GW - 001

REPORTS

River Terrace Voluntary Corrective Measures

2010



CERTIFIED MAIL # 7007 0220 0004 0187 1395

June 29, 2010

James Bearzi, Bureau Chief New Mexico Environment Department Hazardous Waste Bureau 2905 Rodeo Park Drive East, Bldg 1 Santa Fe. NM 87505

Re:

Submittal of Group 7 Remedy Completion Report Western Refining Southwest, Inc., Bloomfield Refinery

EPA ID# NMD089416416

Dear Mr. Bearzi:

This document is being submitted in accordance with Provision IV.B.5 of the July 27, 2007 Order [HWB 07-34 (CO)] for Group 7. The Order specifies submittal of a remedy completion report for SWMU No. 17 River Terrace Area on or before June 30, 2010. The fact that the remedy is not yet completed was discussed with New Mexico Environment Department (NMED) staff during a meeting held on March 4, 2010. Pursuant to those discussions, Western Refining Southwest, Inc., Bloomfield Refinery has prepared the following the discussion on the River Terrace remediation program.

The River Terrace Bioventing Remediation System, which includes thirteen bioventing wells and two dewatering wells, was installed in 2005 and began operation in January 2006. An additional ground water collection gallery was installed in October 2009 to improve the dewatering system. Annual monitoring reports are submitted to the NMED in accordance with Order Provision V.B.1 to document the progress of the bioventing system. The most recent of these reports prepared for the period January – December 2009 (dated March 2010), provides specific details on the on-going remedial operations and monitoring results. The monitoring data, including the most recent in-situ respiration test data, indicate that the bioventing system is continuing to successfully treat hydrocarbons present in soils and ground water.

As directed by NMED in the June 10, 2010 Approval with Direction River Terrace Voluntary Corrective Measures Bioventing System Annual Report (January-December 2009), Western will continue to operate the bioventing system in accordance with monitoring and sampling requirements established in NMED's June 16, 2009 Approval with Direction River Terrace Voluntary Corrective Action Bioventing System Annual Report January 2008 through December 2008.

I trust that submittal of this document, as well as the annual monitoring report in March 2010, will satisfy the requirements of Ordering Provision IV.B.5 for Group 7. Upon successful completion of the remediation of the River Terrace Area, Western will submit a final Remedy Completion Report. If you have questions or would like to discuss this submittal, then please contact me at (505) 632-4171.

Sincerely,

Ualmes R. Schmaltz

Environmental Manager

Western Refining Southwest, Inc., Bloomfield Refinery

cc: Hope Monzeglio – NMED HWB

Carl Chavez - NMOCD

Dave Cobrain - NMED HWB

John Kieling – NMED HWB

Laurie King - EPA Region 6

Allen Hains - Western Refining El Paso

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Sincerely,

James R. Schmaltz Environmental Manager

Western Refining Southwest, Inc., Bloomfield Refinery

cc: Hope Monzeglio – NMED HWB

Carl Chavez - NMOCD

Dave Cobrain – NMED HWB John Kieling – NMED HWB Laurie King – EPA Region 6

Allen Hains - Western Refining El Paso

Chavez, Carl J, EMNRD

From: Monzeglio, Hope, NMENV

Sent: Thursday, June 10, 2010 10:55 AM

To: Schmaltz, Randy

Cc: Kieling, John, NMENV; Cobrain, Dave, NMENV; Chavez, Carl J, EMNRD; Hains, Allen;

Martinez, Cynthia, NMENV

Subject: River Terrace

Attachments: WRB 10-003 App w Direct 6-10.pdf

Randy

This will go out in the mail today.

Hope

Hope Monzeglio Environmental Specialist New Mexico Environment Department Hazardous Waste Bureau 2905 Rodeo Park Drive East, BLDG 1 Santa Fe NM 87505

Phone: (505) 476-6045; Main No.: (505)-476-6000

Fax: (505)-476-6060

hope.monzeglio@state.nm.us

Websites:

New Mexico Environment Department

Hazardous Waste Bureau



BILL RICHARDSON Governor

DIANE DENISH Lieutenant Governor

NEW MEXICO ENVIRONMENT DEPARTMENT

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RON CURRY Secretary

SARAH COTTRELL Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

June 10, 2010

Mr. Randy Schmaltz
Environmental Manager
Western Refining, Southwest, Inc.
Bloomfield Refinery
P.O. Box 159
Bloomfield, New Mexico 87413

RE: APPROVAL WITH DIRECTION

RIVER TERRACE VOLUNTARY CORRECTIVE MEASURES BIOVENTING SYSTEM ANNUAL REPORT (JANUARY –DECEMBER 2009) WESTERN REFINING COMPANY SOUTHWEST, INC.

BLOOMFIELD REFINERY EPA ID# NMD089416416 HWB-WRB-10-003

Dear Mr. Schmaltz:

The New Mexico Environment Department (NMED) has completed its review of Western Refining Southwest, Inc., Bloomfield Refinery (Western) River Terrace Voluntary Corrective Measures Bioventing System Annual Report January through December 2009 (Report), dated March 2010. Based on the information provided, NMED hereby approves this Report with the following direction.

Comment 1

In Section 3.0 (Regulatory Criteria/Groundwater Cleanup Standards), Western references the "USEPA Region VI Human Health Medium-Specific Screening Level 2008." The most recent Human Health Medium-Specific Screening Levels have been replaced by EPA's Regional Screening Levels (RSL) which can be found at http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm. In the next submittal, Western must revise this Section to reference the most recent Regional Screening Levels (RSL).

Mr. Schmaltz June 10, 2010 Page 2 of 2

Western must continue to operate the bioventing system in accordance with monitoring and sampling requirements established in NMED's June 16, 2009 Approval with Direction River Terrace Voluntary Corrective Measures Bioventing System Annual Report January 2008 through December 2008.

