |

**Qualifiers:**

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- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-41 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 2:45:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-07 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | 1.4 | 1.0 | | mg/L | 1 | 11/21/2010 1:12:36 AM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 11/21/2010 1:12:36 AM |
| Surr: DNOP | 118 | 86.9-151 | | %REC | 1 | 11/21/2010 1:12:36 AM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 6.6 | 0.50 | | mg/L | 10 | 11/25/2010 5:32:19 AM |
| Surr: BFB | 123 | 84.5-118 | S | %REC | 10 | 11/25/2010 5:32:19 AM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | 0.23 | 0.10 | | mg/L | 1 | 11/29/2010 7:30:22 PM |
| Chloride | 1100 | 50 | | mg/L | 100 | 12/1/2010 3:58:43 AM |
| Bromide | 1.0 | 0.10 | | mg/L | 1 | 11/29/2010 7:30:22 PM |
| Sulfate | 610 | 10 | | mg/L | 20 | 11/29/2010 7:47:47 PM |
| **EPA 6010B: HARDNESS** | | | | | | Analyst: **RAGS** |
| Hardness (As CaCO3) | 980 | 1.0 | | mg/L | 1 | 11/30/2010 |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **ELS** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 11/29/2010 12:41:07 PM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **RAGS** |
| Calcium | 300 | 20 | | mg/L | 20 | 12/3/2010 11:33:27 AM |
| Magnesium | 58 | 1.0 | | mg/L | 1 | 11/30/2010 11:08:14 AM |
| Potassium | 5.8 | 1.0 | | mg/L | 1 | 11/30/2010 11:08:14 AM |
| Sodium | 910 | 20 | | mg/L | 20 | 12/3/2010 11:33:27 AM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Arsenic | ND | 0.020 | | mg/L | 1 | 11/30/2010 2:28:32 PM |
| Barium | 0.069 | 0.020 | | mg/L | 1 | 11/30/2010 2:28:32 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/30/2010 2:28:32 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 11/30/2010 2:28:32 PM |
| Lead | ND | 0.0050 | | mg/L | 1 | 11/30/2010 2:28:32 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/30/2010 2:28:32 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/30/2010 2:28:32 PM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Benzene | 96 | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Toluene | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Ethylbenzene | 480 | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Methyl tert-butyl ether (MTBE) | 17 | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |

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- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-41 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 2:45:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-07 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: RAA |
| 1,2,4-Trimethylbenzene | 450 | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 1,3,5-Trimethylbenzene | 97 | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 1,2-Dichloroethane (EDC) | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 1,2-Dibromoethane (EDB) | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Naphthalene | 55 | 20 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 1-Methylnaphthalene | ND | 40 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 2-Methylnaphthalene | ND | 40 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Acetone | ND | 100 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Bromobenzene | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Bromodichloromethane | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Bromoform | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Bromomethane | ND | 30 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 2-Butanone | ND | 100 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Carbon disulfide | ND | 100 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Carbon Tetrachloride | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Chlorobenzene | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Chloroethane | ND | 20 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Chloroform | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Chloromethane | ND | 30 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 2-Chlorotoluene | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 4-Chlorotoluene | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| cis-1,2-DCE | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| cis-1,3-Dichloropropene | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 1,2-Dibromo-3-chloropropane | ND | 20 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Dibromochloromethane | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Dibromomethane | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 1,2-Dichlorobenzene | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 1,3-Dichlorobenzene | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 1,4-Dichlorobenzene | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Dichlorodifluoromethane | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 1,1-Dichloroethane | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 1,1-Dichloroethene | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 1,2-Dichloropropane | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 1,3-Dichloropropane | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 2,2-Dichloropropane | ND | 20 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 1,1-Dichloropropene | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Hexachlorobutadiene | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 2-Hexanone | ND | 100 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Isopropylbenzene | 32 | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 4-Isopropyltoluene | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 4-Methyl-2-pentanone | ND | 100 | | µg/L | 10 | 11/21/2010 6:51:41 AM |

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- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-41 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 2:45:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-07 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Methylene Chloride | ND | 30 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| n-Butylbenzene | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| n-Propylbenzene | 30 | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| sec-Butylbenzene | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Styrene | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| tert-Butylbenzene | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 1,1,1,2-Tetrachloroethane | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 1,1,2,2-Tetrachloroethane | ND | 20 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Tetrachloroethene (PCE) | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| trans-1,2-DCE | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| trans-1,3-Dichloropropene | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 1,2,3-Trichlorobenzene | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 1,2,4-Trichlorobenzene | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 1,1,1-Trichloroethane | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 1,1,2-Trichloroethane | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Trichloroethene (TCE) | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Trichlorofluoromethane | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| 1,2,3-Trichloropropane | ND | 20 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Vinyl chloride | ND | 10 | | µg/L | 10 | 11/21/2010 6:51:41 AM |
| Xylenes, Total | 2200 | 30 | | µg/L | 20 | 11/22/2010 6:06:27 PM |
| Surr: 1,2-Dichloroethane-d4 | 105 | 77.7-113 | | %REC | 10 | 11/21/2010 6:51:41 AM |
| Surr: 4-Bromofluorobenzene | 93.7 | 76.4-106 | | %REC | 10 | 11/21/2010 6:51:41 AM |
| Surr: Dibromofluoromethane | 103 | 91.6-125 | | %REC | 10 | 11/21/2010 6:51:41 AM |
| Surr: Toluene-d8 | 102 | 92.3-107 | | %REC | 10 | 11/21/2010 6:51:41 AM |
| **EPA 120.1: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **IC** |
| Specific Conductance | 5200 | 0.010 | | µmhos/cm | 1 | 11/23/2010 1:09:00 PM |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** |
| Total Dissolved Solids | 3670 | 40.0 | | mg/L | 1 | 11/26/2010 8:21:00 PM |

**Qualifiers:**

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- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Date: *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-42 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 3:25:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-08 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | ND | 1.0 | | mg/L | 1 | 11/21/2010 1:46:27 AM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 11/21/2010 1:46:27 AM |
| Surr: DNOP | 117 | 86.9-151 | | %REC | 1 | 11/21/2010 1:46:27 AM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 0.16 | 0.050 | | mg/L | 1 | 11/25/2010 6:30:07 AM |
| Surr: BFB | 105 | 84.5-118 | | %REC | 1 | 11/25/2010 6:30:07 AM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | 0.47 | 0.10 | | mg/L | 1 | 11/29/2010 8:05:11 PM |
| Chloride | 840 | 50 | | mg/L | 100 | 12/1/2010 4:09:57 AM |
| Bromide | 0.86 | 0.10 | | mg/L | 1 | 11/29/2010 8:05:11 PM |
| Sulfate | 2300 | 50 | | mg/L | 100 | 12/1/2010 4:09:57 AM |
| **EPA 6010B: HARDNESS** | | | | | | Analyst: **RAGS** |
| Hardness (As CaCO3) | 1400 | 1.0 | | mg/L | 1 | 12/3/2010 |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **ELS** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 11/29/2010 12:42:50 PM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **RAGS** |
| Calcium | 370 | 5.0 | | mg/L | 5 | 12/3/2010 12:58:30 PM |
| Magnesium | 110 | 5.0 | | mg/L | 5 | 12/3/2010 12:58:30 PM |
| Potassium | 6.8 | 1.0 | | mg/L | 1 | 12/3/2010 11:48:59 AM |
| Sodium | 1200 | 50 | | mg/L | 50 | 12/3/2010 12:44:34 PM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Arsenic | ND | 0.020 | | mg/L | 1 | 11/30/2010 2:42:00 PM |
| Barium | ND | 0.020 | | mg/L | 1 | 11/30/2010 2:42:00 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/30/2010 2:42:00 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 11/30/2010 2:42:00 PM |
| Lead | ND | 0.0050 | | mg/L | 1 | 11/30/2010 2:42:00 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/30/2010 2:42:00 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/30/2010 2:42:00 PM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Benzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Toluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Methyl tert-butyl ether (MTBE) | 53 | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |

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# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-42 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 3:25:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-08 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Acetone | ND | 10 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Isopropylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 11/21/2010 7:19:16 AM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-42 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 3:25:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-08 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| n-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| n-Propylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Styrene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Xylenes, Total | ND | 1.5 | | µg/L | 1 | 11/21/2010 7:19:16 AM |
| Surr: 1,2-Dichloroethane-d4 | 109 | 77.7-113 | | %REC | 1 | 11/21/2010 7:19:16 AM |
| Surr: 4-Bromofluorobenzene | 104 | 76.4-106 | | %REC | 1 | 11/21/2010 7:19:16 AM |
| Surr: Dibromofluoromethane | 101 | 91.6-125 | | %REC | 1 | 11/21/2010 7:19:16 AM |
| Surr: Toluene-d8 | 98.5 | 92.3-107 | | %REC | 1 | 11/21/2010 7:19:16 AM |
| **EPA 120.1: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **IC** |
| Specific Conductance | 5900 | 0.010 | | µmhos/cm | 1 | 11/23/2010 1:11:00 PM |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** |
| Total Dissolved Solids | 5040 | 100 | | mg/L | 1 | 11/26/2010 8:21:00 PM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-43 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 4:00:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-09 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | ND | 1.0 | | mg/L | 1 | 11/21/2010 2:20:17 AM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 11/21/2010 2:20:17 AM |
| Surr: DNOP | 118 | 86.9-151 | | %REC | 1 | 11/21/2010 2:20:17 AM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 0.48 | 0.050 | | mg/L | 1 | 11/25/2010 9:23:11 AM |
| Surr: BFB | 101 | 84.5-118 | | %REC | 1 | 11/25/2010 9:23:11 AM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | 0.98 | 0.10 | | mg/L | 1 | 11/29/2010 8:40:01 PM |
| Chloride | 150 | 10 | | mg/L | 20 | 11/29/2010 8:57:26 PM |
| Bromide | 0.44 | 0.10 | | mg/L | 1 | 11/29/2010 8:40:01 PM |
| Sulfate | 2800 | 50 | | mg/L | 100 | 12/1/2010 4:43:40 AM |
| **EPA 6010B: HARDNESS** | | | | | | Analyst: **RAGS** |
| Hardness (As CaCO3) | 1600 | 1.0 | | mg/L | 1 | 12/3/2010 |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **ELS** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 11/29/2010 12:44:34 PM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **RAGS** |
| Calcium | 540 | 10 | | mg/L | 10 | 12/3/2010 1:01:46 PM |
| Magnesium | 53 | 1.0 | | mg/L | 1 | 12/3/2010 11:52:23 AM |
| Potassium | 4.8 | 1.0 | | mg/L | 1 | 12/3/2010 11:52:23 AM |
| Sodium | 820 | 10 | | mg/L | 10 | 12/3/2010 1:01:46 PM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Arsenic | ND | 0.020 | | mg/L | 1 | 11/30/2010 2:46:10 PM |
| Barium | ND | 0.020 | | mg/L | 1 | 11/30/2010 2:46:10 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/30/2010 2:46:10 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 11/30/2010 2:46:10 PM |
| Lead | 0.0073 | 0.0050 | | mg/L | 1 | 11/30/2010 2:46:10 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/30/2010 2:46:10 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/30/2010 2:46:10 PM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Benzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Toluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Methyl tert-butyl ether (MTBE) | 370 | 10 | | µg/L | 10 | 11/22/2010 6:34:03 PM |

Qualifiers:

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- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Date: *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-43 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 4:00:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-09 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 1,2-Dichloroethane (EDC) | 1.2 | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Acetone | ND | 10 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| cis-1,2-DCE | 3.8 | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Isopropylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 11/21/2010 7:46:49 AM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Date: *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-43 |
| **Lab Order:** | 1011766 | **Collection Date:** | 11/16/2010 4:00:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-09 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| n-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| n-Propylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Styrene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Xylenes, Total | ND | 1.5 | | µg/L | 1 | 11/21/2010 7:46:49 AM |
| Surr: 1,2-Dichloroethane-d4 | 104 | 77.7-113 | | %REC | 1 | 11/21/2010 7:46:49 AM |
| Surr: 4-Bromofluorobenzene | 100 | 76.4-106 | | %REC | 1 | 11/21/2010 7:46:49 AM |
| Surr: Dibromofluoromethane | 105 | 91.6-125 | | %REC | 1 | 11/21/2010 7:46:49 AM |
| Surr: Toluene-d8 | 102 | 92.3-107 | | %REC | 1 | 11/21/2010 7:46:49 AM |
| **EPA 120.1: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **IC** |
| Specific Conductance | 4800 | 0.010 | | µmhos/cm | 1 | 11/23/2010 1:12:00 PM |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** |
| Total Dissolved Solids | 4450 | 40.0 | | mg/L | 1 | 11/26/2010 8:21:00 PM |

**Qualifiers:**

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- B Analyte detected in the associated Method Blank
- E Estimated value
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- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TRIP BLANK |
| **Lab Order:** | 1011766 | **Collection Date:** | |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-10 | **Matrix:** | TRIP BLANK |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Benzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Toluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Acetone | ND | 10 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL *Practical Quantitation Limit*
- S *Spike recovery outside accepted recovery limits*

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *08-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TRIP BLANK |
| **Lab Order:** | 1011766 | **Collection Date:** | |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011766-10 | **Matrix:** | TRIP BLANK |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Isopropylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| n-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| n-Propylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Styrene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Xylenes, Total | ND | 1.5 | | µg/L | 1 | 11/21/2010 9:09:25 AM |
| Surr: 1,2-Dichloroethane-d4 | 97.8 | 77.7-113 | | %REC | 1 | 11/21/2010 9:09:25 AM |
| Surr: 4-Bromofluorobenzene | 107 | 76.4-106 | S | %REC | 1 | 11/21/2010 9:09:25 AM |
| Surr: Dibromofluoromethane | 98.1 | 91.6-125 | | %REC | 1 | 11/21/2010 9:09:25 AM |
| Surr: Toluene-d8 | 103 | 92.3-107 | | %REC | 1 | 11/21/2010 9:09:25 AM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E *Estimated value*
- H *Holding times for preparation or analysis exceeded*
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# QA/QC SUMMARY REPORT

**Client:** Animas Environmental Services
**Project:** TW 810 Refinery **Work Order:** 1011766

| Analyte | Result | Units | PQL | SPK Val | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 300.0: Anions** | | | | | | | | | | | |
| **Sample ID: 1011766-01CMSD** | | *MSD* | | | | Batch ID: | **R42398** | Analysis Date: | | 11/29/2010 1:24:43 PM | |
| Fluoride | 1.525 | mg/L | 0.10 | 0.5 | 1.012 | 103 | 71.7 | 114 | 0.489 | 20 | |
| Bromide | 2.751 | mg/L | 0.10 | 2.5 | 0.2807 | 98.8 | 82 | 112 | 2.33 | 20 | |
| **Sample ID: MB** | | *MBLK* | | | | Batch ID: | **R42398** | Analysis Date: | | 11/29/2010 9:41:39 AM | |
| Fluoride | ND | mg/L | 0.10 | | | | | | | | |
| Chloride | ND | mg/L | 0.50 | | | | | | | | |
| Bromide | ND | mg/L | 0.10 | | | | | | | | |
| Sulfate | ND | mg/L | 0.50 | | | | | | | | |
| **Sample ID: MB** | | *MBLK* | | | | Batch ID: | **R42398** | Analysis Date: | | 11/30/2010 7:24:11 AM | |
| Fluoride | ND | mg/L | 0.10 | | | | | | | | |
| Chloride | ND | mg/L | 0.50 | | | | | | | | |
| Bromide | ND | mg/L | 0.10 | | | | | | | | |
| Sulfate | ND | mg/L | 0.50 | | | | | | | | |
| **Sample ID: MB** | | *MBLK* | | | | Batch ID: | **R42418** | Analysis Date: | | 11/30/2010 3:15:02 PM | |
| Fluoride | ND | mg/L | 0.10 | | | | | | | | |
| Chloride | ND | mg/L | 0.50 | | | | | | | | |
| Bromide | ND | mg/L | 0.10 | | | | | | | | |
| Sulfate | ND | mg/L | 0.50 | | | | | | | | |
| **Sample ID: LCS** | | *LCS* | | | | Batch ID: | **R42398** | Analysis Date: | | 11/29/2010 9:59:04 AM | |
| Fluoride | 0.5265 | mg/L | 0.10 | 0.5 | 0 | 105 | 90 | 110 | | | |
| Chloride | 5.167 | mg/L | 0.50 | 5 | 0 | 103 | 90 | 110 | | | |
| Bromide | 2.584 | mg/L | 0.10 | 2.5 | 0 | 103 | 90 | 110 | | | |
| Sulfate | 10.34 | mg/L | 0.50 | 10 | 0 | 103 | 90 | 110 | | | |
| **Sample ID: LCS** | | *LCS* | | | | Batch ID: | **R42398** | Analysis Date: | | 11/30/2010 7:41:36 AM | |
| Fluoride | 0.5379 | mg/L | 0.10 | 0.5 | 0 | 108 | 90 | 110 | | | |
| Chloride | 5.067 | mg/L | 0.50 | 5 | 0 | 101 | 90 | 110 | | | |
| Bromide | 2.550 | mg/L | 0.10 | 2.5 | 0 | 102 | 90 | 110 | | | |
| Sulfate | 10.20 | mg/L | 0.50 | 10 | 0 | 102 | 90 | 110 | | | |
| **Sample ID: LCS** | | *LCS* | | | | Batch ID: | **R42418** | Analysis Date: | | 11/30/2010 3:26:15 PM | |
| Fluoride | 0.5470 | mg/L | 0.10 | 0.5 | 0 | 109 | 90 | 110 | | | |
| Chloride | 5.087 | mg/L | 0.50 | 5 | 0 | 102 | 90 | 110 | | | |
| Bromide | 2.604 | mg/L | 0.10 | 2.5 | 0 | 104 | 90 | 110 | | | |
| Sulfate | 10.31 | mg/L | 0.50 | 10 | 0 | 103 | 90 | 110 | | | |
| **Sample ID: 1011766-01CMS** | | *MS* | | | | Batch ID: | **R42398** | Analysis Date: | | 11/29/2010 1:07:18 PM | |
| Fluoride | 1.517 | mg/L | 0.10 | 0.5 | 1.012 | 101 | 71.7 | 114 | | | |
| Bromide | 2.687 | mg/L | 0.10 | 2.5 | 0.2807 | 96.3 | 82 | 112 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Animas Environmental Services
**Project:** TW 810 Refinery **Work Order:** 1011766