If you have any questions regarding this letter, please contact Hope Monzeglio at (505) 476-6045.

Sincerely,

John E. Kieling

Program Manager

Permits Management Program

Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB

H. Monzeglio, NMED HWB

C. Chavez, OCD

A. Hains, Western

File: WRB 2010 and Reading

HWB-WRB-10-003



BLOOMFIELD REFINERY

February 25, 2010

Certified Mail: 7008 1300 0001 3402 7237

7008 1300 0001 3402 7244

Hope Monzeglio New Mexico Environmental Department Hazardous Waste Bureau 2905 Rodeo Park Drive East Bldg 1 Santa Fe, NM 87505 Carl Chavez New Mexico Oil Conservation Division Environmental Bureau 1220 South St. Francis Dr Santa Fe, NM 87505

Re: River Terrace Voluntary Corrective Measures Bioventing System Annual Report January 2009 through December 2009

Dear Hope and Carl,

Western Refining - Bloomfield Refinery submits the River Terrace Voluntary Corrective Measures Bioventing System Annual Report as requested by NMED. This report summarizes data gathered throughout 2008.

If you have questions or would like to discuss any aspect of the report, please contact me at (505) 632-4171.

Sincerely,

James R. Schmaltz
Environmental Manager
Bloomfield Refinery

Cc: Laurie King, USEPA - Region VI

Brandon Powell - NMOCD Aztec District Office Allen Hains - Western Refining - El Paso

Executive Summary

This report is a summary of monitoring activities conducted in 2009 at the River Terrace Bioventing System located at the Bloomfield Refinery. The following is a synopsis of conclusions and recommendations developed from the monitoring activities performed at the River Terrace in 2009.

Western Refining indefinitely suspended refining operations at the Bloomfield Refinery on November 23, 2009. The crude unloading and product loading racks, storage tanks and other supporting equipment remain in operation. The River Terrace Bioventing System will continue to operate.

Dewatering

In order to improve and optimize the dewatering system, a collection gallery, pump, and piping system were installed in the southwest portion of the River Terrace. This system came online on October 13, 2009. The pumps at MW #48 and DW #1 continue to operate.

Comparison of the depth-to-groundwater measurements during the three in-situ respiration testing periods show that the groundwater surface elevation during the 2009 test period was approximately one foot lower than it was during the 2007 test period. The most significant groundwater elevation change was detected at TP-1, located within the vicinity of the collection gallery. This data supports the notion that the collection gallery has enhanced the dewatering effects within the biovent area.

Performance Monitoring

On-going performance monitoring activities continued on a quarterly basis at the River Terrace area in accordance with the approved *Bioventing System Monitoring Plan*, dated October 28, 2006, and in accordance with an NMED comment letter (*Direction to Modify Future Monitoring as reported in the River Terrace Voluntary Corrective Measures Bioventing System Annual Report January 2006 through December 2006*) dated June 13, 2007. Additional revisions to the monitoring plan were stated in the NMED letter dated June 16, 2009 (*Approval with Direction River Terrace Voluntary Corrective Measures Bioventing System Annual Report January 2008 through December 2008*). NMED agreed to modify the sampling at the eastern portion of the River Terrace (TP #3, TP #10, TP #11, TP #12, and TP #13) to semi-annual sampling during the high and low water flows of the San Juan River. These modifications were initiated during the fourth quarter sampling event of 2009 and will continue to be followed in future sampling events.

Laboratory analysis of groundwater, treated groundwater, and soil gas provides periodic feedback of the remediation operation and GAC filter capability. The ongoing performance monitoring program also includes certain field parameter data which are collected using portable gauges and gas meters. An In-Situ Respiration Test was also conducted during the week of October 26, 2009.

Comparison of the initial oxygen readings for all three in-situ tests (2006, 2007, and 2009) show that the bioventing system continues to be successful in providing sufficient oxygen to sustain bioremedial activity. A review of the field data collected during all three in-situ respiration tests indicate that the biodegradation rate has declined since the initial respiration test was conducted in 2006. However, the average biodegradation rate calculated at each designated TP well remains above 1 mg/kg-day which reflects positive indications of bioremedial activity. The lower degradation rates could indicate remedial progress within the River Terrace area due to decreased food source (petroleum impacted soil) causing lower respiration rates.

Quarterly monitoring of the River Terrace will continue though out 2010. An insitu respiration test is tentatively scheduled for June 2010.

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4.0	Monitoring Results
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6.0	In-Situ Respiration Test
7.0	Maps
8.0	Summary
9.0	Field Methods
10.0	Chemical Analytical Program
11.0	Chemical Analytical Reports

Section 1.0 Introduction

INTRODUCTION

Owner:

Western Refining

123 W. Mills Ave., Suite 200

El Paso, TX 79901

(parent corporation)

(postal address)

Operator:

Western Refining Southwest, Inc.

P.O. Box 159

Bloomfield, New Mexico 87413

(physical address)

Western Refining Southwest, Inc.

#50 Rd 4990

Bloomfield, New Mexico 87413

Facility Name:

Bloomfield Refinery

#50 Rd 4990

Bloomfield, New Mexico 87413

(physical address)

Facility Status

Corrective Action/Compliance

US EPA ID

NMD089416416

SIC Code

2911

Purpose of Monitoring:

River Terrace Corrective Measures - Assess and

Provide Periodic Progress Information

Type of Monitoring:

Periodic Groundwater and Soil Vapor Monitoring

BACKGROUND INFORMATION

SITE LOCATION AND DESCRIPTION

The Bloomfield Refinery is a crude oil refining facility with a crude capacity of 18,000 barrels per day. It is located approximately 1 mile south of Bloomfield, New Mexico, in San Juan County, latitude N36 41' 87", longitude W107 58' 70". It is further located approximately ½ mile east of State Route 550 on Count Road 4990 (a.k.a. Sullivan Road).

The refinery is located on a bluff 120 feet above the south side of the San Juan River. The top of the bluff is relatively flat and is at an elevation of 5,540 feet above sea level. The geological units that comprise the site include, in order of increasing depth, San Juan River Alluvium, Quaternary apron deposits, Aeolian sand and silt, Jackson Lake Terrace, and the Tertiary Nacimiento Formation. An unnamed arroyo flows toward the San Juan River on the southern and western edges of the site. East of the site, a well-defined arroyo cuts a small canyon from the bluff to the San Juan River. Hammond Ditch lies on the bluff between the limit of the Jackson Lake Terrace and the refinery.

Refinery offices are on the western end of the facility, along with warehouse space, maintenance areas, and a storage yard containing used material (e.g., pipes, valves). Petroleum processing units, located in the northwest portion of the refinery, include the crude unit, fluidized cracking unit, catalytic polymerization unit, and hydrodesulfurization unit. The API Separator and the aeration lagoons are located in the north central section of the refinery.

In the central portion of the site, aboveground storage tanks (AST's) occupy a large percentage of refinery property. South of the refinery and across Sullivan Road are terminals for loading product and off-loading crude, as well as gas storage and hazardous waste storage.

Western Refining merged with San Juan Refining Company (SJRC) May 31, 2007. The refinery was operated by Western Refining Southwest, Inc. The historical activities conducted at the refinery are petroleum processing, crude and product storage, crude unloading and product loading, waste management (closed and existing facilities), and offices and non-petroleum material storage. Western Refining indefinitely suspended refining operations at the Bloomfield Refinery on November 23, 2009. The crude unloading and product loading racks, storage tanks and other supporting equipment remain in operation.

HISTORY OF THE RIVER TERRACE

1999

Sheet piling was installed along with a bentonite slurry wall adjacent to the San Juan River, at the River Terrace, in order to intercept a small hydrocarbon seep that had been detected in the area.

2004

MW #48 & MW #49 and 8 temporary piezometers were installed to launch a River Terrace Investigation. Several temporary piezometers were drilled on the north side of Hammond Ditch to chart the top of the Naciemento Formation.

2005

The North Boundary Barrier Wall installation was completed March 2005. In April, five more temporary piezometers were installed at the River Terrace. Dewatering Wells #1 and #2 and thirteen bioventing wells were drilled in August at the River Terrace. Construction of the River Terrace Bioventing Project was initiated in August. The system was put on-line in January 2006.

2006

System monitoring began in January abiding by the guidelines from the River Terrace Voluntary Corrective Measures Monitoring Plan approved by OCD and NMED. The In-Situ Respiration test was conducted in May 2006. Quarterly performance monitoring was carried out in March, June, September, and December of 2006.

2007

The dewatering pumps failed and were replaced in February. Breakthrough in the lead GAC (V-612) was detected in April at which time it was taken out of service and V-611 became the lead GAC. V-612 was replaced and back in service in June as the lag filter. Quarterly performance monitoring for the Bioventing System occurred in February, June, August, and October. The In-Situ Respiration Test was conducted in September 2007.

2008

The blower bearings were replaced in February. The dewatering pump at MW #48 failed and was replaced in August. Blower piping was upgraded in October. Quarterly performance monitoring for the Bioventing System occurred in March, May, July, and November.

2009

Quarterly performance monitoring for the Bioventing System occurred in March, April, September, and October.

Modifications to the monitoring plan (TP #3, TP #10, TP #11, TP #12, and TP #13 revised to semi-annual sampling) were employed during the fourth quarter (October) sampling event of 2009.

An In-Situ Respiration Test was conducted during the week of October 26, 2009. In order to improve and optimize the dewatering system, a collection gallery, pump, and piping system were installed in the southwest portion of the River Terrace and put on service by October 13, 2009.

Western Refining indefinitely suspended refining operations at the Bloomfield Refinery on November 23, 2009. The crude unloading and product loading racks, storage tanks and other supporting equipment remain in operation. The River Terrace Bioventing System will continue to operate.

Section 2.0 Scope of Activities

Scope of Activities

Bloomfield Refinery initiated and constructed the River Terrace Bioventing Project to provide oxygen to the subsurface and support aerobic biodegradation of petroleum hydrocarbons existing in the soil at the River Terrace. The system was put on-line in January 2006 at which time the *Voluntary Corrective Measure Bioventing Monitoring Plan* was followed.

The NMED letter dated June 13, 2007 (Direction to Modify Future Monitoring as reported in the River Terrace Voluntary Corrective Measures Bioventing System Annual Report January 2006 through December 2006) revised the monitoring plan to include additional metals analysis and incorporate quarterly sampling of TP-7. The revisions were implemented during the second quarter sampling event of 2007 and continue to be followed.

Additional revisions to the monitoring plan were stated in the NMED letter dated June 16, 2009 (*Approval with Direction River Terrace Voluntary Corrective Measures Bioventing System Annual Report January 2008 through December 2008*). NMED agreed to modify the sampling at the eastern portion of the River Terrace (TP #3, TP #10, TP #11, TP #12, and TP #13) to semi-annual sampling during the high and low water flows of the San Juan River. These modifications were employed during the fourth quarter sampling event of 2009 and will continue to be followed in future sampling events.

Western Refining indefinitely suspended refining operations at the Bloomfield Refinery on November 23, 2009. The crude unloading and product loading racks, storage tanks and other supporting equipment remain in operation.

Performance Monitoring

On-going performance monitoring activities continued on a quarterly basis to assess the progress of the remediation system in reducing fuel hydrocarbons. Laboratory analysis of groundwater, treated groundwater, and soil gas are included in the on-going performance monitoring program. In addition, certain field parameter data were collected using portable gauges and gas meters. An In-Situ Respiration Test was also conducted during the week of October 26, 2009.