| Analyte | Result | Units | PQL | SPK Val | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8015B: Diesel Range** | | | | | | | | | | | |
| **Sample ID: MB-24586** | | *MBLK* | | | | Batch ID: | **24586** | Analysis Date: | | 11/20/2010 1:18:54 PM | |
| Diesel Range Organics (DRO) | ND | mg/L | 1.0 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | mg/L | 5.0 | | | | | | | | |
| **Sample ID: LCS-24586** | | *LCS* | | | | Batch ID: | **24586** | Analysis Date: | | 11/20/2010 1:52:46 PM | |
| Diesel Range Organics (DRO) | 5.761 | mg/L | 1.0 | 5 | 0 | 115 | 74 | 157 | | | |
| **Sample ID: LCSD-24586** | | *LCSD* | | | | Batch ID: | **24586** | Analysis Date: | | 11/20/2010 2:26:53 PM | |
| Diesel Range Organics (DRO) | 5.768 | mg/L | 1.0 | 5 | 0 | 115 | 74 | 157 | 0.116 | 23 | |
| **Method: EPA Method 8015B: Gasoline Range** | | | | | | | | | | | |
| **Sample ID: 5ML RB** | | *MBLK* | | | | Batch ID: | **R42340** | Analysis Date: | | 11/24/2010 8:28:50 AM | |
| Gasoline Range Organics (GRO) | ND | mg/L | 0.050 | | | | | | | | |
| **Sample ID: b 14** | | *MBLK* | | | | Batch ID: | **R42340** | Analysis Date: | | 11/24/2010 2:36:43 PM | |
| Gasoline Range Organics (GRO) | ND | mg/L | 0.050 | | | | | | | | |
| **Sample ID: b 48** | | *MBLK* | | | | Batch ID: | R42340 | Analysis Date: | | 11/25/2010 6:59:00 AM | |
| Gasoline Range Organics (GRO) | ND | mg/L | 0.050 | | | | | | | | |
| **Sample ID: 2.5UG GRO LCS-II** | | *LCS* | | | | Batch ID: | **R42340** | Analysis Date: | | 11/24/2010 8:52:32 PM | |
| Gasoline Range Organics (GRO) | 0.5210 | mg/L | 0.050 | 0.5 | 0 | 104 | 83.7 | 124 | | | |
| **Sample ID: 2.5UG GRO LCS** | | *LCS* | | | | Batch ID: | **R42340** | Analysis Date: | | 11/24/2010 12:18:10 PM | |
| Gasoline Range Organics (GRO) | 0.5500 | mg/L | 0.050 | 0.5 | 0 | 110 | 83.7 | 124 | | | |
| **Sample ID: 2.5UG GRO LCS-III** | | *LCS* | | | | Batch ID: | **R42340** | Analysis Date: | | 11/25/2010 7:56:42 AM | |
| Gasoline Range Organics (GRO) | 0.5038 | mg/L | 0.050 | 0.5 | 0 | 101 | 83.7 | 124 | | | |
| **Sample ID: 2.5UG GRO LCSD** | | *LCSD* | | | | Batch ID: | **R42340** | Analysis Date: | | 11/24/2010 12:47:11 PM | |
| Gasoline Range Organics (GRO) | 0.5196 | mg/L | 0.050 | 0.5 | 0 | 104 | 83.7 | 124 | 5.68 | 12 | |
| **Sample ID: 2.5UG GRO LCSD-III** | | *LCSD* | | | | Batch ID: | **R42340** | Analysis Date: | | 11/25/2010 8:25:31 AM | |
| Gasoline Range Organics (GRO) | 0.5020 | mg/L | 0.050 | 0.5 | 0 | 100 | 83.7 | 124 | 0.358 | 12 | |

Qualifiers:

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Animas Environmental Services
**Project:** TW 810 Refinery **Work Order:** 1011766

| Analyte | Result | Units | PQL | SPK Val | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8260B: VOLATILES** | | | | | | | | | | | |
| **Sample ID: 1011766-09a msd** | | *MSD* | | | | Batch ID: | **R42279** | Analysis Date: | | 11/21/2010 8:41:53 AM | |
| Benzene | 18.83 | µg/L | 1.0 | 20 | 0 | 94.1 | 73.1 | 117 | 4.09 | 11.3 | |
| Toluene | 21.35 | µg/L | 1.0 | 20 | 0 | 107 | 82.9 | 109 | 0.542 | 11.6 | |
| Chlorobenzene | 20.73 | µg/L | 1.0 | 20 | 0 | 104 | 87.5 | 110 | 0.498 | 10.6 | |
| 1,1-Dichloroethene | 21.34 | µg/L | 1.0 | 20 | 0 | 107 | 66.2 | 131 | 0.791 | 14.4 | |
| Trichloroethene (TCE) | 16.45 | µg/L | 1.0 | 20 | 0 | 82.3 | 67.1 | 110 | 0.834 | 11.2 | |
| **Sample ID: 5ml-rb** | | *MBLK* | | | | Batch ID: | **R42279** | Analysis Date: | | 11/20/2010 11:08:52 AM | |
| Benzene | ND | µg/L | 1.0 | | | | | | | | |
| Toluene | ND | µg/L | 1.0 | | | | | | | | |
| Ethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | µg/L | 1.0 | | | | | | | | |
| Naphthalene | ND | µg/L | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | µg/L | 4.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | µg/L | 4.0 | | | | | | | | |
| Acetone | ND | µg/L | 10 | | | | | | | | |
| Bromobenzene | ND | µg/L | 1.0 | | | | | | | | |
| Bromodichloromethane | ND | µg/L | 1.0 | | | | | | | | |
| Bromoform | ND | µg/L | 1.0 | | | | | | | | |
| Bromomethane | ND | µg/L | 3.0 | | | | | | | | |
| 2-Butanone | ND | µg/L | 10 | | | | | | | | |
| Carbon disulfide | ND | µg/L | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | µg/L | 1.0 | | | | | | | | |
| Chlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| Chloroethane | ND | µg/L | 2.0 | | | | | | | | |
| Chloroform | ND | µg/L | 1.0 | | | | | | | | |
| Chloromethane | ND | µg/L | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | µg/L | 1.0 | | | | | | | | |
| 4-Chlorotoluene | ND | µg/L | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | µg/L | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | µg/L | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | µg/L | 1.0 | | | | | | | | |
| Dibromomethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | µg/L | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | µg/L | 1.0 | | | | | | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Animas Environmental Services
**Project:** TW 810 Refinery **Work Order:** 1011766

| Analyte | Result | Units | PQL | SPK Val | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8260B: VOLATILES** | | | | | | | | | | | |
| **Sample ID: 5ml-rb** | | *MBLK* | | | | | Batch ID: **R42279** | | Analysis Date: 11/20/2010 11:08:52 AM | | |
| 2,2-Dichloropropane | ND | µg/L | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | µg/L | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | µg/L | 1.0 | | | | | | | | |
| 2-Hexanone | ND | µg/L | 10 | | | | | | | | |
| Isopropylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | µg/L | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | µg/L | 10 | | | | | | | | |
| Methylene Chloride | ND | µg/L | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| n-Propylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| Styrene | ND | µg/L | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | µg/L | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | µg/L | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | µg/L | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | µg/L | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | µg/L | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | µg/L | 2.0 | | | | | | | | |
| Vinyl chloride | ND | µg/L | 1.0 | | | | | | | | |
| Xylenes, Total | ND | µg/L | 1.5 | | | | | | | | |
| **Sample ID: b3** | | *MBLK* | | | | | Batch ID: **R42279** | | Analysis Date: 11/20/2010 11:57:45 PM | | |
| Benzene | ND | µg/L | 1.0 | | | | | | | | |
| Toluene | ND | µg/L | 1.0 | | | | | | | | |
| Ethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | µg/L | 1.0 | | | | | | | | |
| Naphthalene | ND | µg/L | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | µg/L | 4.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | µg/L | 4.0 | | | | | | | | |
| Acetone | ND | µg/L | 10 | | | | | | | | |
| Bromobenzene | ND | µg/L | 1.0 | | | | | | | | |
| Bromodichloromethane | ND | µg/L | 1.0 | | | | | | | | |
| Bromoform | ND | µg/L | 1.0 | | | | | | | | |
| Bromomethane | ND | µg/L | 3.0 | | | | | | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Animas Environmental Services
**Project:** TW 810 Refinery **Work Order:** 1011766

| Analyte | Result | Units | PQL | SPK Val | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8260B: VOLATILES** | | | | | | | | | | | |
| **Sample ID: b3** | | *MBLK* | | | | | Batch ID: **R42279** | | Analysis Date: 11/20/2010 11:57:45 PM | | |
| 2-Butanone | ND | µg/L | 10 | | | | | | | | |
| Carbon disulfide | ND | µg/L | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | µg/L | 1.0 | | | | | | | | |
| Chlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| Chloroethane | ND | µg/L | 2.0 | | | | | | | | |
| Chloroform | ND | µg/L | 1.0 | | | | | | | | |
| Chloromethane | ND | µg/L | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | µg/L | 1.0 | | | | | | | | |
| 4-Chlorotoluene | ND | µg/L | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | µg/L | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | µg/L | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | µg/L | 1.0 | | | | | | | | |
| Dibromomethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | µg/L | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | µg/L | 1.0 | | | | | | | | |
| 2,2-Dichloropropane | ND | µg/L | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | µg/L | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | µg/L | 1.0 | | | | | | | | |
| 2-Hexanone | ND | µg/L | 10 | | | | | | | | |
| Isopropylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | µg/L | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | µg/L | 10 | | | | | | | | |
| Methylene Chloride | ND | µg/L | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| n-Propylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| Styrene | ND | µg/L | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | µg/L | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | µg/L | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | µg/L | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | µg/L | 1.0 | | | | | | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Animas Environmental Services
**Project:** TW 810 Refinery **Work Order:** 1011766

| Analyte | Result | Units | PQL | SPK Val | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8260B: VOLATILES** | | | | | | | | | | | |
| **Sample ID: b3** | | *MBLK* | | | | Batch ID: **R42279** | | Analysis Date: 11/20/2010 11:57:45 PM | | | |
| Trichloroethene (TCE) | ND | µg/L | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | µg/L | 2.0 | | | | | | | | |
| Vinyl chloride | ND | µg/L | 1.0 | | | | | | | | |
| Xylenes, Total | ND | µg/L | 1.5 | | | | | | | | |
| **Sample ID: 5ml-rb** | | *MBLK* | | | | Batch ID: **R42314** | | Analysis Date: 11/22/2010 8:56:13 AM | | | |
| Benzene | ND | µg/L | 1.0 | | | | | | | | |
| Toluene | ND | µg/L | 1.0 | | | | | | | | |
| Ethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | µg/L | 1.0 | | | | | | | | |
| Naphthalene | ND | µg/L | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | µg/L | 4.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | µg/L | 4.0 | | | | | | | | |
| Acetone | ND | µg/L | 10 | | | | | | | | |
| Bromobenzene | ND | µg/L | 1.0 | | | | | | | | |
| Bromodichloromethane | ND | µg/L | 1.0 | | | | | | | | |
| Bromoform | ND | µg/L | 1.0 | | | | | | | | |
| Bromomethane | ND | µg/L | 3.0 | | | | | | | | |
| 2-Butanone | ND | µg/L | 10 | | | | | | | | |
| Carbon disulfide | ND | µg/L | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | µg/L | 1.0 | | | | | | | | |
| Chlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| Chloroethane | ND | µg/L | 2.0 | | | | | | | | |
| Chloroform | ND | µg/L | 1.0 | | | | | | | | |
| Chloromethane | ND | µg/L | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | µg/L | 1.0 | | | | | | | | |
| 4-Chlorotoluene | ND | µg/L | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | µg/L | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | µg/L | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | µg/L | 1.0 | | | | | | | | |
| Dibromomethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | µg/L | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | µg/L | 1.0 | | | | | | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Animas Environmental Services
**Project:** TW 810 Refinery **Work Order:** 1011766

| Analyte | Result | Units | PQL | SPK Val | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8260B: VOLATILES** | | | | | | | | | | | |
| **Sample ID: 5ml-rb** | | *MBLK* | | | | Batch ID: **R42314** | | Analysis Date: 11/22/2010 8:56:13 AM | | | |
| 2,2-Dichloropropane | ND | µg/L | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | µg/L | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | µg/L | 1.0 | | | | | | | | |
| 2-Hexanone | ND | µg/L | 10 | | | | | | | | |
| Isopropylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | µg/L | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | µg/L | 10 | | | | | | | | |
| Methylene Chloride | ND | µg/L | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| n-Propylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| Styrene | ND | µg/L | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | µg/L | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | µg/L | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | µg/L | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | µg/L | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | µg/L | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | µg/L | 2.0 | | | | | | | | |
| Vinyl chloride | ND | µg/L | 1.0 | | | | | | | | |
| Xylenes, Total | ND | µg/L | 1.5 | | | | | | | | |
| **Sample ID: b7** | | *MBLK* | | | | Batch ID: **R42314** | | Analysis Date: 11/22/2010 9:19:13 PM | | | |
| Benzene | ND | µg/L | 1.0 | | | | | | | | |
| Toluene | ND | µg/L | 1.0 | | | | | | | | |
| Ethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | µg/L | 1.0 | | | | | | | | |
| Naphthalene | ND | µg/L | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | µg/L | 4.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | µg/L | 4.0 | | | | | | | | |
| Acetone | ND | µg/L | 10 | | | | | | | | |
| Bromobenzene | ND | µg/L | 1.0 | | | | | | | | |
| Bromodichloromethane | ND | µg/L | 1.0 | | | | | | | | |
| Bromoform | ND | µg/L | 1.0 | | | | | | | | |
| Bromomethane | ND | µg/L | 3.0 | | | | | | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Animas Environmental Services
**Project:** TW 810 Refinery **Work Order:** 1011766

| Analyte | Result | Units | PQL | SPK Val | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8260B: VOLATILES** | | | | | | | | | | | |
| **Sample ID: b7** | | *MBLK* | | | | Batch ID: **R42314** | | Analysis Date: 11/22/2010 9:19:13 PM | | | |
| 2-Butanone | ND | µg/L | 10 | | | | | | | | |
| Carbon disulfide | ND | µg/L | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | µg/L | 1.0 | | | | | | | | |
| Chlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| Chloroethane | ND | µg/L | 2.0 | | | | | | | | |
| Chloroform | ND | µg/L | 1.0 | | | | | | | | |
| Chloromethane | ND | µg/L | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | µg/L | 1.0 | | | | | | | | |
| 4-Chlorotoluene | ND | µg/L | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | µg/L | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | µg/L | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | µg/L | 1.0 | | | | | | | | |
| Dibromomethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | µg/L | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | µg/L | 1.0 | | | | | | | | |
| 2,2-Dichloropropane | ND | µg/L | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | µg/L | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | µg/L | 1.0 | | | | | | | | |
| 2-Hexanone | ND | µg/L | 10 | | | | | | | | |
| Isopropylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | µg/L | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | µg/L | 10 | | | | | | | | |
| Methylene Chloride | ND | µg/L | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| n-Propylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| Styrene | ND | µg/L | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | µg/L | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | µg/L | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | µg/L | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | µg/L | 1.0 | | | | | | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Animas Environmental Services
**Project:** TW 810 Refinery **Work Order:** 1011766