Section 4.0 of this report summarizes the field parameters and analytical data obtained during routine performance monitoring activities performed in 2006, 2007, 2008, and 2009.

Pressure Readings

Pressure readings were collected from each of the TP wells, MW #49, and DW #1 using a hand-held magnahelic gauge connected to the sample port at the top of each well. Injection pressure and flow rates were collected from all bioventing wells (BV wells). Overall system pressure measurements were also collected.

This data is available in Section 4.0 Tab 1 and Tab 4 in this report.

Groundwater

First quarter groundwater samples and groundwater elevation measurements were collected from each of the TP wells, DW #1, and MW #49 during the week of March 2, 2009. TP-7 was sampled after a 24 hour recharge time.

Groundwater samples were analyzed for BTEX and MTBE (EPA Method 8021B), GRO and DRO (EPA Method 8015B), and Total Lead (EPA Method 6010C). DW #1 was also analyzed for Mercury (EPA Method 7470). Field measurements included temperature, pH, conductivity, DO, and ORP.

Second quarter sampling and groundwater elevation measurements were collected during the week of April 20, 2009. TP-7 was sampled after a 24 hour recharge time. Annual analysis of chromium and barium (EPA Method 6010B) was performed during the second quarter event. Lead analysis (EPA Method 6010B) was performed on samples collected from the TP Wells, MW #49, and DW#1. DW #1 samples were also analyzed for mercury (EPA Method 7470). In addition, groundwater samples were analyzed for BTEX and MTBE (EPA Method 8021B), GRO and DRO (EPA Method 8015B). Field measurements included temperature, pH, conductivity, DO, and ORP.

Third quarter monitoring and groundwater elevation measurements occurred during the week of September 10, 2009. During this sampling event, all TP Wells, MW #49, and DW #1 groundwater samples were analyzed for BTEX and MTBE (EPA Method 8021B), GRO and DRO (EPA Method 8015B), and lead analysis (EPA Method 6010B). Field measurements included temperature, pH, conductivity, DO, and ORP. TP-7 was sampled after a 24 hour recharge time.

Changes to the monitoring plan were implemented during the fourth quarter sampling event which took place the week of October 5, 2009. Groundwater elevation measurements were collected from each of the TP Wells, DW #1, and MW #49. Groundwater samples were not collected from the TPs on the eastern portion of the River Terrace (TP #3, TP #10, TP #11, TP #12, and TP #13). The wells on the western portion of the River Terrace (TP #1, TP #2, TP #5, TP #6, TP, #7, TP #8, TP #9, DW #1, and MW #48) were sampled and analyzed for BTEX and MTBE (EPA Method 8021B), GRO and DRO (EPA Method 8015B), and lead analysis (EPA Method 6010B). Field measurements included temperature, pH, conductivity, DO, and ORP. TP-7 was sampled after a 24 hour recharge time.

A summary of the groundwater monitoring results can be found in Section 4.0 Tab 2 and Tab 3.

Soil Gas

First quarter samples were collected from each of the TP Wells, DW #1, and MW #49 during the week of March 2, 2009. Soil gas analysis included BTEX (8021B) and GRO (8015B). Field measurements of vapor-phase organics (using a PID) and oxygen and carbon dioxide concentrations (using a multi-gas meter) were collected. The second and third quarter monitoring events utilized the same collection sites, and the same methods and parameters. Second quarter samples were collected the week of April 20, 2009. Third quarter monitoring was conducted during the week of September 10, 2009.

Fourth quarter monitoring was accomplished during the week of October 5, 2009. Soil gas samples were not collected from the TPs on the eastern portion of the River Terrace (TP #3, TP #10, TP #11, TP #12, and TP #13) due to approved changes in the monitoring plan. Soil gas samples were collected from the wells on the western portion of the River Terrace (TP #1, TP #2, TP #5, TP #6, TP, #7, TP #8, TP #9, DW #1, and MW #48) and analyzed for BTEX (8021B) and GRO (8015B). Field measurements of vapor-phase organics (using a PID) and oxygen and carbon dioxide concentrations (using a multi-gas meter) were collected.

A summary of the soil gas monitoring results can be found in Section 4.0 Tab 1.

In-Situ Respiration Test

An in-situ respiration test was performed October 26, 2009 through October 29, 2009. Due to limited daylight hours, NMED approved a revision to the monitoring frequency of all the BV wells and TP 1, 2, 5, 6, 8, and 9 from every 12 hours to 3 sample events within an 8 hour period over the duration of the test. Soil gas samples from TP 1, 2, 5, 6, and 9 were collected and assessed using portable field instruments for vapor-phase organics (using a PID meter), and oxygen and carbon dioxide concentrations (using a multi-gas meter). Field measurements of oxygen concentrations (using a multi-gas meter) were collected from all the BV wells.

In-situ respiration test data and results can be found in Section 6.0.

Dewatering System

Fluctuations in the flow of the San Juan River influence the water table at the River Terrace, and consequently affect the attempts at optimizing the dewatering system. It is difficult to adjust pump speed to match pump outflow with water table inflow. The dewatering pumps at MW #48 and DW #2 have been operating at a low flow rate in order to preserve the integrity of the pump during low river flows. Although the low flow rate keeps the pumps in service, the water table isn't significantly reduced during high river flow rates.