| Analyte | Result | Units | PQL | SPK Val | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8260B: VOLATILES** | | | | | | | | | | | |
| **Sample ID: b7** | | *MBLK* | | | | Batch ID: | **R42314** | Analysis Date: | 11/22/2010 9:19:13 PM | | |
| Trichloroethene (TCE) | ND | µg/L | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | µg/L | 2.0 | | | | | | | | |
| Vinyl chloride | ND | µg/L | 1.0 | | | | | | | | |
| Xylenes, Total | ND | µg/L | 1.5 | | | | | | | | |
| **Sample ID: 100ng lcs2** | | *LCS* | | | | Batch ID: | **R42279** | Analysis Date: | 11/20/2010 2:07:57 PM | | |
| Benzene | 18.75 | µg/L | 1.0 | 20 | 0 | 93.8 | 84.6 | 109 | | | |
| Toluene | 20.92 | µg/L | 1.0 | 20 | 0 | 105 | 81 | 114 | | | |
| Chlorobenzene | 20.92 | µg/L | 1.0 | 20 | 0 | 105 | 85.2 | 113 | | | |
| 1,1-Dichloroethene | 21.65 | µg/L | 1.0 | 20 | 0 | 108 | 79.6 | 124 | | | |
| Trichloroethene (TCE) | 17.39 | µg/L | 1.0 | 20 | 0 | 87.0 | 78.3 | 102 | | | |
| **Sample ID: 100ng lcs3** | | *LCS* | | | | Batch ID: | **R42279** | Analysis Date: | 11/21/2010 12:52:57 AM | | |
| Benzene | 18.40 | µg/L | 1.0 | 20 | 0 | 92.0 | 84.6 | 109 | | | |
| Toluene | 20.68 | µg/L | 1.0 | 20 | 0 | 103 | 81 | 114 | | | |
| Chlorobenzene | 20.60 | µg/L | 1.0 | 20 | 0 | 103 | 85.2 | 113 | | | |
| 1,1-Dichloroethene | 21.51 | µg/L | 1.0 | 20 | 0 | 108 | 79.6 | 124 | | | |
| Trichloroethene (TCE) | 16.88 | µg/L | 1.0 | 20 | 0 | 84.4 | 78.3 | 102 | | | |
| **Sample ID: 100ng lcs** | | *LCS* | | | | Batch ID: | **R42314** | Analysis Date: | 11/22/2010 9:51:33 AM | | |
| Benzene | 18.39 | µg/L | 1.0 | 20 | 0 | 92.0 | 84.6 | 109 | | | |
| Toluene | 20.70 | µg/L | 1.0 | 20 | 0 | 103 | 81 | 114 | | | |
| Chlorobenzene | 19.77 | µg/L | 1.0 | 20 | 0 | 98.9 | 85.2 | 113 | | | |
| 1,1-Dichloroethene | 20.62 | µg/L | 1.0 | 20 | 0 | 103 | 79.6 | 124 | | | |
| Trichloroethene (TCE) | 16.05 | µg/L | 1.0 | 20 | 0 | 80.3 | 78.3 | 102 | | | |
| **Sample ID: 100ng lcs** | | *LCS* | | | | Batch ID: | **R42314** | Analysis Date: | 11/22/2010 9:51:33 AM | | |
| Benzene | 18.39 | µg/L | 1.0 | 20 | 0 | 92.0 | 84.6 | 109 | | | |
| Toluene | 20.70 | µg/L | 1.0 | 20 | 0 | 103 | 81 | 114 | | | |
| Chlorobenzene | 19.77 | µg/L | 1.0 | 20 | 0 | 98.9 | 85.2 | 113 | | | |
| 1,1-Dichloroethene | 20.62 | µg/L | 1.0 | 20 | 0 | 103 | 79.6 | 124 | | | |
| Trichloroethene (TCE) | 16.05 | µg/L | 1.0 | 20 | 0 | 80.3 | 78.3 | 102 | | | |
| **Sample ID: 1011766-09a ms** | | *MS* | | | | Batch ID: | **R42279** | Analysis Date: | 11/21/2010 8:14:21 AM | | |
| Benzene | 19.62 | µg/L | 1.0 | 20 | 0 | 98.1 | 73.1 | 117 | | | |
| Toluene | 21.24 | µg/L | 1.0 | 20 | 0 | 106 | 82.9 | 109 | | | |
| Chlorobenzene | 20.83 | µg/L | 1.0 | 20 | 0 | 104 | 87.5 | 110 | | | |
| 1,1-Dichloroethene | 21.51 | µg/L | 1.0 | 20 | 0 | 108 | 66.2 | 131 | | | |
| Trichloroethene (TCE) | 16.59 | µg/L | 1.0 | 20 | 0 | 83.0 | 67.1 | 110 | | | |
| **Method: EPA Method 7470: Mercury** | | | | | | | | | | | |
| **Sample ID: MB-24678** | | *MBLK* | | | | Batch ID: | **24678** | Analysis Date: | 11/29/2010 12:21:08 PM | | |
| Mercury | ND | mg/L | 0.00020 | | | | | | | | |
| **Sample ID: LCS-24678** | | *LCS* | | | | Batch ID: | **24678** | Analysis Date: | 11/29/2010 12:22:55 PM | | |
| Mercury | 0.005290 | mg/L | 0.00020 | 0.005 | 0 | 106 | 80 | 120 | | | |
| **Sample ID: LCS-24678** | | *LCS* | | | | Batch ID: | **24678** | Analysis Date: | 11/29/2010 12:24:44 PM | | |
| Mercury | 0.005272 | mg/L | 0.00020 | 0.005 | 0 | 105 | 80 | 120 | 0.331 | 0 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Animas Environmental Services
**Project:** TW 810 Refinery **Work Order:** 1011766

| Analyte | Result | Units | PQL | SPK Val | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 6010B: Dissolved Metals** | | | | | | | | | | | |
| **Sample ID: MB** | | *MBLK* | | | | Batch ID: | **R42402** | Analysis Date: | | 11/30/2010 8:52:57 AM | |
| Calcium | ND | mg/L | 1.0 | | | | | | | | |
| Magnesium | ND | mg/L | 1.0 | | | | | | | | |
| Potassium | ND | mg/L | 1.0 | | | | | | | | |
| Sodium | ND | mg/L | 1.0 | | | | | | | | |
| **Sample ID: MB** | | *MBLK* | | | | Batch ID: | **R42480** | Analysis Date: | | 12/3/2010 11:44:23 AM | |
| Calcium | ND | mg/L | 1.0 | | | | | | | | |
| Magnesium | ND | mg/L | 1.0 | | | | | | | | |
| Potassium | ND | mg/L | 1.0 | | | | | | | | |
| Sodium | ND | mg/L | 1.0 | | | | | | | | |
| **Sample ID: LCS** | | *LCS* | | | | Batch ID: | **R42402** | Analysis Date: | | 11/30/2010 8:56:04 AM | |
| Calcium | 53.91 | mg/L | 1.0 | 50.5 | 0.0397 | 107 | 80 | 120 | | | |
| Magnesium | 53.76 | mg/L | 1.0 | 50.5 | 0.0407 | 106 | 80 | 120 | | | |
| Potassium | 55.65 | mg/L | 1.0 | 55 | 0 | 101 | 80 | 120 | | | |
| Sodium | 52.32 | mg/L | 1.0 | 50.5 | 0.0742 | 103 | 80 | 120 | | | |
| **Sample ID: LCSRR** | | *LCS* | | | | Batch ID: | **R42402** | Analysis Date: | | 11/30/2010 8:59:13 AM | |
| Calcium | 53.59 | mg/L | 1.0 | 50.5 | 0.0397 | 106 | 80 | 120 | 0.608 | 0 | |
| Magnesium | 53.22 | mg/L | 1.0 | 50.5 | 0.0407 | 105 | 80 | 120 | 1.01 | 0 | |
| Potassium | 55.05 | mg/L | 1.0 | 55 | 0 | 100 | 80 | 120 | 1.08 | 0 | |
| Sodium | 51.69 | mg/L | 1.0 | 50.5 | 0.0742 | 102 | 80 | 120 | 1.21 | 0 | |
| **Sample ID: LCS** | | *LCS* | | | | Batch ID: | **R42480** | Analysis Date: | | 12/3/2010 11:46:45 AM | |
| Calcium | 50.64 | mg/L | 1.0 | 50.5 | 0 | 100 | 80 | 120 | | | |
| Magnesium | 48.19 | mg/L | 1.0 | 50.5 | 0 | 95.4 | 80 | 120 | | | |
| Potassium | 44.83 | mg/L | 1.0 | 55 | 0 | 81.5 | 80 | 120 | | | |
| Sodium | 44.04 | mg/L | 1.0 | 50.5 | 0.1433 | 86.9 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Animas Environmental Services
**Project:** TW 810 Refinery **Work Order:** 1011766

| Analyte | Result | Units | PQL | SPK Val | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA 6010B: Total Recoverable Metals** | | | | | | | | | | | |
| **Sample ID: MB-24626** | | *MBLK* | | | | Batch ID: | **24626** | Analysis Date: | 11/23/2010 9:45:29 AM | | |
| Barium | ND | mg/L | 0.020 | | | | | | | | |
| Cadmium | ND | mg/L | 0.0020 | | | | | | | | |
| Chromium | ND | mg/L | 0.0060 | | | | | | | | |
| Silver | ND | mg/L | 0.0050 | | | | | | | | |
| **Sample ID: MB-24626** | | *MBLK* | | | | Batch ID: | **24626** | Analysis Date: | 11/24/2010 1:39:26 PM | | |
| Arsenic | ND | mg/L | 0.020 | | | | | | | | |
| Lead | ND | mg/L | 0.0050 | | | | | | | | |
| Selenium | ND | mg/L | 0.050 | | | | | | | | |
| **Sample ID: LCS-24626** | | *LCS* | | | | Batch ID: | **24626** | Analysis Date: | 11/23/2010 9:48:22 AM | | |
| Barium | 0.5367 | mg/L | 0.020 | 0.5 | 0 | 107 | 80 | 120 | | | |
| Cadmium | 0.5425 | mg/L | 0.0020 | 0.5 | 0 | 108 | 80 | 120 | | | |
| Chromium | 0.5513 | mg/L | 0.0060 | 0.5 | 0 | 110 | 80 | 120 | | | |
| Silver | 0.5302 | mg/L | 0.0050 | 0.5 | 0.0010 | 106 | 80 | 120 | | | |
| **Sample ID: LCS-24626** | | *LCS* | | | | Batch ID: | **24626** | Analysis Date: | 11/24/2010 1:42:28 PM | | |
| Arsenic | 0.5738 | mg/L | 0.020 | 0.5 | 0 | 115 | 80 | 120 | | | |
| Lead | 0.5602 | mg/L | 0.0050 | 0.5 | 0 | 112 | 80 | 120 | | | |
| Selenium | 0.5417 | mg/L | 0.050 | 0.5 | 0 | 108 | 80 | 120 | | | |
| **Method: SM2540C MOD: Total Dissolved Solids** | | | | | | | | | | | |
| **Sample ID: 1011766-01CMSD** | | *MSD* | | | | Batch ID: | **24653** | Analysis Date: | 11/26/2010 8:21:00 PM | | |
| Total Dissolved Solids | 6844 | mg/L | 40.0 | 2000 | 4792 | 103 | 80 | 120 | 0 | 20 | |
| **Sample ID: MB-24653** | | *MBLK* | | | | Batch ID: | **24653** | Analysis Date: | 11/26/2010 8:21:00 PM | | |
| Total Dissolved Solids | ND | mg/L | 20.0 | | | | | | | | |
| **Sample ID: LCS-24653** | | *LCS* | | | | Batch ID: | **24653** | Analysis Date: | 11/26/2010 8:21:00 PM | | |
| Total Dissolved Solids | 1003 | mg/L | 20.0 | 1000 | 0 | 100 | 80 | 120 | | | |
| **Sample ID: 1011766-01CMS** | | *MS* | | | | Batch ID: | **24653** | Analysis Date: | 11/26/2010 8:21:00 PM | | |
| Total Dissolved Solids | 6844 | mg/L | 40.0 | 2000 | 4792 | 103 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

## Hall Environmental Analysis Laboratory, Inc.

### Sample Receipt Checklist

Client Name ANIMAS ENVIRONMENTAL | Date Received: 11/18/2010

Work Order Number 1011766 | Received by: LNM

Checklist completed by: Signature 11/18/10 Date | Sample ID labels checked by: NG Initials

Matrix: | Carrier name: Greyhound

| | | | | |
|---|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ✔ | No | Not Present | |
| Custody seals intact on shipping container/cooler? | Yes ✔ | No | Not Present | Not Shipped |
| Custody seals intact on sample bottles? | Yes | No | N/A ✔ | |
| Chain of custody present? | Yes ✔ | No | | |
| Chain of custody signed when relinquished and received? | Yes ✔ | No | | |
| Chain of custody agrees with sample labels? | Yes ✔ | No | | |
| Samples in proper container/bottle? | Yes ✔ | No | | |
| Sample containers intact? | Yes ✔ | No | | |
| Sufficient sample volume for indicated test? | Yes ✔ | No | | |
| All samples received within holding time? | Yes ✔ | No | | |
| Water - VOA vials have zero headspace? | No VOA vials submitted | Yes ✔ | No | |
| Water - Preservation labels on bottle and cap match? | Yes ✔ | No | N/A | |
| Water - pH acceptable upon receipt? | Yes ✔ | No | N/A | |
| Container/Temp Blank temperature? | 2.4° | <6° C Acceptable If given sufficient time to cool. | | |

Number of preserved bottles checked for pH: 18

(<2) >12 unless noted below.

COMMENTS:

Client contacted | Date contacted: | Person contacted

Contacted by: | Regarding:

Comments: -ADDED 1 mL HNO3 TO 500 mL BOTTLES FOR: 02D, 04D, 06D, 07D, 08D, 09D TO PRESERVE FOR PROPER ANALYSIS. — 11/18/10

Corrective Action

# Chain-of-Custody Record

Client: Animas Environmental Services

Mailing Address: 624 E Comanche
Farmington, NM 87401

Phone #: 505-564-2281

email or Fax#: 505-324-2022

QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☑ Standard ☐ Rush _____

Project Name:
TW 810 Refinery

Project #:
AES 050204

Project Manager:
Ross Kennemer

Sampler: Chad Dawson

On Ice: ☑ Yes ☐ No

Sample Temperature: 2

**HALL ENVIRONMENTAL ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. 1011166 |
|---|---|---|---|---|---|---|
| 11-16-10 | 1000 | $H_2O$ | TW-18 | 6-40mL glass | 5-HCl 1-non | 1 |
| | 1045 | | TW-30 | 1-500mL plastic | $HNO_3$ | 2 |
| | 1118 | | TW-31 | 1-125mL plastic | $HNO_3$ | 3 |
| | 1406 | | TW-37 | 1-liter plastic | non | 4 |
| | 1325 | | TW-38 | | | 5 |
| | 1157 | | TW-39 | | | 6 |
| | 1445 | | TW-41 | | | 7 |
| | 1525 | | TW-42 | | | 8 |
| ↓ | 1600 | ↓ | TW-43 | | | 9 |
| | | | | | | 10 |
| | | | Trip Blank | 2-40mL glass | HCl | 10 |

Analysis Request

| BTEX + MTBE + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH Method 8015B (Gas/Diesel) MRO/DRO/GRO | TPH (Method 418.1) | EDB (Method 504.1) | 8310 (PNA or PAH) | RCRA 8 Metals per 6010/7470 | Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) include MTBE / total Naphth | 8270 (Semi-VOA) | 6010 Dissolved Metals (Ca, Mg, K, and Na) | 6010 Hardness as $CaCO_3$ | Bromide, Chloride, 300.0 Fluoride, Sulfate | TDS SM2540C EPA | Air Bubbles (Y or N) Specific Cond. Chlorine |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | X | | | | X | | | X | | X | X | X | X | X |
| | | X | | | | X | | | X | | X | X | X | X | X |
| | | X | | | | X | | | X | | X | X | X | X | X |
| | | X | | | | X | | | X | | X | X | X | X | X |
| | | X | | | | X | | | X | | X | X | X | X | X |
| | | X | | | | X | | | X | | X | X | X | X | X |
| | | X | | | | X | | | X | | X | X | X | X | X |
| | | X | | | | X | | | X | | X | X | X | X | X |
| | | X | | | | X | | | X | | X | X | X | X | X |
| | | | | | | | | | X | | | | | | |

| Date: | Time: | Relinquished by: | Received by: | Date | Time |
|---|---|---|---|---|---|
| 11-16-10 | 1635 | Chad Dawson | Deborah Watson | 11-16-10 | 1635 |
| 11-17-10 | 1615 | Deborah Watson | | 11/18/10 | 1000 |

Remarks:
Bill to BioTech
8015 GRO-DRO $160
Discounted Price for TDS

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

# COVER LETTER

Monday, December 13, 2010

Ross Kennemer
Animas Environmental Services
624 East Comanche
Farmington, NM 87401

TEL: (505) 486-1776
FAX (505) 324-2022

RE: TW 810 Refinery

Order No.: 1011764

Dear Ross Kennemer:

Hall Environmental Analysis Laboratory, Inc. received 7 sample(s) on 11/18/2010 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901
AZ license # AZ0682
ORELAP Lab # NM100001
Texas Lab# T104704424-08-TX

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-35 |
| **Lab Order:** | 1011764 | **Collection Date:** | 11/17/2010 10:37:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011764-01 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | ND | 1.0 | | mg/L | 1 | 11/19/2010 12:08:38 PM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 11/19/2010 12:08:38 PM |
| Surr: DNOP | 119 | 86.9-151 | | %REC | 1 | 11/19/2010 12:08:38 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | ND | 0.050 | | mg/L | 1 | 11/24/2010 9:50:21 PM |
| Surr: BFB | 100 | 84.5-118 | | %REC | 1 | 11/24/2010 9:50:21 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | 0.81 | 0.10 | | mg/L | 1 | 11/29/2010 1:03:50 PM |
| Chloride | 70 | 10 | | mg/L | 20 | 11/29/2010 1:56:03 PM |
| Bromide | 0.26 | 0.10 | | mg/L | 1 | 11/29/2010 1:03:50 PM |
| Sulfate | 4700 | 100 | | mg/L | 200 | 12/1/2010 12:14:06 AM |
| **EPA 6010B: HARDNESS** | | | | | | Analyst: **RAGS** |
| Hardness (As CaCO3) | 1600 | 1.0 | | mg/L | 1 | 12/3/2010 |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **ELS** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 11/23/2010 1:29:16 PM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **RAGS** |
| Calcium | 480 | 10 | | mg/L | 10 | 12/3/2010 1:04:02 PM |
| Magnesium | 84 | 1.0 | | mg/L | 1 | 12/3/2010 11:55:46 AM |
| Potassium | 8.6 | 1.0 | | mg/L | 1 | 12/3/2010 11:55:46 AM |
| Sodium | 1600 | 100 | | mg/L | 100 | 12/3/2010 1:07:56 PM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Arsenic | ND | 0.020 | | mg/L | 1 | 11/30/2010 3:33:57 PM |
| Barium | ND | 0.020 | | mg/L | 1 | 11/30/2010 3:33:57 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/30/2010 3:33:57 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 11/30/2010 3:33:57 PM |
| Lead | ND | 0.0050 | | mg/L | 1 | 11/30/2010 3:33:57 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/30/2010 3:33:57 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/30/2010 3:33:57 PM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Benzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Toluene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | MCL | Maximum Contaminant Level |
| NC | Non-Chlorinated | ND | Not Detected at the Reporting Limit |
| PQL | Practical Quantitation Limit | S | Spike recovery outside accepted recovery limits |