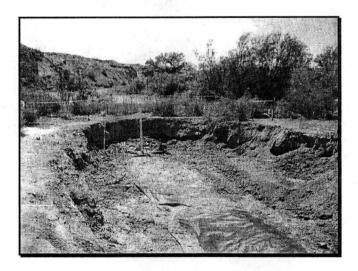
In order to improve and optimize the dewatering system, a collection gallery, pump, and piping were installed in the southwest portion of the River Terrace. Figure 3.0 in Section 7.0 shows the location of the collection gallery and piping. The gallery consists of 75 feet of 4-inch perforated pipe placed approximately 10 feet below ground surface. The perforated pipe is covered with 5 feet of crushed gravel. The gravel is covered with fabric to prevent sediments from filling the voids. An 8-inch diameter vertical pipe attached to the 4-inch perforated pipe acts as a sump and houses the submersible pump. Water collected in the gallery is pumped through the GAC filter system.



Tie-in of the 4" perforated pipe to the 8" vertical pipe



Facing east looking at the 8 inch vertical pipe



Facing west looking at the 4" vertical clean out pipe

The collection gallery dewatering system came online on October 13, 2009. The pumps at MW #48 and DW #1 continue to operate.

GAC Filter Monitoring

Extracted groundwater from the dewatering wells and collection gallery is treated prior to discharge to the raw water ponds, located within the east portion of the refinery. Extracted groundwater is pumped through two GAC filters positioned in series for removal of dissolved-phase hydrocarbons.

GAC filter sampling includes influent samples from a sample port located upstream of the GAC filters, and effluent samples collected from ports located after each of the lead and lag GAC filters. Monitoring the performance of the GAC filters is necessary to estimate GAC filter change-out frequency.

GAC filter influent samples (GAC Inf) and effluent samples collected downstream of the lag GAC filter (GAC 1 Eff – V612) were collected quarterly. Effluent samples from the lead GAC filter (GAC 2 Eff – V-611) were obtained monthly. Samples were analyzed for BTEX by EPA Method 8021B, GRO and DRO by EPA Method 8015B.

A summary of the GAC filter performance monitoring results is presented in Section 4.0 Tab 5 of this report.

Field Data Collection

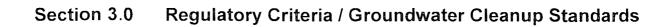
All water/product levels were measured to an accuracy of 0.01 foot using a Geotech Interface Probe. After determining water levels, purge volumes were calculated.

Soil gas purging and sampling were done before groundwater purging and sampling. After sufficient purging (three well volumes), soil gas samples were collected using the vacuum pump. Field measurements of vapor-phase organics (using a PID meter), oxygen, and carbon dioxide concentrations (using a multigas meter) were recorded using portable field instruments.

Prior to soil gas purging, the YSI 550A Dissolved Oxygen Probe was used to determine dissolved oxygen (DO) levels. At least three well volumes were purged from each well prior to groundwater sampling. Electrical conductance (E.C.), pH, temperature, and oxidation reduction potential were monitored during purging using an Ultrameter 6P. The wells were considered satisfactorily purged when the pH, E.C., and temperature values did not vary by more than 10 percent for at least three measurements.

Field data and analytical results can be found in Section 4.0 – Tabs 1, 2, 3, 4 and 5.

All purged water was collected and disposed of through the refinery wastewater system.



Metals	(mg/l)
Antimony	0.006 ²
Arsenic	0.01 2
Barium	1.0
Beryllium	0.004 ²
Cadmium	0.005 ²
Chromium	0.05
Cobalt	0.05
Copper	1.0
Cyanide	0.2
Lead	0.015²
Mercury	0.002
Nickel	0.200
Selenium	0.05
Silver	0.05
Uranium	0.03
Vanadium	0.18 3
Zinc	10.0

Groundwater Standards are WQCC 20NMAC 6.2.3103 unless otherwise indicated

- 2 Federal Maximum Contaminant Level
- 3 USEPA Region VI Human Health Medium-Specific Screening Level 2008

Volatiles	(ug/l)
1,1,1,2-Tetrachloroethane	0.43 3
1,1,1-Trichloroethane	60
1,1,2,2-Tetrachloroethane	10
1,1,2-Trichloroethane	10
1,1-Dichloroethane	25
1,1-Dichloroethene	5
1,1-Dichloropropene	Ne
1,2,3-Trichlorobenzene	Ne
1,2,3-Trichloropropane	0.034 3
1,2,4-Trichlorobenzene	70.0 ²
1,2,4-Trimethylbenzene	15.0 ³
1,2-Dibromo-3-chloropropane	0.2 2
1,2-Dibromoethane (EDB)	0.1
1,2-Dichlorobenzene	600.0 ²
1,2-Dichloroethane (EDC)	10
1,2-Dichloropropane	5.0 ²
1,3,5-Trimethylbenzene	Ne
1,3-Dichlorobenzene	Ne
1,3-Dichloropropane	120 ³
1,4-Dichlorobenzene	75.0 ²
1-Methylnaphthalene	Ne
2,2-Dichloropropane	Ne
2-Butanone	710.0 ³
2-Chlorotoluene	120.0 ³
2-Hexanone	Ne
2-Methylnaphthalene	Ne
4-Chlorotoluene	Ne
4-Isopropyltoluene	Ne
4-Methyl-2-pentanone	Ne

Groundwater Standards are WQCC 20NMAC 6.2.3103 unless otherwise indicated

2 - Federal Maximum Contaminant Level

3 - USEPA Region VI Human Health Medium-Specific Screening Level 2008

Semivolatiles	(ug/l)
Aniline	12 ³
Anthracene	1,800 3
Azobenzene	0.61 ³
Benz(a)anthracene	0.029 3
Benzo(a)pyrene	0.2 2
Benzo(b)fluoranthene	0.029 ³
Benzo(g,h,i)perylene	Ne
Benzo(k)fluoranthene	0.29 ³
Benzoic acid	150,000 ³
Benzyl alcohol	11,000 3
Bis(2-chloroethoxy)methane	Ne
Bis(2-chloroethyl)ether	0.0098 3
Bis(2-chloroisopropyl)ether	Ne
Bis(2-ethylhexyl)phthalate	4.8 ³
Butyl benzyl phthalate	7,300 ³
Carbazole	3.4 ³
Chrysene	2.9 ³
Dibenz(a,h)anthracene	0.0029 ³
Dibenzofuran	12 ³
Diethyl phthalate	29,000 ³
Dimethyl phthalate	370,000 ³
Di-n-butyl phthalate	Ne
Di-n-octyl phthalate	Ne
Fluoranthene	1,500 ³
Fluorene	240 ³
Hexachlorobenzene	1.0 ²
Hexachlorobutadiene	O.86 ³
Hexachlorocyclopentadiene	50 ²
Hexachloroethane	4.8 ³