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-35 |
| **Lab Order:** | 1011764 | **Collection Date:** | 11/17/2010 10:37:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011764-01 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Acetone | ND | 10 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Isopropylbenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 11/20/2010 10:07:39 PM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-35 |
| **Lab Order:** | 1011764 | **Collection Date:** | 11/17/2010 10:37:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011764-01 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: RAA |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| n-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| n-Propylbenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Styrene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Xylenes, Total | ND | 1.5 | | µg/L | 1 | 11/20/2010 10:07:39 PM |
| Surr: 1,2-Dichloroethane-d4 | 101 | 77.7-113 | | %REC | 1 | 11/20/2010 10:07:39 PM |
| Surr: 4-Bromofluorobenzene | 97.2 | 76.4-106 | | %REC | 1 | 11/20/2010 10:07:39 PM |
| Surr: Dibromofluoromethane | 103 | 91.6-125 | | %REC | 1 | 11/20/2010 10:07:39 PM |
| Surr: Toluene-d8 | 101 | 92.3-107 | | %REC | 1 | 11/20/2010 10:07:39 PM |
| **EPA 120.1: SPECIFIC CONDUCTANCE** | | | | | | Analyst: IC |
| Specific Conductance | 6600 | 0.010 | | µmhos/cm | 1 | 11/23/2010 12:43:00 PM |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: KS |
| Total Dissolved Solids | 6770 | 100 | | mg/L | 1 | 11/29/2010 9:17:00 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | MCL | Maximum Contaminant Level |
| NC | Non-Chlorinated | ND | Not Detected at the Reporting Limit |
| PQL | Practical Quantitation Limit | S | Spike recovery outside accepted recovery limits |

# Hall Environmental Analysis Laboratory, Inc.

Date: *13-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-45 |
| **Lab Order:** | 1011764 | **Collection Date:** | 11/17/2010 11:20:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011764-02 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | ND | 1.0 | | mg/L | 1 | 11/19/2010 12:42:45 PM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 11/19/2010 12:42:45 PM |
| Surr: DNOP | 119 | 86.9-151 | | %REC | 1 | 11/19/2010 12:42:45 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 0.23 | 0.050 | | mg/L | 1 | 11/24/2010 10:19:18 PM |
| Surr: BFB | 103 | 84.5-118 | | %REC | 1 | 11/24/2010 10:19:18 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | 0.78 | 0.10 | | mg/L | 1 | 11/29/2010 2:13:27 PM |
| Chloride | 320 | 10 | | mg/L | 20 | 11/29/2010 2:30:52 PM |
| Bromide | 0.47 | 0.10 | | mg/L | 1 | 11/29/2010 2:13:27 PM |
| Sulfate | 2600 | 50 | | mg/L | 100 | 12/1/2010 12:25:19 AM |
| **EPA 6010B: HARDNESS** | | | | | | Analyst: **RAGS** |
| Hardness (As CaCO3) | 1600 | 1.0 | | mg/L | 1 | 12/3/2010 |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **ELS** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 11/23/2010 1:31:05 PM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **RAGS** |
| Calcium | 550 | 10 | | mg/L | 10 | 12/3/2010 1:10:09 PM |
| Magnesium | 53 | 1.0 | | mg/L | 1 | 12/3/2010 12:18:57 PM |
| Potassium | 3.9 | 1.0 | | mg/L | 1 | 12/3/2010 12:18:57 PM |
| Sodium | 860 | 10 | | mg/L | 10 | 12/3/2010 1:10:09 PM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Arsenic | 0.070 | 0.020 | | mg/L | 1 | 11/30/2010 3:38:10 PM |
| Barium | ND | 0.020 | | mg/L | 1 | 11/30/2010 3:38:10 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/30/2010 3:38:10 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 11/30/2010 3:38:10 PM |
| Lead | ND | 0.0050 | | mg/L | 1 | 11/30/2010 3:38:10 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/30/2010 3:38:10 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/30/2010 3:38:10 PM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Benzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Toluene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Methyl tert-butyl ether (MTBE) | 170 | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |

Qualifiers:

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | MCL | Maximum Contaminant Level |
| NC | Non-Chlorinated | ND | Not Detected at the Reporting Limit |
| PQL | Practical Quantitation Limit | S | Spike recovery outside accepted recovery limits |

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-45 |
| **Lab Order:** | 1011764 | **Collection Date:** | 11/17/2010 11:20:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011764-02 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 1,2-Dichloroethane (EDC) | 1.0 | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Acetone | ND | 10 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| cis-1,2-DCE | 4.5 | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Isopropylbenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 11/20/2010 11:30:18 PM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-45 |
| **Lab Order:** | 1011764 | **Collection Date:** | 11/17/2010 11:20:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011764-02 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| n-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| n-Propylbenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Styrene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Xylenes, Total | ND | 1.5 | | µg/L | 1 | 11/20/2010 11:30:18 PM |
| Surr: 1,2-Dichloroethane-d4 | 98.8 | 77.7-113 | | %REC | 1 | 11/20/2010 11:30:18 PM |
| Surr: 4-Bromofluorobenzene | 103 | 76.4-106 | | %REC | 1 | 11/20/2010 11:30:18 PM |
| Surr: Dibromofluoromethane | 103 | 91.6-125 | | %REC | 1 | 11/20/2010 11:30:18 PM |
| Surr: Toluene-d8 | 103 | 92.3-107 | | %REC | 1 | 11/20/2010 11:30:18 PM |
| **EPA 120.1: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **IC** |
| Specific Conductance | 5000 | 0.010 | | µmhos/cm | 1 | 11/23/2010 12:45:00 PM |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** |
| Total Dissolved Solids | 4530 | 40.0 | | mg/L | 1 | 11/29/2010 9:17:00 AM |

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-47 |
| **Lab Order:** | 1011764 | **Collection Date:** | 11/17/2010 12:17:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011764-03 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | ND | 1.0 | | mg/L | 1 | 11/19/2010 1:16:36 PM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 11/19/2010 1:16:36 PM |
| Surr: DNOP | 120 | 86.9-151 | | %REC | 1 | 11/19/2010 1:16:36 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | ND | 0.050 | | mg/L | 1 | 11/24/2010 10:48:14 PM |
| Surr: BFB | 101 | 84.5-118 | | %REC | 1 | 11/24/2010 10:48:14 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | 0.57 | 0.10 | | mg/L | 1 | 11/29/2010 2:48:17 PM |
| Chloride | 1200 | 50 | | mg/L | 100 | 12/1/2010 12:36:34 AM |
| Bromide | 0.93 | 0.10 | | mg/L | 1 | 11/29/2010 2:48:17 PM |
| Sulfate | 5300 | 100 | | mg/L | 200 | 12/1/2010 12:47:48 AM |
| **EPA 6010B: HARDNESS** | | | | | | Analyst: **RAGS** |
| Hardness (As CaCO3) | 1700 | 1.0 | | mg/L | 1 | 12/3/2010 |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **ELS** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 11/23/2010 1:32:55 PM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **RAGS** |
| Calcium | 490 | 10 | | mg/L | 10 | 12/3/2010 1:12:23 PM |
| Magnesium | 120 | 10 | | mg/L | 10 | 12/3/2010 1:12:23 PM |
| Potassium | 8.6 | 1.0 | | mg/L | 1 | 12/3/2010 12:22:21 PM |
| Sodium | 2300 | 100 | | mg/L | 100 | 12/3/2010 1:15:37 PM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Arsenic | ND | 0.10 | | mg/L | 5 | 11/30/2010 4:43:07 PM |
| Barium | ND | 0.10 | | mg/L | 5 | 11/30/2010 4:43:07 PM |
| Cadmium | ND | 0.010 | | mg/L | 5 | 11/30/2010 4:43:07 PM |
| Chromium | ND | 0.030 | | mg/L | 5 | 11/30/2010 4:43:07 PM |
| Lead | ND | 0.025 | | mg/L | 5 | 11/30/2010 4:43:07 PM |
| Selenium | ND | 0.25 | | mg/L | 5 | 11/30/2010 4:43:07 PM |
| Silver | ND | 0.025 | | mg/L | 5 | 11/30/2010 4:43:07 PM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Benzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Toluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Methyl tert-butyl ether (MTBE) | 8.2 | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-47 |
| **Lab Order:** | 1011764 | **Collection Date:** | 11/17/2010 12:17:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011764-03 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Acetone | ND | 10 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Isopropylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 11/21/2010 1:48:07 AM |

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-47 |
| **Lab Order:** | 1011764 | **Collection Date:** | 11/17/2010 12:17:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011764-03 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| n-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| n-Propylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Styrene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Xylenes, Total | ND | 1.5 | | µg/L | 1 | 11/21/2010 1:48:07 AM |
| Surr: 1,2-Dichloroethane-d4 | 101 | 77.7-113 | | %REC | 1 | 11/21/2010 1:48:07 AM |
| Surr: 4-Bromofluorobenzene | 97.9 | 76.4-106 | | %REC | 1 | 11/21/2010 1:48:07 AM |
| Surr: Dibromofluoromethane | 102 | 91.6-125 | | %REC | 1 | 11/21/2010 1:48:07 AM |
| Surr: Toluene-d8 | 99.6 | 92.3-107 | | %REC | 1 | 11/21/2010 1:48:07 AM |
| **EPA 120.1: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **IC** |
| Specific Conductance | 8800 | 0.010 | | µmhos/cm | 1 | 11/23/2010 12:47:00 PM |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** |
| Total Dissolved Solids | 8800 | 100 | | mg/L | 1 | 11/29/2010 9:17:00 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | MCL | Maximum Contaminant Level |
| NC | Non-Chlorinated | ND | Not Detected at the Reporting Limit |
| PQL | Practical Quantitation Limit | S | Spike recovery outside accepted recovery limits |

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-49 |
| **Lab Order:** | 1011764 | **Collection Date:** | 11/17/2010 1:25:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011764-04 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | ND | 1.0 | | mg/L | 1 | 11/19/2010 1:50:43 PM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 11/19/2010 1:50:43 PM |
| Surr: DNOP | 117 | 86.9-151 | | %REC | 1 | 11/19/2010 1:50:43 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 0.12 | 0.050 | | mg/L | 1 | 11/24/2010 11:17:07 PM |
| Surr: BFB | 103 | 84.5-118 | | %REC | 1 | 11/24/2010 11:17:07 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | 0.51 | 0.10 | | mg/L | 1 | 11/29/2010 3:23:06 PM |
| Chloride | 3400 | 100 | | mg/L | 200 | 12/1/2010 12:59:02 AM |
| Bromide | 2.1 | 2.0 | | mg/L | 20 | 11/29/2010 3:40:31 PM |
| Sulfate | 7000 | 100 | | mg/L | 200 | 12/1/2010 12:59:02 AM |
| **EPA 6010B: HARDNESS** | | | | | | Analyst: **RAGS** |
| Hardness (As CaCO3) | 1900 | 1.0 | | mg/L | 1 | 12/3/2010 |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **ELS** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 11/23/2010 1:38:27 PM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **RAGS** |
| Calcium | 630 | 10 | | mg/L | 10 | 12/3/2010 1:17:52 PM |
| Magnesium | 92 | 1.0 | | mg/L | 1 | 12/3/2010 12:25:37 PM |
| Potassium | 14 | 1.0 | | mg/L | 1 | 12/3/2010 12:25:37 PM |
| Sodium | 1700 | 100 | | mg/L | 100 | 12/3/2010 1:20:12 PM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Arsenic | ND | 0.10 | | mg/L | 5 | 11/30/2010 4:47:19 PM |
| Barium | ND | 0.10 | | mg/L | 5 | 11/30/2010 4:47:19 PM |
| Cadmium | ND | 0.010 | | mg/L | 5 | 11/30/2010 4:47:19 PM |
| Chromium | ND | 0.030 | | mg/L | 5 | 11/30/2010 4:47:19 PM |
| Lead | ND | 0.025 | | mg/L | 5 | 11/30/2010 4:47:19 PM |
| Selenium | ND | 0.25 | | mg/L | 5 | 11/30/2010 4:47:19 PM |
| Silver | ND | 0.025 | | mg/L | 5 | 11/30/2010 4:47:19 PM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Benzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Toluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Methyl tert-butyl ether (MTBE) | 28 | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |

*Qualifiers:*

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-49 |
| **Lab Order:** | 1011764 | **Collection Date:** | 11/17/2010 1:25:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011764-04 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Acetone | ND | 10 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Isopropylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 11/21/2010 2:15:46 AM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | TW-49 |
| **Lab Order:** | 1011764 | **Collection Date:** | 11/17/2010 1:25:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011764-04 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| n-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| n-Propylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Styrene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Xylenes, Total | ND | 1.5 | | µg/L | 1 | 11/21/2010 2:15:46 AM |
| Surr: 1,2-Dichloroethane-d4 | 101 | 77.7-113 | | %REC | 1 | 11/21/2010 2:15:46 AM |
| Surr: 4-Bromofluorobenzene | 110 | 76.4-106 | S | %REC | 1 | 11/21/2010 2:15:46 AM |
| Surr: Dibromofluoromethane | 101 | 91.6-125 | | %REC | 1 | 11/21/2010 2:15:46 AM |
| Surr: Toluene-d8 | 102 | 92.3-107 | | %REC | 1 | 11/21/2010 2:15:46 AM |
| **EPA 120.1: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **IC** |
| Specific Conductance | 8000 | 0.010 | | µmhos/cm | 1 | 11/23/2010 12:49:00 PM |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** |
| Total Dissolved Solids | 7470 | 100 | | mg/L | 1 | 11/29/2010 9:17:00 AM |

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | MW-5 |
| **Lab Order:** | 1011764 | **Collection Date:** | 11/17/2010 10:00:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011764-05 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | ND | 1.0 | | mg/L | 1 | 11/19/2010 2:24:51 PM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 11/19/2010 2:24:51 PM |
| Surr: DNOP | 122 | 86.9-151 | | %REC | 1 | 11/19/2010 2:24:51 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 0.11 | 0.050 | | mg/L | 1 | 11/24/2010 11:45:56 PM |
| Surr: BFB | 101 | 84.5-118 | | %REC | 1 | 11/24/2010 11:45:56 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | ND | 2.0 | | mg/L | 20 | 12/1/2010 1:21:29 AM |
| Chloride | 310 | 10 | | mg/L | 20 | 12/1/2010 1:21:29 AM |
| Bromide | 0.77 | 0.10 | | mg/L | 1 | 12/1/2010 1:10:15 AM |
| Sulfate | 3000 | 50 | | mg/L | 100 | 12/2/2010 2:42:44 AM |
| **EPA 6010B: HARDNESS** | | | | | | Analyst: **RAGS** |
| Hardness (As CaCO3) | 500 | 1.0 | | mg/L | 1 | 12/3/2010 |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **ELS** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 11/23/2010 1:40:18 PM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **RAGS** |
| Calcium | 150 | 5.0 | | mg/L | 5 | 12/3/2010 1:22:29 PM |
| Magnesium | 29 | 1.0 | | mg/L | 1 | 12/3/2010 12:29:06 PM |
| Potassium | 6.1 | 1.0 | | mg/L | 1 | 12/3/2010 12:29:06 PM |
| Sodium | 1200 | 20 | | mg/L | 20 | 12/3/2010 1:32:43 PM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Arsenic | ND | 0.020 | | mg/L | 1 | 11/30/2010 3:50:52 PM |
| Barium | ND | 0.020 | | mg/L | 1 | 11/30/2010 3:50:52 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/30/2010 3:50:52 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 11/30/2010 3:50:52 PM |
| Lead | ND | 0.0050 | | mg/L | 1 | 11/30/2010 3:50:52 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/30/2010 3:50:52 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/30/2010 3:50:52 PM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Benzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Toluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Methyl tert-butyl ether (MTBE) | 54 | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | MW-5 |
| **Lab Order:** | 1011764 | **Collection Date:** | 11/17/2010 10:00:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011764-05 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Acetone | ND | 10 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| cis-1,2-DCE | 3.1 | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Isopropylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 11/21/2010 2:43:25 AM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | MW-5 |
| **Lab Order:** | 1011764 | **Collection Date:** | 11/17/2010 10:00:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011764-05 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| n-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| n-Propylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Styrene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Xylenes, Total | ND | 1.5 | | µg/L | 1 | 11/21/2010 2:43:25 AM |
| Surr: 1,2-Dichloroethane-d4 | 94.7 | 77.7-113 | | %REC | 1 | 11/21/2010 2:43:25 AM |
| Surr: 4-Bromofluorobenzene | 102 | 76.4-106 | | %REC | 1 | 11/21/2010 2:43:25 AM |
| Surr: Dibromofluoromethane | 99.1 | 91.6-125 | | %REC | 1 | 11/21/2010 2:43:25 AM |
| Surr: Toluene-d8 | 98.2 | 92.3-107 | | %REC | 1 | 11/21/2010 2:43:25 AM |
| **EPA 120.1: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **IC** |
| Specific Conductance | 5400 | 0.010 | | µmhos/cm | 1 | 11/23/2010 12:51:00 PM |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** |
| Total Dissolved Solids | 4630 | 100 | | mg/L | 1 | 11/29/2010 9:17:00 AM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | MW-20 |
| **Lab Order:** | 1011764 | **Collection Date:** | 11/17/2010 11:45:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011764-06 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | ND | 1.0 | | mg/L | 1 | 11/20/2010 12:10:54 PM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 11/20/2010 12:10:54 PM |
| Surr: DNOP | 122 | 86.9-151 | | %REC | 1 | 11/20/2010 12:10:54 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 1.0 | 0.050 | | mg/L | 1 | 11/25/2010 12:14:47 AM |
| Surr: BFB | 140 | 84.5-118 | S | %REC | 1 | 11/25/2010 12:14:47 AM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | ND | 0.50 | | mg/L | 5 | 12/2/2010 2:53:58 AM |
| Chloride | 430 | 25 | | mg/L | 50 | 12/1/2010 1:55:10 AM |
| Bromide | 0.72 | 0.10 | | mg/L | 1 | 12/1/2010 1:43:56 AM |
| Sulfate | 2000 | 25 | | mg/L | 50 | 12/1/2010 1:55:10 AM |
| **EPA 6010B: HARDNESS** | | | | | | Analyst: **RAGS** |
| Hardness (As CaCO3) | 1200 | 1.0 | | mg/L | 1 | 12/3/2010 |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **ELS** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 11/23/2010 1:42:01 PM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **RAGS** |
| Calcium | 410 | 10 | | mg/L | 10 | 12/3/2010 1:35:00 PM |
| Magnesium | 47 | 1.0 | | mg/L | 1 | 12/3/2010 12:34:13 PM |
| Potassium | 4.1 | 1.0 | | mg/L | 1 | 12/3/2010 12:34:13 PM |
| Sodium | 840 | 10 | | mg/L | 10 | 12/3/2010 1:35:00 PM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Arsenic | ND | 0.020 | | mg/L | 1 | 11/30/2010 3:54:57 PM |
| Barium | 0.020 | 0.020 | | mg/L | 1 | 11/30/2010 3:54:57 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/30/2010 3:54:57 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 11/30/2010 3:54:57 PM |
| Lead | ND | 0.0050 | | mg/L | 1 | 11/30/2010 3:54:57 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/30/2010 3:54:57 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/30/2010 3:54:57 PM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Benzene | 1.6 | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Toluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Methyl tert-butyl ether (MTBE) | 160 | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |

**Qualifiers:**

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- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | MW-20 |
| **Lab Order:** | 1011764 | **Collection Date:** | 11/17/2010 11:45:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011764-06 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Acetone | ND | 10 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Isopropylbenzene | 2.0 | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 11/21/2010 3:11:03 AM |

**Qualifiers:**

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- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | MW-20 |
| **Lab Order:** | 1011764 | **Collection Date:** | 11/17/2010 11:45:00 AM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011764-06 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| n-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| n-Propylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| sec-Butylbenzene | 1.3 | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Styrene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| tert-Butylbenzene | 1.4 | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Xylenes, Total | ND | 1.5 | | µg/L | 1 | 11/21/2010 3:11:03 AM |
| Surr: 1,2-Dichloroethane-d4 | 112 | 77.7-113 | | %REC | 1 | 11/21/2010 3:11:03 AM |
| Surr: 4-Bromofluorobenzene | 94.9 | 76.4-106 | | %REC | 1 | 11/21/2010 3:11:03 AM |
| Surr: Dibromofluoromethane | 99.0 | 91.6-125 | | %REC | 1 | 11/21/2010 3:11:03 AM |
| Surr: Toluene-d8 | 99.0 | 92.3-107 | | %REC | 1 | 11/21/2010 3:11:03 AM |
| **EPA 120.1: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **IC** |
| Specific Conductance | 4700 | 0.010 | | µmhos/cm | 1 | 11/23/2010 12:53:00 PM |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** |
| Total Dissolved Solids | 3950 | 40.0 | | mg/L | 1 | 11/29/2010 9:17:00 AM |

Qualifiers:

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | MCL | Maximum Contaminant Level |
| NC | Non-Chlorinated | ND | Not Detected at the Reporting Limit |
| PQL | Practical Quantitation Limit | S | Spike recovery outside accepted recovery limits |

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | MW-21 |
| **Lab Order:** | 1011764 | **Collection Date:** | 11/17/2010 12:42:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011764-07 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | ND | 1.0 | | mg/L | 1 | 11/20/2010 12:44:46 PM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 11/20/2010 12:44:46 PM |
| Surr: DNOP | 129 | 86.9-151 | | %REC | 1 | 11/20/2010 12:44:46 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 0.12 | 0.050 | | mg/L | 1 | 11/25/2010 12:43:40 AM |
| Surr: BFB | 104 | 84.5-118 | | %REC | 1 | 11/25/2010 12:43:40 AM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | 0.64 | 0.50 | | mg/L | 5 | 12/2/2010 3:05:12 AM |
| Chloride | 820 | 50 | | mg/L | 100 | 12/1/2010 2:40:04 AM |
| Bromide | 0.87 | 0.10 | | mg/L | 1 | 12/1/2010 2:28:51 AM |
| Sulfate | 3500 | 50 | | mg/L | 100 | 12/1/2010 2:40:04 AM |
| **EPA 6010B: HARDNESS** | | | | | | Analyst: **RAGS** |
| Hardness (As CaCO3) | 1400 | 1.0 | | mg/L | 1 | 12/3/2010 |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **ELS** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 11/23/2010 1:43:45 PM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **RAGS** |
| Calcium | 460 | 10 | | mg/L | 10 | 12/3/2010 1:37:15 PM |
| Magnesium | 64 | 1.0 | | mg/L | 1 | 12/3/2010 12:37:38 PM |
| Potassium | 7.4 | 1.0 | | mg/L | 1 | 12/3/2010 12:37:38 PM |
| Sodium | 1400 | 100 | | mg/L | 100 | 12/3/2010 1:41:11 PM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Arsenic | 0.040 | 0.020 | | mg/L | 1 | 12/7/2010 10:54:07 AM |
| Barium | ND | 0.020 | | mg/L | 1 | 12/7/2010 10:54:07 AM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 12/7/2010 10:54:07 AM |
| Calcium | 390 | 5.0 | | mg/L | 5 | 11/30/2010 4:57:46 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 12/7/2010 10:54:07 AM |
| Lead | ND | 0.0050 | | mg/L | 1 | 12/7/2010 10:54:07 AM |
| Magnesium | 60 | 1.0 | | mg/L | 1 | 12/7/2010 10:54:07 AM |
| Potassium | 7.2 | 1.0 | | mg/L | 1 | 11/30/2010 4:01:02 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 12/7/2010 10:54:07 AM |
| Silver | ND | 0.0050 | | mg/L | 1 | 12/7/2010 10:54:07 AM |
| Sodium | 1400 | 20 | | mg/L | 20 | 12/7/2010 10:58:18 AM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | MW-21 |
| **Lab Order:** | 1011764 | **Collection Date:** | 11/17/2010 12:42:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011764-07 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: RAA |
| Benzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Toluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Methyl tert-butyl ether (MTBE) | 83 | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Acetone | ND | 10 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Dec-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Animas Environmental Services | **Client Sample ID:** | MW-21 |
| **Lab Order:** | 1011764 | **Collection Date:** | 11/17/2010 12:42:00 PM |
| **Project:** | TW 810 Refinery | **Date Received:** | 11/18/2010 |
| **Lab ID:** | 1011764-07 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **RAA** |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Isopropylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| n-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| n-Propylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Styrene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Xylenes, Total | ND | 1.5 | | µg/L | 1 | 11/21/2010 3:38:39 AM |
| Surr: 1,2-Dichloroethane-d4 | 95.4 | 77.7-113 | | %REC | 1 | 11/21/2010 3:38:39 AM |
| Surr: 4-Bromofluorobenzene | 101 | 76.4-106 | | %REC | 1 | 11/21/2010 3:38:39 AM |
| Surr: Dibromofluoromethane | 102 | 91.6-125 | | %REC | 1 | 11/21/2010 3:38:39 AM |
| Surr: Toluene-d8 | 101 | 92.3-107 | | %REC | 1 | 11/21/2010 3:38:39 AM |
| **EPA 120.1: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **IC** |
| Specific Conductance | 6700 | 0.010 | | µmhos/cm | 1 | 11/23/2010 12:55:00 PM |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** |
| Total Dissolved Solids | 6270 | 100 | | mg/L | 1 | 11/29/2010 9:17:00 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | MCL | Maximum Contaminant Level |
| NC | Non-Chlorinated | ND | Not Detected at the Reporting Limit |
| PQL | Practical Quantitation Limit | S | Spike recovery outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Animas Environmental Services
**Project:** TW 810 Refinery **Work Order:** 1011764

| Analyte | Result | Units | PQL | SPK Val | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 300.0: Anions** | | | | | | | | | | | |
| **Sample ID: 1011764-01DMSD** | | *MSD* | | | | Batch ID: **R42387** | | Analysis Date: | | 11/29/2010 1:38:39 PM | |
| Fluoride | 1.265 | mg/L | 0.10 | 0.5 | 0.8112 | 90.8 | 71.7 | 114 | 2.60 | 20 | |
| Bromide | 2.533 | mg/L | 0.10 | 2.5 | 0.2638 | 90.8 | 82 | 112 | 7.28 | 20 | |
| **Sample ID: MB** | | *MBLK* | | | | Batch ID: **R42387** | | Analysis Date: | | 11/29/2010 9:41:34 AM | |
| Fluoride | ND | mg/L | 0.10 | | | | | | | | |
| Chloride | ND | mg/L | 0.50 | | | | | | | | |
| Bromide | ND | mg/L | 0.10 | | | | | | | | |
| Sulfate | ND | mg/L | 0.50 | | | | | | | | |
| **Sample ID: MB** | | *MBLK* | | | | Batch ID: **R42418** | | Analysis Date: | | 11/30/2010 3:15:02 PM | |
| Fluoride | ND | mg/L | 0.10 | | | | | | | | |
| Chloride | ND | mg/L | 0.50 | | | | | | | | |
| Bromide | ND | mg/L | 0.10 | | | | | | | | |
| Sulfate | ND | mg/L | 0.50 | | | | | | | | |
| **Sample ID: MB** | | *MBLK* | | | | Batch ID: **R42439** | | Analysis Date: | | 12/1/2010 11:31:48 PM | |
| Fluoride | ND | mg/L | 0.10 | | | | | | | | |
| Chloride | ND | mg/L | 0.50 | | | | | | | | |
| Bromide | ND | mg/L | 0.10 | | | | | | | | |
| Sulfate | ND | mg/L | 0.50 | | | | | | | | |
| **Sample ID: LCS** | | *LCS* | | | | Batch ID: **R42387** | | Analysis Date: | | 11/29/2010 9:58:59 AM | |
| Fluoride | 0.4953 | mg/L | 0.10 | 0.5 | 0 | 99.1 | 90 | 110 | | | |
| Chloride | 4.867 | mg/L | 0.50 | 5 | 0 | 97.3 | 90 | 110 | | | |
| Bromide | 2.486 | mg/L | 0.10 | 2.5 | 0 | 99.4 | 90 | 110 | | | |
| Sulfate | 9.828 | mg/L | 0.50 | 10 | 0 | 98.3 | 90 | 110 | | | |
| **Sample ID: LCS** | | *LCS* | | | | Batch ID: **R42418** | | Analysis Date: | | 11/30/2010 3:26:15 PM | |
| Fluoride | 0.5470 | mg/L | 0.10 | 0.5 | 0 | 109 | 90 | 110 | | | |
| Chloride | 5.087 | mg/L | 0.50 | 5 | 0 | 102 | 90 | 110 | | | |
| Bromide | 2.604 | mg/L | 0.10 | 2.5 | 0 | 104 | 90 | 110 | | | |
| Sulfate | 10.31 | mg/L | 0.50 | 10 | 0 | 103 | 90 | 110 | | | |
| **Sample ID: LCS** | | *LCS* | | | | Batch ID: **R42439** | | Analysis Date: | | 12/1/2010 11:43:01 PM | |
| Fluoride | 0.5160 | mg/L | 0.10 | 0.5 | 0 | 103 | 90 | 110 | | | |
| Chloride | 4.946 | mg/L | 0.50 | 5 | 0 | 98.9 | 90 | 110 | | | |
| Bromide | 2.420 | mg/L | 0.10 | 2.5 | 0 | 96.8 | 90 | 110 | | | |
| Sulfate | 10.25 | mg/L | 0.50 | 10 | 0 | 102 | 90 | 110 | | | |
| **Sample ID: 1011764-01DMS** | | *MS* | | | | Batch ID: **R42387** | | Analysis Date: | | 11/29/2010 1:21:15 PM | |
| Fluoride | 1.299 | mg/L | 0.10 | 0.5 | 0.8112 | 97.5 | 71.7 | 114 | | | |
| Bromide | 2.724 | mg/L | 0.10 | 2.5 | 0.2638 | 98.4 | 82 | 112 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Animas Environmental Services
**Project:** TW 810 Refinery **Work Order:** 1011764

| Analyte | Result | Units | PQL | SPK Val | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8015B: Diesel Range** | | | | | | | | | | | |
| **Sample ID: MB-24587** | | *MBLK* | | | | Batch ID: | **24587** | Analysis Date: | | 11/19/2010 9:52:42 AM | |
| Diesel Range Organics (DRO) | ND | mg/L | 1.0 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | mg/L | 5.0 | | | | | | | | |
| **Sample ID: LCS-24587** | | *LCS* | | | | Batch ID: | **24587** | Analysis Date: | | 11/19/2010 10:26:33 AM | |
| Diesel Range Organics (DRO) | 5.530 | mg/L | 1.0 | 5 | 0 | 111 | 74 | 157 | | | |
| **Sample ID: LCSD-24587** | | *LCSD* | | | | Batch ID: | **24587** | Analysis Date: | | 11/19/2010 11:00:24 AM | |
| Diesel Range Organics (DRO) | 5.780 | mg/L | 1.0 | 5 | 0 | 116 | 74 | 157 | 4.42 | 23 | |
| **Method: EPA Method 8015B: Gasoline Range** | | | | | | | | | | | |
| **Sample ID: 5ML RB** | | *MBLK* | | | | Batch ID: | **R42340** | Analysis Date: | | 11/24/2010 8:28:50 AM | |
| Gasoline Range Organics (GRO) | ND | mg/L | 0.050 | | | | | | | | |
| **Sample ID: b 14** | | *MBLK* | | | | Batch ID: | **R42340** | Analysis Date: | | 11/24/2010 2:36:43 PM | |
| Gasoline Range Organics (GRO) | ND | mg/L | 0.050 | | | | | | | | |
| **Sample ID: b 48** | | *MBLK* | | | | Batch ID: | **R42340** | Analysis Date: | | 11/25/2010 6:59:00 AM | |
| Gasoline Range Organics (GRO) | ND | mg/L | 0.050 | | | | | | | | |
| **Sample ID: 2.5UG GRO LCS-II** | | *LCS* | | | | Batch ID: | **R42340** | Analysis Date: | | 11/24/2010 8:52:32 PM | |
| Gasoline Range Organics (GRO) | 0.5210 | mg/L | 0.050 | 0.5 | 0 | 104 | 83.7 | 124 | | | |
| **Sample ID: 2.5UG GRO LCS** | | *LCS* | | | | Batch ID: | **R42340** | Analysis Date: | | 11/24/2010 12:18:10 PM | |
| Gasoline Range Organics (GRO) | 0.5500 | mg/L | 0.050 | 0.5 | 0 | 110 | 83.7 | 124 | | | |
| **Sample ID: 2.5UG GRO LCS-III** | | *LCS* | | | | Batch ID: | **R42340** | Analysis Date: | | 11/25/2010 7:56:42 AM | |
| Gasoline Range Organics (GRO) | 0.5038 | mg/L | 0.050 | 0.5 | 0 | 101 | 83.7 | 124 | | | |
| **Sample ID: 2.5UG GRO LCSD** | | *LCSD* | | | | Batch ID: | **R42340** | Analysis Date: | | 11/24/2010 12:47:11 PM | |
| Gasoline Range Organics (GRO) | 0.5196 | mg/L | 0.050 | 0.5 | 0 | 104 | 83.7 | 124 | 5.68 | 12 | |
| **Sample ID: 2.5UG GRO LCSD-III** | | *LCSD* | | | | Batch ID: | **R42340** | Analysis Date: | | 11/25/2010 8:25:31 AM | |
| Gasoline Range Organics (GRO) | 0.5020 | mg/L | 0.050 | 0.5 | 0 | 100 | 83.7 | 124 | 0.358 | 12 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Animas Environmental Services
**Project:** TW 810 Refinery **Work Order:** 1011764

| Analyte | Result | Units | PQL | SPK Val | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8260B: VOLATILES** | | | | | | | | | | | |
| **Sample ID: 1011764-01a msd** | | *MSD* | | | | Batch ID: **R42279** | | Analysis Date: | | 11/20/2010 11:02:50 PM | |
| Benzene | 19.19 | µg/L | 1.0 | 20 | 0 | 95.9 | 73.1 | 117 | 0.857 | 11.3 | |
| Toluene | 20.81 | µg/L | 1.0 | 20 | 0 | 104 | 82.9 | 109 | 5.80 | 11.6 | |
| Chlorobenzene | 20.13 | µg/L | 1.0 | 20 | 0 | 101 | 87.5 | 110 | 4.45 | 10.6 | |
| 1,1-Dichloroethene | 21.42 | µg/L | 1.0 | 20 | 0 | 107 | 66.2 | 131 | 3.37 | 14.4 | |
| Trichloroethene (TCE) | 17.38 | µg/L | 1.0 | 20 | 0 | 86.9 | 67.1 | 110 | 3.16 | 11.2 | |
| **Sample ID: 5ml-rb** | | *MBLK* | | | | Batch ID: **R42279** | | Analysis Date: | | 11/20/2010 11:08:52 AM | |
| Benzene | ND | µg/L | 1.0 | | | | | | | | |
| Toluene | ND | µg/L | 1.0 | | | | | | | | |
| Ethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | µg/L | 1.0 | | | | | | | | |
| Naphthalene | ND | µg/L | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | µg/L | 4.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | µg/L | 4.0 | | | | | | | | |
| Acetone | ND | µg/L | 10 | | | | | | | | |
| Bromobenzene | ND | µg/L | 1.0 | | | | | | | | |
| Bromodichloromethane | ND | µg/L | 1.0 | | | | | | | | |
| Bromoform | ND | µg/L | 1.0 | | | | | | | | |
| Bromomethane | ND | µg/L | 3.0 | | | | | | | | |
| 2-Butanone | ND | µg/L | 10 | | | | | | | | |
| Carbon disulfide | ND | µg/L | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | µg/L | 1.0 | | | | | | | | |
| Chlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| Chloroethane | ND | µg/L | 2.0 | | | | | | | | |
| Chloroform | ND | µg/L | 1.0 | | | | | | | | |
| Chloromethane | ND | µg/L | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | µg/L | 1.0 | | | | | | | | |
| 4-Chlorotoluene | ND | µg/L | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | µg/L | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | µg/L | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | µg/L | 1.0 | | | | | | | | |
| Dibromomethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | µg/L | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | µg/L | 1.0 | | | | | | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Animas Environmental Services
**Project:** TW 810 Refinery **Work Order:** 1011764

| Analyte | Result | Units | PQL | SPK Val | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8260B: VOLATILES** | | | | | | | | | | | |
| **Sample ID: 5ml-rb** | | *MBLK* | | | | | | | | | |
| | | | | Batch ID: **R42279** | | Analysis Date: 11/20/2010 11:08:52 AM | | | | | |
| 2,2-Dichloropropane | ND | µg/L | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | µg/L | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | µg/L | 1.0 | | | | | | | | |
| 2-Hexanone | ND | µg/L | 10 | | | | | | | | |
| Isopropylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | µg/L | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | µg/L | 10 | | | | | | | | |
| Methylene Chloride | ND | µg/L | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| n-Propylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| Styrene | ND | µg/L | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | µg/L | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | µg/L | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | µg/L | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | µg/L | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | µg/L | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | µg/L | 2.0 | | | | | | | | |
| Vinyl chloride | ND | µg/L | 1.0 | | | | | | | | |
| Xylenes, Total | ND | µg/L | 1.5 | | | | | | | | |
| **Sample ID: b3** | | *MBLK* | | | | | | | | | |
| | | | | Batch ID: **R42279** | | Analysis Date: 11/20/2010 11:57:45 PM | | | | | |
| Benzene | ND | µg/L | 1.0 | | | | | | | | |
| Toluene | ND | µg/L | 1.0 | | | | | | | | |
| Ethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | µg/L | 1.0 | | | | | | | | |
| Naphthalene | ND | µg/L | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | µg/L | 4.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | µg/L | 4.0 | | | | | | | | |
| Acetone | ND | µg/L | 10 | | | | | | | | |
| Bromobenzene | ND | µg/L | 1.0 | | | | | | | | |
| Bromodichloromethane | ND | µg/L | 1.0 | | | | | | | | |
| Bromoform | ND | µg/L | 1.0 | | | | | | | | |
| Bromomethane | ND | µg/L | 3.0 | | | | | | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Animas Environmental Services
**Project:** TW 810 Refinery **Work Order:** 1011764

**Method:** EPA Method 8260B: VOLATILES
**Sample ID:** b3 *MBLK* Batch ID: **R42279** Analysis Date: 11/20/2010 11:57:45 PM

| Analyte | Result | Units | PQL | SPK Val | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone | ND | µg/L | 10 | | | | | | | | |
| Carbon disulfide | ND | µg/L | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | µg/L | 1.0 | | | | | | | | |
| Chlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| Chloroethane | ND | µg/L | 2.0 | | | | | | | | |
| Chloroform | ND | µg/L | 1.0 | | | | | | | | |
| Chloromethane | ND | µg/L | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | µg/L | 1.0 | | | | | | | | |
| 4-Chlorotoluene | ND | µg/L | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | µg/L | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | µg/L | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | µg/L | 1.0 | | | | | | | | |
| Dibromomethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | µg/L | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | µg/L | 1.0 | | | | | | | | |
| 2,2-Dichloropropane | ND | µg/L | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | µg/L | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | µg/L | 1.0 | | | | | | | | |
| 2-Hexanone | ND | µg/L | 10 | | | | | | | | |
| Isopropylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | µg/L | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | µg/L | 10 | | | | | | | | |
| Methylene Chloride | ND | µg/L | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| n-Propylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| Styrene | ND | µg/L | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | µg/L | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | µg/L | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | µg/L | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | µg/L | 1.0 | | | | | | | | |

**Qualifiers:**

- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- H Holding times for preparation or analysis exceeded
- NC Non-Chlorinated
- R RPD outside accepted recovery limits

# QA/QC SUMMARY REPORT

**Client:** Animas Environmental Services
**Project:** TW 810 Refinery **Work Order:** 1011764

| Analyte | Result | Units | PQL | SPK Val | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8260B: VOLATILES** | | | | | | | | | | | |
| **Sample ID: b3** | | *MBLK* | | | | Batch ID: | **R42279** | Analysis Date: | 11/20/2010 11:57:45 PM | | |
| Trichloroethene (TCE) | ND | µg/L | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | µg/L | 2.0 | | | | | | | | |
| Vinyl chloride | ND | µg/L | 1.0 | | | | | | | | |
| Xylenes, Total | ND | µg/L | 1.5 | | | | | | | | |
| **Sample ID: 100ng lcs2** | | *LCS* | | | | Batch ID: | **R42279** | Analysis Date: | 11/20/2010 2:07:57 PM | | |
| Benzene | 18.75 | µg/L | 1.0 | 20 | 0 | 93.8 | 84.6 | 109 | | | |
| Toluene | 20.92 | µg/L | 1.0 | 20 | 0 | 105 | 81 | 114 | | | |
| Chlorobenzene | 20.92 | µg/L | 1.0 | 20 | 0 | 105 | 85.2 | 113 | | | |
| 1,1-Dichloroethene | 21.65 | µg/L | 1.0 | 20 | 0 | 108 | 79.6 | 124 | | | |
| Trichloroethene (TCE) | 17.39 | µg/L | 1.0 | 20 | 0 | 87.0 | 78.3 | 102 | | | |
| **Sample ID: 100ng lcs3** | | *LCS* | | | | Batch ID: | **R42279** | Analysis Date: | 11/21/2010 12:52:57 AM | | |
| Benzene | 18.40 | µg/L | 1.0 | 20 | 0 | 92.0 | 84.6 | 109 | | | |
| Toluene | 20.68 | µg/L | 1.0 | 20 | 0 | 103 | 81 | 114 | | | |
| Chlorobenzene | 20.60 | µg/L | 1.0 | 20 | 0 | 103 | 85.2 | 113 | | | |
| 1,1-Dichloroethene | 21.51 | µg/L | 1.0 | 20 | 0 | 108 | 79.6 | 124 | | | |
| Trichloroethene (TCE) | 16.88 | µg/L | 1.0 | 20 | 0 | 84.4 | 78.3 | 102 | | | |
| **Sample ID: 1011764-01a ms** | | *MS* | | | | Batch ID: | **R42279** | Analysis Date: | 11/20/2010 10:35:11 PM | | |
| Benzene | 19.35 | µg/L | 1.0 | 20 | 0 | 96.8 | 73.1 | 117 | | | |
| Toluene | 22.05 | µg/L | 1.0 | 20 | 0 | 110 | 82.9 | 109 | | | S |
| Chlorobenzene | 21.05 | µg/L | 1.0 | 20 | 0 | 105 | 87.5 | 110 | | | |
| 1,1-Dichloroethene | 22.16 | µg/L | 1.0 | 20 | 0 | 111 | 66.2 | 131 | | | |
| Trichloroethene (TCE) | 16.84 | µg/L | 1.0 | 20 | 0 | 84.2 | 67.1 | 110 | | | |
| **Method: EPA Method 7470: Mercury** | | | | | | | | | | | |
| **Sample ID: MB-24639** | | *MBLK* | | | | Batch ID: | **24639** | Analysis Date: | 11/23/2010 1:23:52 PM | | |
| Mercury | ND | mg/L | 0.00020 | | | | | | | | |
| **Sample ID: LCS-24639** | | *LCS* | | | | Batch ID: | **24639** | Analysis Date: | 11/23/2010 1:25:39 PM | | |
| Mercury | 0.005262 | mg/L | 0.00020 | 0.005 | 0 | 105 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Animas Environmental Services
**Project:** TW 810 Refinery **Work Order:** 1011764

| Analyte | Result | Units | PQL | SPK Val | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 6010B: Dissolved Metals** | | | | | | | | | | | |
| **Sample ID: MB** | | *MBLK* | | | | Batch ID: | **R42480** | Analysis Date: | | 12/3/2010 11:44:23 AM | |
| Calcium | ND | mg/L | 1.0 | | | | | | | | |
| Magnesium | ND | mg/L | 1.0 | | | | | | | | |
| Potassium | ND | mg/L | 1.0 | | | | | | | | |
| Sodium | ND | mg/L | 1.0 | | | | | | | | |
| **Sample ID: LCS** | | *LCS* | | | | Batch ID: | **R42480** | Analysis Date: | | 12/3/2010 11:46:45 AM | |
| Calcium | 50.64 | mg/L | 1.0 | 50.5 | 0 | 100 | 80 | 120 | | | |
| Magnesium | 48.19 | mg/L | 1.0 | 50.5 | 0 | 95.4 | 80 | 120 | | | |
| Potassium | 44.83 | mg/L | 1.0 | 55 | 0 | 81.5 | 80 | 120 | | | |
| Sodium | 44.04 | mg/L | 1.0 | 50.5 | 0.1433 | 86.9 | 80 | 120 | | | |
| **Sample ID: LCSRR** | | *LCS* | | | | Batch ID: | **R42480** | Analysis Date: | | 12/3/2010 1:48:00 PM | |
| Calcium | 50.54 | mg/L | 1.0 | 50.5 | 0 | 100 | 80 | 120 | 0.211 | 0 | |
| Magnesium | 47.60 | mg/L | 1.0 | 50.5 | 0 | 94.3 | 80 | 120 | 1.24 | 0 | |
| Potassium | 44.23 | mg/L | 1.0 | 55 | 0 | 80.4 | 80 | 120 | 1.36 | 0 | |
| Sodium | 43.73 | mg/L | 1.0 | 50.5 | 0.1433 | 86.3 | 80 | 120 | 0.718 | 0 | |
| **Method: EPA 6010B: Total Recoverable Metals** | | | | | | | | | | | |
| **Sample ID: MB-24684** | | *MBLK* | | | | Batch ID: | **24684** | Analysis Date: | | 11/30/2010 1:51:05 PM | |
| Arsenic | ND | mg/L | 0.020 | | | | | | | | |
| Barium | ND | mg/L | 0.020 | | | | | | | | |
| Cadmium | ND | mg/L | 0.0020 | | | | | | | | |
| Calcium | ND | mg/L | 1.0 | | | | | | | | |
| Chromium | ND | mg/L | 0.0060 | | | | | | | | |
| Lead | ND | mg/L | 0.0050 | | | | | | | | |
| Magnesium | ND | mg/L | 1.0 | | | | | | | | |
| Potassium | ND | mg/L | 1.0 | | | | | | | | |
| Selenium | ND | mg/L | 0.050 | | | | | | | | |
| Sodium | ND | mg/L | 1.0 | | | | | | | | |
| **Sample ID: LCS-24684** | | *LCS* | | | | Batch ID: | **24684** | Analysis Date: | | 11/30/2010 1:54:30 PM | |
| Arsenic | 0.5285 | mg/L | 0.020 | 0.5 | 0 | 106 | 80 | 120 | | | |
| Barium | 0.5174 | mg/L | 0.020 | 0.5 | 0 | 103 | 80 | 120 | | | |
| Cadmium | 0.5406 | mg/L | 0.0020 | 0.5 | 0 | 108 | 80 | 120 | | | |
| Calcium | 50.09 | mg/L | 1.0 | 50 | 0 | 100 | 80 | 120 | | | |
| Chromium | 0.5215 | mg/L | 0.0060 | 0.5 | 0 | 104 | 80 | 120 | | | |
| Lead | 0.5301 | mg/L | 0.0050 | 0.5 | 0 | 106 | 80 | 120 | | | |
| Magnesium | 52.36 | mg/L | 1.0 | 50 | 0 | 105 | 80 | 120 | | | |
| Potassium | 55.43 | mg/L | 1.0 | 50 | 0 | 111 | 80 | 120 | | | |
| Selenium | 0.5264 | mg/L | 0.050 | 0.5 | 0 | 105 | 80 | 120 | | | |
| Silver | 0.6045 | mg/L | 0.0050 | 0.5 | 0.0150 | 118 | 80 | 120 | | | B |
| Sodium | 51.65 | mg/L | 1.0 | 50 | 0 | 103 | 80 | 120 | | | |

**Qualifiers:**

- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- H Holding times for preparation or analysis exceeded
- NC Non-Chlorinated
- R RPD outside accepted recovery limits

# QA/QC SUMMARY REPORT

**Client:** Animas Environmental Services
**Project:** TW 810 Refinery **Work Order:** 1011764

| Analyte | Result | Units | PQL | SPK Val | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: SM2540C MOD: Total Dissolved Solids** | | | | | | | | | | | |
| **Sample ID: MB-24667** | | *MBLK* | | | | Batch ID: | **24667** | Analysis Date: | 11/29/2010 9:17:00 AM | | |
| Total Dissolved Solids | ND | mg/L | 20.0 | | | | | | | | |
| **Sample ID: LCS-24667** | | *LCS* | | | | Batch ID: | **24667** | Analysis Date: | 11/29/2010 9:17:00 AM | | |
| Total Dissolved Solids | 1020 | mg/L | 20.0 | 1000 | 9 | 101 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

## Hall Environmental Analysis Laboratory, Inc.

### Sample Receipt Checklist

Client Name ANIMAS ENVIRONMENTAL  Date Received: 11/18/2010

Work Order Number 1011764  Received by: LNM

Checklist completed by: Signature  11/18/10 Date  Sample ID labels checked by: Initials

Matrix:  Carrier name: Greyhound

| | | | | |
|---|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ✔ | No | Not Present | |
| Custody seals intact on shipping container/cooler? | Yes ✔ | No | Not Present | Not Shipped |
| Custody seals intact on sample bottles? | Yes | No | N/A ✔ | |
| Chain of custody present? | Yes ✔ | No | | |
| Chain of custody signed when relinquished and received? | Yes ✔ | No | | |
| Chain of custody agrees with sample labels? | Yes ✔ | No | | |
| Samples in proper container/bottle? | Yes ✔ | No | | |
| Sample containers intact? | Yes ✔ | No | | |
| Sufficient sample volume for indicated test? | Yes ✔ | No | | |
| All samples received within holding time? | Yes ✔ | No | | |
| Water - VOA vials have zero headspace? | No VOA vials submitted | Yes ✔ | No | |
| Water - Preservation labels on bottle and cap match? | Yes ✔ | No | N/A | |
| Water - pH acceptable upon receipt? | Yes ✔ | No | N/A | |
| Container/Temp Blank temperature? | 1.3° | <6° C Acceptable If given sufficient time to cool. | | |

Number of preserved bottles checked for pH: 14

<2 >12 unless noted below.

COMMENTS:

Client contacted  Date contacted:  Person contacted

Contacted by:  Regarding:

Comments: ADDED 1mL HNO3 TO: 01C, 04C, 05C, 06C, 07C 500's TO PRESERVE FOR PROPER ANALYSIS. 11/18/10

Corrective Action

# Chain-of-Custody Record

Client: Animas Environmental Services LLC

Mailing Address: 624 E Comanche Farmington, NM 87401

Phone #: 505-564-2281

email or Fax#: 505-324-2022

QA/QC Package: ☑ Standard ☐ Level 4 (Full Validation)

Accreditation ☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time: ☑ Standard ☐ Rush _____

Project Name: TW 810 Refinery

Project #: AES 050204

Project Manager: Ross Kennemer

Sampler: Chad Dawson

On Ice: ☑ Yes ☐ No

Sample Temperature: 4.2

HEAL No.: 1011704

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. |
|---|---|---|---|---|---|---|
| 11-17-10 | 1037 | $H_2O$ | TW-35 | 6-40mL glass | 5-HCl 1-non | 1 |
| | 1120 | | TW-45 | 1-500mL plastic | $HNO_3$ | 2 |
| | 1217 | | TW-47 | 1-125mL plastic | $HNO_3$ | 3 |
| | 1325 | | TW-49 | 1-Liter plastic | non | 4 |
| | 1000 | | MW-5 | | | 5 |
| | 1145 | | MW-20 | | | 6 |
| | 1242 | | MW-21 | | | 7 |

Analysis Request

| BTEX + MTBE + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH Method 8015B (Gas/Diesel) MRO/DRO/GRO | TPH (Method 418.1) | EDB (Method 504.1) | 8310 (PNA or PAH) | RCRA 8 Metals 6010/7470 | Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) include MTBE/BTEX | 8270 (Semi-VOA) SM2540C TDS | 6010 Dissolved Metals (Ca, Mg, K, and Na) | 6010 Hardness as $CaCO_3$ | 300.0 Bromide, Chloride, Fluoride, Sulfate | EPA 1201 Specific Conductance | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | X | | | | X | | | X | X | X | X | X | X | |
| | | X | | | | X | | | X | X | X | X | X | X | |
| | | X | | | | X | | | X | X | X | X | X | X | |
| | | X | | | | X | | | X | X | X | X | X | X | |
| | | X | | | | X | | | X | X | X | X | X | X | |
| | | X | | | | X | | | X | X | X | X | X | X | |
| | | X | | | | X | | | X | X | X | X | X | X | |

| Date | Time | Relinquished by: | Received by: | Date | Time |
|---|---|---|---|---|---|
| 11-17-10 | 1445 | Chad R | Debrah Watson | 11-17-10 | 1445 |
| 11-17-10 | 1615 | Debrah Watson | | | |

Remarks:
Bill to BioTech
8015 GRO-DRO #60
Discounted Price for TDS

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

# DEPTH TO GROUNDWATER MEASUREMENT FORM

**Animas Environmental Services**
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Project: Groundwater Monitoring
Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Tech: Chad Dixon

Project No.: AES 050204
Date: 11-15-10
Time: 0930 - 1530
Form: 1 of 2

| Well I.D. | Time | Depth to NAPL (ft.) | Depth to Water (ft.) | NAPL Thickness (ft.) | Notes / Observations |
|---|---|---|---|---|---|
| TW-1 | 0953 | — | 30.98 | — | |
| TW-2 | 0958 | — | 29.11 | — | |
| TW-3 | 1003 | — | 28.16 | — | |
| TW-4 | 1007 | — | 29.51 | — | |
| TW-5 | 1012 | — | 25.70 | — | |
| TW-6 | 1022 | — | 24.90 | — | |
| TW-7 | 1026 | — | 22.37 | — | |
| TW-8 | 1030 | — | 29.87 | — | |
| TW-9 | 1034 | — | 12.30 | — | |
| TW-10 | 1038 | — | 12.59 | — | |
| TW-11 | 1053 | — | ~~11.52~~ 16.29 | — | |
| TW-12 | 1059 | — | 22.54 | — | |
| TW-13 | 1107 | 20.79 | 21.39 | 0.60 | |
| TW-14 | 1050 | — | 17.17 | — | |
| TW-15 | 1049 | — | 13.24 | — | |
| TW-16 | 1042 | — | 11.52 | — | |
| TW-17 | 1115 | — | ~~15.~~ 10.18 | — | |
| TW-18 | 1416 | — | 16.50 | — | |
| TW-19 | 1411 | 17.79 | 18.02 | 0.23 | |
| TW-20 | 1256 | 17.56 | 18.88 | 1.32 | |
| TW-21 | — | — | — | — | Well Damaged |
| TW-22 | 1354 | 14.94 | 15.14 | 0.20 | |
| TW-23 | 1117 | — | 9.10 | — | |
| TW-24 | 1345 | 11.17 | 11.30 | 0.13 | |
| TW-25 | 1357 | 14.40 | 14.71 | 0.31 | |
| TW-26 | 1245 | 15.85 | 17.06 | 1.21 | |
| TW-28 | 1251 | 15.49 | 16.67 | 1.18 | |
| TW-29 | 1350 | 9.45 | 10.23 | 0.80 | |
| TW-30 | 1340 | — | 6.54 | — | |
| TW-31 | 1337 | — | 7.20 | — | |
| TW-32 | 1325 | 9.30 | 10.87 | 1.57 | |
| TW-33 | 1256 | 12.97 | 13.15 | 0.18 | |
| TW-34 | 1433 | — | 19.93 | — | |

Wells measured with KECK water level or KECK interface tape, decontaminated between each well measurement.