Groundwater Standards are WQCC 20NMAC 6.2.3103 unless otherwise indicated

- 2 Federal Maximum Contaminant Level
- 3 USEPA Region VI Human Health Medium-Specific Screening Level 2008

Semivolatiles	(ug/l)
1,2,4-Trichlorobenzene	70 ²
1,2-Dichlorobenzene	49 ³
1,3-Dichlorobenzene	14 ³
1,4-Dichlorobenzene	D.47 ³
2,4,5-Trichlorophenol	3,700 ³
2,4,6-Trichlorophenol	6.1 ³
2,4-Dichlorophenol	110 ³
2,4-Dimethylphenol	730 ³
2,4-Dinitrophenol	73 ³
2,4-Dinitrotoluene	73 ³
2,6-Dinitrotoluene	37 ³
2-Chioronaphthalene	490 ³
2-Chlorophenol	30 ³
2-Methylnaphthalene	Ne
2-Methylphenol	1,800 ³
2-Nitroaniline	110 ³
2-Nitrophenol	Ne
3.3 -Dichlorobenzidine	Ne
3+4-Methylphenol	180 ³
3-Nitroaniline	Ne
4,6-Dinitro-2-methylphenol	Ne
4-Bromophenyi phenyl ether	Ne
4-Chloro-3-methylphenol	Ne
4-Chloroaniline	150 ³
4-Chiorophenyl phenyl ether	Ne
4-Nitroaniline	Ne
4-Nitrophenol	290 ³
Acenaphthene	370 ³
Acenaphthylene	Ne

Groundwater Standards are WQCC 20NMAC 6.2.3103 unless otherwise indicated

^{2 -} Federal Maximum Contaminant Level

^{3 -} USEPA Region VI Human Health Medium-Specific Screening Level 2008

Volatiles	(ug/l)
1,1,1,2-Tetrachloroethane	0.43 ³
1,1,1-Trichloroethane	60
1,1,2,2-Tetrachloroethane	10
1,1,2-Trichloroethane	10
1,1-Dichloroethane	25
1,1-Dichloroethene	5
1,1-Dichloropropene	Ne
1,2,3-Trichlorobenzene	Ne
1,2,3-Trichloropropane	0.034 ³
1,2,4-Trichlorobenzene	70.0 ²
1,2,4-Trimethylbenzene	15.0 ³
1,2-Dibromo-3-chloropropane	0.2 2
1,2-Dibromoethane (EDB)	0.1
1,2-Dichlorobenzene	600.0 ²
1,2-Dichloroethane (EDC)	-10
1,2-Dichloropropane	5.0 ²
1,3,5-Trimethylbenzene	Ne
1,3-Dichlorobenzene	Ne
1,3-Dichloropropane	120 ³
1,4-Dichlorobenzene	75.0 ²
1-Methylnaphthalene	Ne
2,2-Dichloropropane	Ne
2-Butanone	710.0 ³
2-Chlorotoluene	120.0 ³
2-Hexanone	Ne
2-Methylnaphthalene	Ne
4-Chlorotoluene	Ne
4-Isopropyltoluene	Ne
4-Methyl-2-pentanone	Ne

Groundwater Standards are WQCC 20NMAC 6.2.3103 unless otherwise indicated

- 2 Federal Maximum Contaminant Level
- 3 USEPA Region VI Human Health Medium-Specific Screening Level 2008

Volatiles	(ug/l)
Acetone	5,500 ³
Benzene	5 ²
Bromobenzene	23.0 ³
Bromodichloromethane	0.18 ³
Bromoform	8.5 ³
Bromomethane	8.7 ³
Carbon disulfide	1,000 ³
Carbon Tetrachloride	5.0 ³
Chlorobenzene	100.0 ²
Chloroethane	Ne
Chloroform	100
Chloromethane	190 ³
cis-1,2-DCE	70 ²
cis-1,3-Dichloropropene	0.4 3
Dibromochloromethane	D.13 ³
Dibromomethane	Ne
Dichlorodifluoromethane	390 ³
Ethylbenzene	700 ²
Hexachlorobutadiene	O:86 ³
Isopropylbenzene	Ne
Methyl tert-butyl ether (MTBE)	11 ³
Methylene Chloride	4.3 ³
Naphthalene	Ne
n-Butylbenzene	61 ³
n-Propylbenzene	61 ³
sec-Butylbenzene	61, ³
Styrene	100 2
tert-Butylbenzene	61 ³
Tetrachloroethene (PCE)	5 ²

Groundwater Standards are WQCC 20NMAC 6.2.3103 unless otherwise indicated

- 2 Federal Maximum Contaminant Level
- 3 USEPA Region VI Human Health Medium-Specific Screening Level 2008

Volatiles	(ug/l)
Toluene	750
trans-1,2-DCE	100 ²
trans-1,3-Dichloropropene	0.4 3
Trichloroethene (TCE)	5 ²
Trichlorofluoromethane	1,300 ³
Vinyl chloride	1
Xylenes, Total	620

Groundwater Standards are WQCC 20NMAC 6.2.3103 unless otherwise indicated

- 2 Federal Maximum Contaminant Level
- 3 USEPA Region VI Human Health Medium-Specific Screening Level 2008