# DEPTH TO GROUNDWATER MEASUREMENT FORM

**Animas Environmental Services**
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Project: Groundwater Monitoring
Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Tech: Chad Dunson

Project No.: AES 050204
Date: 11-15-16
Time: 0945-1530
Form: 2 of 2

| Well I.D. | Time | Depth to NAPL (ft.) | Depth to Water (ft.) | NAPL Thickness (ft.) | Notes / Observations |
|---|---|---|---|---|---|
| TW-35 | 1429 | — | 15.23 | — | |
| TW-36 | 1425 | 13.20 | 13.35 | 0.15 | |
| TW-37 | 1316 | — | 10.68 | — | |
| TW-38 | 1320 | — | 11.54 | — | |
| TW-39 | 1334 | — | 7.95 | — | |
| TW-40 | 1328 | 7.97 | 8.51 | 0.54 | |
| TW-41 | 1307 | — | 6.12 | — | |
| TW-42 | 1310 | — | 6.21 | — | |
| TW-43 | 1303 | — | 12.34 | — | |
| TW-44 | 1300 | 15.12 | 15.15 | 0.03 | |
| TW-45 | 1438 | — | 7.09 | — | |
| TW-46 | 1443 | — | 7.41 | — | |
| TW-47 | 1440 | — | 7.47 | — | 6.93 @ 1450 |
| TW-48 | 1125 | — | 7.39 | — | |
| TW-49 | 1500 | — | 6.36 | — | |
| TW-50 | 1126 | — | 8.06 | — | |
| MW-5 | 1313 | — | 5.17 | — | |
| MW-7 | 1133 | — | 8.83 | — | |
| MW-20 | 1442 | — | 10.05 | — | |
| MW-21 | 1454 | — | 3.68 | — | |

Wells measured with KECK water level or KECK interface tape, decontaminated between each well measurement.

## MONITORING WELL SAMPLING RECORD

Monitor Well No: TW-18

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: Chad Dresen
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 16.50 Time: 1416 (11-15-10) (taken at initial gauging of all wells)
Confirm D.T.W. (ft): 16.50 Time: 0938 (taken prior to purging well)
Final D.T.W. (ft): Time: (taken after sample collection)
If NAPL Present: D.T.P.: D.T.W.: Thickness: Time:

Project No.: AES 050204
Date: 11-16-10
Arrival Time: ~~37°~~ 0920
Air Temp: 34°
T.O.C. Elev. (ft): 5452.73
Total Well Depth (ft):

### Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
| 0939 | 17.66 | 4.471 | 0.70 | 7.07 | -14.9 | 0.50 | |
| 0943 | 17.16 | 4.651 | 0.85 | 7.10 | -16.9 | 1.75 | |
| 0951 | 16.85 | 4.730 | 0.82 | 7.14 | -18.9 | 3.00 | |
| 1000 | | | | | | SC | |
| | | | | | | | |
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### Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water:
Collected Samples Stored on Ice in Cooler:
Chain of Custody Record Complete:
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

revised: 08/10/09

## MONITORING WELL SAMPLING RECORD

Monitor Well No: TW-19

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): ____ Time: ____ (taken at initial gauging of all wells)
Confirm D.T.W. (ft): ____ Time: ____ (taken prior to purging well)
Final D.T.W. (ft): ____ Time: ____ (taken after sample collection)
If NAPL Present: D.T.P.: 17.79 D.T.W.: 18.02 Thickness: 0.23 Time: ____

Project No.: AES 050204
Date: 11/15/10
Arrival Time: ____
Air Temp: ____
T.O.C. Elev. (ft): 5458.49
Total Well Depth (ft): ____

### Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
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| | | NAPL | PRESENT | | | | |
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### Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water: ____
Collected Samples Stored on Ice in Cooler: ____
Chain of Custody Record Complete: ____
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

*revised: 08/10/09*

# MONITORING WELL SAMPLING RECORD

**Monitor Well No:** TW-20

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

**Site:** Thriftway #810 Refinery
**Location:** Bloomfield, New Mexico
**Project:** Groundwater Monitoring and Sampling
**Sampling Technician:** Chad Dawson
**Purge / No Purge:** Purge
**Well Diameter (in):** 2
**Initial D.T.W. (ft):** _____ **Time:** _____ *(taken at initial gauging of all wells)*
**Confirm D.T.W. (ft):** _____ **Time:** _____ *(taken prior to purging well)*
**Final D.T.W. (ft):** _____ **Time:** _____ *(taken after sample collection)*
**If NAPL Present:** D.T.P.: 17.56 D.T.W.: 18.88 **Thickness:** 1.32 **Time:** _____

**Project No.:** AES 050204
**Date:** 11/15/10
**Arrival Time:** _____
**Air Temp:** _____
**T.O.C. Elev. (ft):** 5453.74
**Total Well Depth (ft):** _____

## Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
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| | | NAPL | | | PRESENT | | |
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## Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

**Disposal of Purged Water:** _____
**Collected Samples Stored on Ice in Cooler:** _____
**Chain of Custody Record Complete:** _____
**Analytical Laboratory:** Hall Environmental Analysis Laboratory, Albuquerque, NM
**Equipment Used During Sampling:** Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

**Notes/Comments:**

*revised: 06/10/09*

## MONITORING WELL SAMPLING RECORD

Monitor Well No: **TW-22**

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): ____ Time: ____ *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): ____ Time: ____ *(taken prior to purging well)*
Final D.T.W. (ft): ____ Time: ____ *(taken after sample collection)*
If NAPL Present: D.T.P.: 14.94 D.T.W.: 15.14 Thickness: 0.20 Time: ____

Project No.: AES 050204
Date: 11/15/10
Arrival Time: ____
Air Temp: ____
T.O.C. Elev. (ft): 5450.19
Total Well Depth (ft): ____

### Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
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### Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials, 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water: ____
Collected Samples Stored on Ice in Cooler: ____
Chain of Custody Record Complete: ____
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

*revised: 08/10/09*

## MONITORING WELL SAMPLING RECORD

**Monitor Well No:** TW-24

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

**Site:** Thriftway #810 Refinery
**Location:** Bloomfield, New Mexico
**Project:** Groundwater Monitoring and Sampling
**Sampling Technician:** Chad Dawson
**Purge / No Purge:** Purge
**Well Diameter (in):** 2
**Initial D.T.W. (ft):** _____ **Time:** _____ *(taken at initial gauging of all wells)*
**Confirm D.T.W. (ft):** _____ **Time:** _____ *(taken prior to purging well)*
**Final D.T.W. (ft):** _____ **Time:** _____ *(taken after sample collection)*
**If NAPL Present:** D.T.P.: 11.17 D.T.W.: 11.30 Thickness: 0.13 Time: _____

**Project No.:** AES 050204
**Date:** 11/15/10
**Arrival Time:** _____
**Air Temp:** _____
**T.O.C. Elev. (ft):** 5444.79
**Total Well Depth (ft):** 17.45

### Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
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### Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

**Disposal of Purged Water:** _____
**Collected Samples Stored on Ice in Cooler:** _____
**Chain of Custody Record Complete:** _____
**Analytical Laboratory:** Hall Environmental Analysis Laboratory, Albuquerque, NM
**Equipment Used During Sampling:** Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

**Notes/Comments:**

*revised: 08/10/09*

## MONITORING WELL SAMPLING RECORD

Monitor Well No: **TW-25**

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel: (505) 564-2281 Fax (505) 324-2022

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): ____ Time: ____ *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): ____ Time: ____ *(taken prior to purging well)*
Final D.T.W. (ft): ____ Time: ____ *(taken after sample collection)*
If NAPL Present: D.T.P.: 14.90 D.T.W.: 14.71 Thickness: 0.31 Time: ____

Project No.: AES 050204
Date: 11/15/10
Arrival Time: ____
Air Temp: ____
T.O.C. Elev. (ft): 5448.8
Total Well Depth (ft): ____

### Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
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| | | NAPL PRESENT | | | | | |
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### Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials: 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water: ____
Collected Samples Stored on Ice in Cooler: ____
Chain of Custody Record Complete: ____
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

*revised: 08/10/09*

| MONITORING WELL SAMPLING RECORD | Animas Environmental Services |
|---|---|
| Monitor Well No: TW-26 | 624 E. Comanche, Farmington NM 87401<br>Tel. (505) 564-2281 Fax (505) 324-2022 |

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): _____ Time: _____ *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): _____ Time: _____ *(taken prior to purging well)*
Final D.T.W. (ft): _____ Time: _____ *(taken after sample collection)*
If NAPL Present: D.T.P.: 15.85 D.T.W.: 17.06 Thickness: 1.21 Time: _____

Project No.: AES 050204
Date: 11/15/10
Arrival Time: _____
Air Temp: _____
T.O.C. Elev. (ft): 5450.34
Total Well Depth (ft): _____

**Water Quality Parameters - Recorded During Well Purging**

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
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| | | NAPL | | PRESENT | | | |
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**Analytical Parameters (include analysis method and number and type of sample containers)**

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials: 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water: _____
Collected Samples Stored on Ice in Cooler: _____
Chain of Custody Record Complete: _____
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

*revised: 08/10/09*

# MONITORING WELL SAMPLING RECORD

Monitor Well No: **TW-28**

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): ____ Time: ____ *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): ____ Time: ____ *(taken prior to purging well)*
Final D.T.W. (ft): ____ Time: ____ *(taken after sample collection)*
If NAPL Present: D.T.P.: 15.49 D.T.W.: 16.67 Thickness: 1.18 Time: ____

Project No.: AES 050204
Date: 11-15-10
Arrival Time: ____
Air Temp: ____
T.O.C. Elev. (ft): 5449.24
Total Well Depth (ft): ____

## Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
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| | | NAPL | | PRESENT | | | |
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## Analytical Parameters (Include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water: ____
Collected Samples Stored on Ice in Cooler: ____
Chain of Custody Record Complete: ____
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

*revised: 05/10/09*

## MONITORING WELL SAMPLING RECORD

Monitor Well No: **TW-29**

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): ____ Time: ____ *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): ____ Time: ____ *(taken prior to purging well)*
Final D.T.W. (ft): ____ Time: ____ *(taken after sample collection)*
If NAPL Present: D.T.P.: 9.43 D.T.W.: 10.23 Thickness: 6.80 Time: ____

Project No.: AES 050204
Date: 11-15-10
Arrival Time: ____
Air Temp: ____
T.O.C. Elev. (ft): 5441.87
Total Well Depth (ft): ____

### Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
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### Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as $CaCO_3$ per EPA Method 6010/7470 (1-500 mL plastic w/ $HNO_3$ preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ $HNO_3$ preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water: ____
Collected Samples Stored on Ice in Cooler: ____
Chain of Custody Record Complete: ____
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

*revised: 08/10/09*

## MONITORING WELL SAMPLING RECORD

Monitor Well No: **TW-30**


Animas Environmental Services

624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022


Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 6.34 Time: 1340 (11-15-10) (taken at initial gauging of all wells)
Confirm D.T.W. (ft): 10.34 Time: 1025 (taken prior to purging well)
Final D.T.W. (ft): Time: (taken after sample collection)
If NAPL Present: D.T.P.: D.T.W.: Thickness: Time:

Project No.: AES 050204
Date: 11-16-10
Arrival Time: 1020
Air Temp: 48°
T.O.C. Elev. (ft): 5437.93
Total Well Depth (ft): 17.14

### Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
| 1024 | 14.85 | 7,120 | 0.68 | 7.02 | -12.2 | 0.50 | |
| 1030 | 14.97 | 7,167 | 0.59 | 7.00 | -11.2 | 1.75 | |
| 1039 | 15.28 | 6,832 | 0.61 | 6.96 | -8.8 | 3.00 | |
| 1045 | | | | | | SC | |
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### Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water:
Collected Samples Stored on Ice in Cooler:
Chain of Custody Record Complete:
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

*revised: 08/10/09*

# MONITORING WELL SAMPLING RECORD

**Monitor Well No:** TW-31


Animas Environmental Services

624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022


**Site:** Thriftway #810 Refinery
**Location:** Bloomfield, New Mexico
**Project:** Groundwater Monitoring and Sampling
**Sampling Technician:** Chad Dawson
**Purge / No Purge:** Purge
**Well Diameter (in):** 2
**Initial D.T.W. (ft):** 7.21 **Time:** 1537 (11-15-10) *(taken at initial gauging of all wells)*
**Confirm D.T.W. (ft):** 7.25 **Time:** 1055 *(taken prior to purging well)*
**Final D.T.W. (ft):** **Time:** *(taken after sample collection)*
**If NAPL Present:** D.T.P.: D.T.W.: Thickness: Time:

**Project No.:** AES 050204
**Date:** 11-16-10
**Arrival Time:** 1053
**Air Temp:** 44°
**T.O.C. Elev. (ft):** 5438.54
**Total Well Depth (ft):** 12.96

## Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
| 1059 | 15.21 | 5.686 | 0.69 | 7.03 | -12.7 | 0.50 | |
| 1103 | 15.47 | 5.546 | 0.91 | 7.00 | -11.2 | 1.75 | |
| 1107 | 15.87 | 5.526 | 0.99 | 6.98 | -10.0 | 3.00 | |
| 1109 | | | | | | SC | |
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## Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

**Disposal of Purged Water:**
**Collected Samples Stored on Ice in Cooler:**
**Chain of Custody Record Complete:**
**Analytical Laboratory:** Hall Environmental Analysis Laboratory, Albuquerque, NM
**Equipment Used During Sampling:** Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

**Notes/Comments:**

*revised: 08/10/09*

# MONITORING WELL SAMPLING RECORD

Monitor Well No: **TW-32**

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): ____ Time: ____ *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): ____ Time: ____ *(taken prior to purging well)*
Final D.T.W. (ft): ____ Time: ____ *(taken after sample collection)*
If NAPL Present: D.T.P.: 9.31 D.T.W.: 10.87 Thickness: 1.57 Time: ____

Project No.: AES 050204
Date: 11-15-10
Arrival Time: ____
Air Temp: ____
T.O.C. Elev. (ft): 5441.61
Total Well Depth (ft): ____

## Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
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| | | NOT SAMPLED | | | | | |
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| | | NAPL PRESENT | | | | | |
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## Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water: ____
Collected Samples Stored on Ice in Cooler: ____
Chain of Custody Record Complete: ____
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Kock Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

*revised: 08/10/09*

## MONITORING WELL SAMPLING RECORD

**Monitor Well No:** TW-33

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

**Site:** Thriftway #810 Refinery
**Location:** Bloomfield, New Mexico
**Project:** Groundwater Monitoring and Sampling
**Sampling Technician:** Chad Dawson
**Purge / No Purge:** Purge
**Well Diameter (in):** 2
**Initial D.T.W. (ft):** _____ **Time:** _____ *(taken at initial gauging of all wells)*
**Confirm D.T.W. (ft):** _____ **Time:** _____ *(taken prior to purging well)*
**Final D.T.W. (ft):** _____ **Time:** _____ *(taken after sample collection)*
**If NAPL Present:** D.T.P.: 12.97 D.T.W.: 13.15 **Thickness:** 0.18 **Time:** _____

**Project No.:** AES 050204
**Date:** 11-15-10
**Arrival Time:** _____
**Air Temp:** _____
**T.O.C. Elev. (ft):** 5445.85
**Total Well Depth (ft):** _____

### Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
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| | | NOT SAMPLED | | | | | |
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| | | NAPL PRESENT | | | | | |
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### Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials: 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

**Disposal of Purged Water:** _____
**Collected Samples Stored on Ice in Cooler:** _____
**Chain of Custody Record Complete:** _____
**Analytical Laboratory:** Hall Environmental Analysis Laboratory, Albuquerque, NM
**Equipment Used During Sampling:** Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