20.6.2.3103 STANDARDS FOR GROUND WATER OF 10,000 mg/l TDS CONCENTRATION OR LESS: The following standards are the allowable pH range and the maximum allowable concentration in ground water for the contaminants specified unless the existing condition exceeds the standard or unless otherwise provided in Subsection D of Section 20.6.2.3109 NMAC. Regardless of whether there is one contaminant or more than one contaminant present in ground water, when an existing pH or concentration of any water contaminant exceeds the standard specified in Subsection A, B, or C of this section, the existing pH or concentration shall be the allowable limit, provided that the discharge at such concentrations will not result in concentrations at any place of withdrawal for present or reasonably foreseeable future use in excess of the standards of this section. These standards shall apply to the dissolved portion of the contaminants specified with a definition of dissolved being that given in the publication "methods for chemical analysis of water and waste of the U.S. environmental protection agency," with the exception that standards for mercury, organic compounds and non-aqueous phase liquids shall apply to the total unfiltered concentrations of the contaminants.

A. Human Health Standards-Ground water shall meet the standards of Subsection A and B of this section unless otherwise provided. If more than one water contaminant affecting human health is present, the toxic pollutant criteria as set forth in the definition of toxic pollutant in Section 20.6.2.1101 NMAC for the combination of contaminants, or the Human Health Standard of Subsection A of Section 20.6.2.3103 NMAC for each contaminant shall apply, whichever is more stringent. Non-aqueous phase liquid shall not be present floating atop of or immersed within ground water, as can be reasonably measured.

(1)

(3)

(5)	Cyanide (CN)	0.2 mg/l
(6)	Fluoride (F)	
(7)	Lead (Pb)	
(8)	Total Mercury (Hg)	
(9)	Nitrate (NO ₃ as N)	
(10)	3	
(11)		
(12)	· · · · · · · · · · · · · · · · · · ·	
(13)	·	
(14)	,	
(15)		0.001 mg/l
(16)		
(17)	,	
(18)	·	
(19)		
(20)	· · · · · · · · · · · · · · · · · · ·	0.02 mg/l
(21)		
(22)	· · · · · · · · · · · · · · · · · · ·	
(23)	,	
(24)	•	
(25)) chloroform	0.1 mg/l
(26)) 1,1-dichloroethane	0.025 mg/l
(27)	ethylene dibromide (EDB)	0.0001 mg/l
(28)) 1,1,1-trichloroethane	0.06 mg/l
(29)		0.01 mg/l
(30)		
(31)		
(32)) PAHs: total naphthalene plus monomethylnaphthalenes	
(33)		0.0007 mg/l
В.	Other Standards for Domestic Water Supply	
(1)	Chloride (Cl)	
(2)	Copper (Cu)	-
(3)	Iron (Fe)	
(4)	Manganese (Mn)	•
(6)	Phenols	
(7)	Sulfate (SO ₄)	
(8)	Total Dissolved Solids (TDS)	1000.0 mg/l
(9)	Zinc (Zn)	
(10)		
C.	Standards for Irrigation Use - Ground water shall meet the	standards of Subsection A, B, and C of

20.6.2.3103 STANDARDS FOR GROUND WATER OF 10,000 mg/l TDS CONCENTRATION OR LESS: The

following standards are the allowable pH range and the maximum allowable concentration in ground water for the contaminants specified unless the existing condition exceeds the standard or unless otherwise provided in Subsection D of Section 20.6.2.3109 NMAC. Regardless of whether there is one contaminant or more than one contaminant present in ground water, when an existing pH or concentration of any water contaminant exceeds the standard specified in Subsection A, B, or C of this section, the existing pH or concentration shall be the allowable limit, provided that the discharge at such concentrations will not result in concentrations at any place of withdrawal for present or reasonably foreseeable future use in excess of the standards of this section. These standards shall apply to the dissolved portion of the contaminants specified with a definition of dissolved being that given in the publication "methods for chemical analysis of water and waste of the U.S. environmental protection agency," with the exception that standards for mercury, organic compounds and non-aqueous phase liquids shall apply to the total unfiltered concentrations of the contaminants.

A. Human Health Standards-Ground water shall meet the standards of Subsection A and B of this section unless otherwise provided. If more than one water contaminant affecting human health is present, the toxic pollutant criteria as set forth in the definition of toxic pollutant in Section 20.6.2.1101 NMAC for the combination of contaminants, or the Human Health Standard of Subsection A of Section 20.6.2.3103 NMAC for each contaminant shall apply, whichever is more stringent. Non-aqueous phase liquid shall not be present floating atop of or immersed within ground water, as can be reasonably measured.

oly measi		
(1)	Arsenic (As)	
(2)	Barium (Ba)	1.0 mg/l
(3)	Cadmium (Cd)	0.01 mg/l
(4)	Chromium (Cr)	0.05 mg/l
(5)	Cyanide (CN)	0.2 mg/l
(6)	Fluoride (F)	
(7)	Lead (Pb)	
(8)	Total Mercury (Hg)	
(9)	Nitrate (NO ₃ as N)	
(10)	Selenium (Se)	,
(10)	Silver (Ag).	
(12)	Uranium (U)	
(13)		
(14)	Benzene Polychlorinated biphenyls (PCB's)	
(15)		
· (·16)	Toluene	
(17)		
(18)	1,2-dichloroethale (EDC)	
(19)	1,1-dichloroethylene (1,1-DCE)	
(20)	1,1,2,2-tetrachloroethylene (PCE)	
(21)	1,1,2-trichloroethylene (TCE)	
(22)	ethylbenzene	
(23)	total xylenes	
(24)	methylene chloride	
(25)	chloroform	
(26)	1,1-dichloroethane	
(27)	ethylene dibromide (EDB)	0.0001 mg/l
(28)	1,1,1-trichloroethane	
(29)	1,1,2-trichloroethane	
(30)	1,1,2,2-tetrachloroethane	
(31)	vinyl chloride	
(32)	PAHs: total naphthalene plus monomethylnaphthalenes	
(33)	benzo-a-pyrene	
B .	Other Standards for Domestic Water Supply	250 0 /1
(1)	Chloride (Cl)	
(2)	Copper (Cu)	
(3)	lron (Fe)	
(4)	Manganese (Mn)	
(6)	Phenols	
(7)	Sulfate (SO ₄)	
(8)	Total Dissolved Solids (TDS)	1000.0 mg/l
(9)	Zinc (Zn)	
(10)	pH	
C.	Standards for Irrigation Use - Ground water shall meet	the standards of Subsection A, B, and C of

this section unless otherwise provided.