**Notes/Comments:**

*revised: 08/10/09*

## MONITORING WELL SAMPLING RECORD

Monitor Well No: **TW-35**

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 15.23 Time: 1429 11-15-10 *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 15.24 Time: 1010 *(taken prior to purging well)*
Final D.T.W. (ft): Time: *(taken after sample collection)*
If NAPL Present: D.T.P.: D.T.W.: Thickness: Time:

Project No.: AES 050204
Date: 11-17-10
Arrival Time: 1007
Air Temp: 47°
T.O.C. Elev. (ft): 5449.14
Total Well Depth (ft): 22.34

### Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
| 1015 | 15.49 | 6.788 | 1.03 | 7.12 | -12.3 | 0.50 | |
| 1022 | 15.80 | 7.064 | 0.67 | 7.12 | -17.6 | 1.75 | |
| 1027 | 15.97 | 7.175 | 0.72 | 7.13 | -15.3 | 3.00 | |
| 1037 | — | — | — | — | — | SC | — |
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### Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water:
Collected Samples Stored on Ice in Cooler:
Chain of Custody Record Complete:
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

*revised: 08/10/09*

## MONITORING WELL SAMPLING RECORD

Monitor Well No: **TW-36**

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): _____ Time: _____ (taken at initial gauging of all wells)
Confirm D.T.W. (ft): _____ Time: _____ (taken prior to purging well)
Final D.T.W. (ft): _____ Time: _____ (taken after sample collection)
If NAPL Present: D.T.P.: 13.20 D.T.W.: 13.35 Thickness: 0.15 Time: _____

Project No.: AES 050204
Date: 11-5-10
Arrival Time: _____
Air Temp: _____
T.O.C. Elev. (ft): 5441.91
Total Well Depth (ft): 20.35

### Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
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| | | NAPL PRESENT | | | | | |
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### Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water: _____
Collected Samples Stored on Ice in Cooler: _____
Chain of Custody Record Complete: _____
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

## MONITORING WELL SAMPLING RECORD

Monitor Well No: **TW-37**

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: Cloud Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 10.68 Time: 1313 (11-15-10) *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 10.69 Time: 1340 *(taken prior to purging well)*
Final D.T.W. (ft): Time: *(taken after sample collection)*
If NAPL Present: D.T.P.: D.T.W.: Thickness: Time:

Project No.: AES 050204
Date: 11-16-10
Arrival Time: 1338
Air Temp: 56°
T.O.C. Elev. (ft): 5439.59
Total Well Depth (ft): 16.5

### Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
| 1347 | 16.69 | 4.134 | 0.44 | 7.02 | -12.2 | 0.50 | |
| 1352 | 16.79 | 4.180 | 0.52 | 7.06 | -14.6 | 1.75 | |
| 1356 | 16.79 | 4.503 | 0.61 | 7.05 | -13.6 | 3.00 | |
| 1406 | — | — | — | — | — | SC | — |
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### Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water:
Collected Samples Stored on Ice in Cooler:
Chain of Custody Record Complete:
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

*revised: 08/10/09*

## MONITORING WELL SAMPLING RECORD

Monitor Well No: **TW-38**

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 11.54 Time: 1320 (11-15-10) *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 11.58 Time: 1303 *(taken prior to purging well)*
Final D.T.W. (ft): Time: *(taken after sample collection)*
If NAPL Present: D.T.P.: D.T.W.: Thickness: Time:

Project No.: AES 050204
Date: 11-16-10
Arrival Time: 1300
Air Temp: 55°
T.O.C. Elev. (ft): 5442.11
Total Well Depth (ft): 15.5

### Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
| 1307 | 16.95 | 4.758 | 0.90 | 7.07 | -15.0 | 0.50 | Grey color |
| 1312 | 16.97 | 4.732 | 0.85 | 7.11 | -16.3 | 1.75 | |
| 1316 | 16.94 | 4.657 | 0.79 | 7.10 | -16.7 | 3.00 | |
| 1325 | | | | | | SC | |
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### Analytical Parameters (Include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials: 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals. Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C. Bromide, Chloride, Fluoride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water:
Collected Samples Stored on Ice in Cooler:
Chain of Custody Record Complete:
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

*revised: 08/10/09*

## MONITORING WELL SAMPLING RECORD

Monitor Well No: TW-39

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 2.95 Time: 1338 (11-15-10) (taken at initial gauging of all wells)
Confirm D.T.W. (ft): 2.94 Time: 1130 (taken prior to purging well)
Final D.T.W. (ft): Time: (taken after sample collection)
If NAPL Present: D.T.P.: D.T.W.: Thickness: Time:

Project No.: AES 050204
Date: 11-16-10
Arrival Time: 1125
Air Temp: 46°
T.O.C. Elev. (ft): 5438.43
Total Well Depth (ft):

### Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
| 1135 | 15.24 | 4.202 | 0.26 | 7.06 | -14.6 | 0.50 | Grey in Color |
| 1139 | 15.13 | 4.155 | 0.07 | 7.10 | -16.6 | 1.75 | & Strong Odor |
| 1143 | 15.29 | 4.274 | 0.05 | 7.17 | -20.8 | 3.00 | |
| 1157 | — | — | — | — | — | SC | — |
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### Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Fluoride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water:
Collected Samples Stored on Ice in Cooler:
Chain of Custody Record Complete:
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

*revised: 08/10/09*

## MONITORING WELL SAMPLING RECORD

Monitor Well No: TW-40

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): ____ Time: ____ (taken at initial gauging of all wells)
Confirm D.T.W. (ft): ____ Time: ____ (taken prior to purging well)
Final D.T.W. (ft): ____ Time: ____ (taken after sample collection)
If NAPL Present: D.T.P.: 7.97 D.T.W.: 8.51 Thickness: 0.54 Time: ____

Project No.: AES 050204
Date: 11-15-10
Arrival Time: ____
Air Temp: ____
T.O.C. Elev. (ft): 5437.5
Total Well Depth (ft): ____

### Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
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| | | NAPL PRESENT | | | | | |
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### Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water: ____
Collected Samples Stored on Ice in Cooler: ____
Chain of Custody Record Complete: ____
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

revised: 08/10/09

## MONITORING WELL SAMPLING RECORD

Monitor Well No: TW-41

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 6.12 Time: 1307 (1415 CDT) *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 6.14 Time: 1422 *(taken prior to purging well)*
Final D.T.W. (ft): Time: *(taken after sample collection)*
If NAPL Present: D.T.P.: D.T.W.: Thickness: Time:

Project No.: AES 050204
Date: 11-16-09
Arrival Time: 1420
Air Temp: 56°
T.O.C. Elev. (ft): 5434.77
Total Well Depth (ft):

### Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
| 1427 | 14.67 | 5.783 | 0.82 | 6.88 | -4.1 | 0.50 | |
| 1431 | 14.41 | 5.763 | 0.78 | 6.91 | -5.8 | 1.75 | |
| 1435 | 14.05 | 5.792 | 0.69 | 6.93 | -6.7 | 3.00 | |
| 1445 | — | — | — | — | — | 3 C | — |
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### Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water:
Collected Samples Stored on Ice in Cooler:
Chain of Custody Record Complete:
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

*revised: 03/10/09*

## MONITORING WELL SAMPLING RECORD

Monitor Well No: TW-42

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 16.21 Time: 1310 (11-15-10) *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 16.21 Time: 1500 *(taken prior to purging well)*
Final D.T.W. (ft): Time: *(taken after sample collection)*
If NAPL Present: D.T.P.: D.T.W.: Thickness: Time:

Project No.: AES 050204
Date: 11-16-10
Arrival Time: 1458
Air Temp: 56°
T.O.C. Elev. (ft): 5433.76
Total Well Depth (ft): 11.82

### Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
| 1506 | 14.59 | 0.590 | 0.60 | 7.22 | -23.6 | 0.5 | |
| 1510 | 14.36 | 0.608 | 1.26 | 7.21 | -24.8 | 1.75 | |
| 1514 | 14.17 | 0.589 | 1.84 | 7.26 | -25.9 | 3.00 | |
| 1525 | | | | | | SC | |
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### Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water:
Collected Samples Stored on Ice in Cooler:
Chain of Custody Record Complete:
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

*revised: 08/10/09*

# MONITORING WELL SAMPLING RECORD

Monitor Well No: **TW-43**

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 12.34 Time: 1303 (11-15-10) *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 12.34 Time: 1540 *(taken prior to purging well)*
Final D.T.W. (ft): Time: *(taken after sample collection)*
If NAPL Present: D.T.P.: D.T.W.: Thickness: Time:

Project No.: AES 050204
Date: 11-16-10
Arrival Time: 1537
Air Temp: 56°
T.O.C. Elev. (ft): 5440.42
Total Well Depth (ft): 18.86

## Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
| 1545 | 16.25 | 5.339 | 0.62 | 6.92 | -6.3 | 0.5 | |
| 1549 | 16.23 | 5.271 | 0.84 | 6.94 | -7.2 | 1.75 | |
| 1553 | 16.58 | 5.273 | 0.84 | 6.94 | -7.3 | 3.00 | |
| 1600 | — | | | | | SC - | |
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## Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water:
Collected Samples Stored on Ice in Cooler:
Chain of Custody Record Complete:
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

*revised: 08/10/09*

# MONITORING WELL SAMPLING RECORD

Monitor Well No: **TW-44**

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): _____ Time: _____ *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): _____ Time: _____ *(taken prior to purging well)*
Final D.T.W. (ft): _____ Time: _____ *(taken after sample collection)*
If NAPL Present: D.T.P.: 15.12 D.T.W.: 15.15 Thickness: 0.03 Time: _____

Project No.: AES 050204
Date: 11-15-10
Arrival Time: _____
Air Temp: _____
T.O.C. Elev. (ft): 5444.08
Total Well Depth (ft): 20.45

## Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
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| | | NAPL PRESENT | | | | | |
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## Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials: 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water: _____
Collected Samples Stored on Ice in Cooler: _____
Chain of Custody Record Complete: _____
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

*revised: 08/10/09*

## MONITORING WELL SAMPLING RECORD

Monitor Well No: TW-45

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: Chad Dawson
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): 7.09 Time: 1439 (11-15-10) (taken at initial gauging of all wells)
Confirm D.T.W. (ft): 7.10 Time: 1100 (taken prior to purging well)
Final D.T.W. (ft): Time: (taken after sample collection)
If NAPL Present: D.T.P.: D.T.W.: Thickness: Time:

Project No.: AES 050204
Date: 11-17-10
Arrival Time: 1050
Air Temp: 52°
T.O.C. Elev. (ft):
Total Well Depth (ft):

### Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
| 1107 | 14.24 | 5.564 | 0.97 | 6.93 | -7.2 | 0.50 | |
| 1120 | " | " | | | | SC | |
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### Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water:
Collected Samples Stored on Ice in Cooler:
Chain of Custody Record Complete:
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

*revised: 08/10/09*

## MONITORING WELL SAMPLING RECORD

**Monitor Well No:** TW-47

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

**Site:** Thriftway #810 Refinery
**Location:** Bloomfield, New Mexico
**Project:** Groundwater Monitoring and Sampling
**Sampling Technician:** CS
**Purge / No Purge:** Purge
**Well Diameter (in):** 2
**Initial D.T.W. (ft):** 6.93 **Time:** 1450 (11-15-10) *(taken at initial gauging of all wells)*
**Confirm D.T.W. (ft):** 6.94 **Time:** 1204 *(taken prior to purging well)*
**Final D.T.W. (ft):** **Time:** *(taken after sample collection)*
**If NAPL Present:** D.T.P.: D.T.W.: **Thickness:** **Time:**

**Project No.:** AES 050204
**Date:** 11-12-10
**Arrival Time:** 1200
**Air Temp:**
**T.O.C. Elev. (ft):**
**Total Well Depth (ft):**

### Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
| 1211 | 14.87 | 10.79 | 2.09 | 7.08 | 15.4 | 0.5 | |
| 1217 | | | | | | SC | |
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### Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

**Disposal of Purged Water:**
**Collected Samples Stored on Ice in Cooler:**
**Chain of Custody Record Complete:**
**Analytical Laboratory:** Hall Environmental Analysis Laboratory, Albuquerque, NM
**Equipment Used During Sampling:** Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

**Notes/Comments:**

*revised: 08/10/09*

# MONITORING WELL SAMPLING RECORD

Monitor Well No: TW-49

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: CD
Purge / No Purge: Purge
Well Diameter (in): 2
Initial D.T.W. (ft): ____ Time: ____ (taken at initial gauging of all wells)
Confirm D.T.W. (ft): ____ Time: ____ (taken prior to purging well)
Final D.T.W. (ft): ____ Time: ____ (taken after sample collection)
If NAPL Present: D.T.P.: ____ D.T.W.: ____ Thickness: ____ Time: ____

Project No.: AES 050204
Date: 11-15-10
Arrival Time: 1747
Air Temp: 60°
T.O.C. Elev. (ft): ____
Total Well Depth (ft): ____

## Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
| 1325 | | | | | | SC | |
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## Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water: ____
Collected Samples Stored on Ice in Cooler: ____
Chain of Custody Record Complete: ____
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

revised: 08/10/09

**MONITORING WELL SAMPLING RECORD**

**Monitor Well No:** MW-5

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

**Site:** Thriftway #810 Refinery
**Location:** Bloomfield, New Mexico
**Project:** Groundwater Monitoring and Sampling
**Sampling Technician:** Chad Dawson
**Purge / No Purge:** Purge
**Well Diameter (in):** 2
**Initial D.T.W. (ft):** 5.13 **Time:** 1333 (11-15-10) *(taken at initial gauging of all wells)*
**Confirm D.T.W. (ft):** 5.12 **Time:** 0920 *(taken prior to purging well)*
**Final D.T.W. (ft):** **Time:** *(taken after sample collection)*
**If NAPL Present:** D.T.P.: D.T.W.: Thickness: Time:

**Project No.:** AES 050204
**Date:** 11-17-10
**Arrival Time:** 0915
**Air Temp:** 44°
**T.O.C. Elev. (ft):** 5428.97
**Total Well Depth (ft):**

**Water Quality Parameters - Recorded During Well Purging**

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
| 0941 | 14.04 | 6.717 | 2.99 | 7.67 | -48.9 | 0.5 | |
| 0946 | 13.95 | 10.432 | 1.41 | 7.56 | -43.0 | 1.75 | |
| 0950 | 14.15 | 10.121 | 1.30 | 7.62 | -46.2 | 3.00 | |
| 1000 | | | | | | SC | |
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**Analytical Parameters (include analysis method and number and type of sample containers)**

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

**Disposal of Purged Water:**
**Collected Samples Stored on Ice in Cooler:**
**Chain of Custody Record Complete:**
**Analytical Laboratory:** Hall Environmental Analysis Laboratory, Albuquerque, NM
**Equipment Used During Sampling:** Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

**Notes/Comments:** Cleaned out Plant Growth

*revised: 08/10/09*

## MONITORING WELL SAMPLING RECORD

Monitor Well No: **MW-20**

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician:
Purge / No Purge: Purge
Well Diameter (in): 2"
Initial D.T.W. (ft): 6.05 Time: 1442 (11-15-10) *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 6.05 Time: 1132 *(taken prior to purging well)*
Final D.T.W. (ft): Time: *(taken after sample collection)*
If NAPL Present: D.T.P.: D.T.W.: Thickness: Time:

Project No.: AES 050204
Date: 11-17-10
Arrival Time: 1129
Air Temp: 53°
T.O.C. Elev. (ft): 5430.45
Total Well Depth (ft):

### Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
| 1134 | 13.63 | 5.167 | 0.40 | 6.94 | -7.7 | 0.50 | |
| 1145 | — | — | — | — | — | 5 C | — |
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### Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Flouride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water:
Collected Samples Stored on Ice in Cooler:
Chain of Custody Record Complete:
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

*revised: 08/10/09*

# MONITORING WELL SAMPLING RECORD

Monitor Well No: **MW-21**

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Site: Thriftway #810 Refinery
Location: Bloomfield, New Mexico
Project: Groundwater Monitoring and Sampling
Sampling Technician: CD
Purge / No Purge: Purge
Well Diameter (in):
Initial D.T.W. (ft): 3.68 Time: 1454 (11-15-10) *(taken at initial gauging of all wells)*
Confirm D.T.W. (ft): 3.68 Time: 1228 *(taken prior to purging well)*
Final D.T.W. (ft): Time: *(taken after sample collection)*
If NAPL Present: D.T.P.: D.T.W.: Thickness: Time:

Project No.: AES 050204
Date: 11-12-10
Arrival Time: 1224
Air Temp: 60°
T.O.C. Elev. (ft): 5428.62
Total Well Depth (ft):

## Water Quality Parameters - Recorded During Well Purging

| Time | Temp (deg C) | Conductivity (µS) (mS) | DO (mg/L) | pH | ORP (mV) | PURGED VOLUME (see reverse for calc.) | Notes/Observations |
|---|---|---|---|---|---|---|---|
| 1235 | 15.47 | 7.817 | 0.52 | 7.02 | -12.0 | 0.50 | |
| 1242 | | | | | | 5C | |
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## Analytical Parameters (include analysis method and number and type of sample containers)

Full VOCs, GRO, DRO, MRO per EPA Methods 8260/8015 (6-40 mL Vials; 5 w/ HCl preserve and 1 w/ no preserve)
RCRA 8 Metals, Hardness as CaCO3 per EPA Method 6010/7470 (1-500 mL plastic w/ HNO3 preserve)
Dissolved Ca, Mg, K, Na per EPA Method 6010 (1-125 mL plastic w/ HNO3 preserve)
TDS per 2540C, Bromide, Chloride, Fluoride, Sulfate per 300.0, Spec. Cond. per 120.1 (1-1L plastic w/ no preserve)

Disposal of Purged Water:
Collected Samples Stored on Ice in Cooler:
Chain of Custody Record Complete:
Analytical Laboratory: Hall Environmental Analysis Laboratory, Albuquerque, NM
Equipment Used During Sampling: Keck Water Level or Keck Interface Level, YSI Water Quality Meter and New Disposable Bailer

Notes/Comments:

*revised: 08/10/09*