(1)	Aluminum (Al)	5.0 mg/l
(2)	Boron (B)	0.75 mg/l
	Cobalt (Co)	
	Molybdenum (Mo)	
		0.2 ma/l

[2-18-77, 1-29-82, 11-17-83, 3-3-86, 12-1-95; 20.6.2.3103 NMAC - Rn, 20 NMAC 6.2.III.3103, 1-15-01; A, 9-26-04] [Note: For purposes of application of the amended numeric uranium standard to past and current water discharges (as of 9-26-04), the new standard will not become effective until June 1, 2007. For any new water discharges, the uranium standard is effective 9-26-04

NEW MEXICO ENVIRONMENT DEPARTMENT TPH SCREENING GUIDELINES October 2006

In some instances, it may be practical to assess areas of soil contamination that are the result of releases of petroleum products such as jet fuel and diesel, using total petroleum hydrocarbon TPH results may be used to delineate the extent of petroleum-related (TPH) analyses. contamination at these sites and ascertain if the residual level of petroleum products in soil represents an unacceptable risk to future users of the site. Petroleum hydrocarbons represent complex mixtures of compounds, some of which are regulated constituents and some compounds that are not regulated. In addition, the amount and types of the constituent compounds in a petroleum hydrocarbon release differ widely depending on what type of product was spilled and how the spill has weathered. This variability makes it difficult to determine the toxicity of weathered petroleum products in soil solely from TPH results; however, these results can be used to approximate risk in some cases, depending upon the nature of the petroleum product, the release scenario, how well the site has been characterized, and anticipated potential future land uses. In some cases, site clean up cannot be based solely on results of TPH sampling. The New Mexico Environment Department (NMED) will make these determinations on a case by case basis. If NMED determines that additional data are necessary, these TPH guidelines must be used in conjunction with the screening guidelines for individual petroleum-related contaminants in Table 3 and other contaminants, as applicable.

The screening levels for each petroleum carbon range from the Massachusetts Department of Environmental Protection (MADEP) Volatile Petroleum Hydrocarbons/Extractable Petroleum Hydrocarbons (VPH/EPH) approach and the percent composition table below were used to generate screening levels corresponding to total TPH. Except for waste oil, the information in the compositional assumptions table was obtained from the Massachusetts Department of Environmental Protection guidance document *Implementation of the MADEP VPH/EPH Approach* (October 31, 2002). TPH toxicity was based only on the weighted sum of the toxicity of the hydrocarbon fractions listed in Table 1.

Table 1. TPH Compositional Assumptions in Soil

Petroleum Product	C11-C22 Aromatics	C9-C18 Aliphatics	C19-C36 Aliphatics
Diesel #2/ new crankcase oil	60%	40%	0%
#3 and #6 Fuel Oil	70%	30%	0%
Kerosene and jet fuel	30%	70%	0%
Mineral oil dielectric fluid	20%	40%	40%
Unknown oil ^a	100%	0%	0%
Waste Oil ^b	0%	0%	100%

Sites with oil from unknown sources must be tested for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, and polychlorinated biphenyls (PCBs) to determine if other potentially toxic constituents are present. The TPH guidelines in Table 2 are not designed to be protective of exposure to these constituents therefore they must be tested for, and compared to, their individual NMED soil screening guidelines.

Compositional assumption for waste oil developed by NMED is based on review of chromatographs of several types of waste oil. Sites with waste oil must be tested for VOCs, SVOCs, metals, and PCBs to determine if other potentially toxic constituents are present. The TPH guidelines in Table 2 are not designed to be protective of exposure to these constituents therefore they must be tested for, and compared to, their individual NMED soil screening guidelines.

A TPH screening guideline was calculated for each of the types of petroleum product based on the assumed composition from Table 1 for petroleum products and the direct soil standards incorporating ceiling concentrations given in the MADEP VPH/EPH Excel spreadsheet for each of the carbon fractions. Groundwater concentrations are based on the weighted sum of the noncarcinogenic toxicity of the petroleum fractions.

Method 1 from the MADEP VPH/EPH document was applied, which represents generic cleanup standards for soil and groundwater. Method 1 applies if contamination exists in only soil and groundwater. The MADEP VPH/EPH further divides groundwater into standards. Standard GW-1 applies when groundwater may be used for drinking water purposes. GW-1 standards are based upon ingestion and use of groundwater as a potable water supply. The TPH screening guidelines for sites with potable groundwater are presented in Table 2a.

Table 2a. TPH Screening Guidelines for Potable Groundwater (GW-1)

ТРН			
Petroleum Product	Residential Direct Exposure (mg/kg)	Industrial Direct Exposure (mg/kg)	Concentration in Groundwater (mg/L)
Diesel #2/crankcase oil	520	1120	1.72
#3 and #6 Fuel Oil	440	890	1.34
Kerosene and jet fuel	760	1810	2.86
Mineral oil dielectric fluid	1440	3040	3.64
Unknown oil	200	200	0.2
Waste Oil	2500	5000	Petroleum-Related Contaminants
Gasoline	Not applicable	Not applicable	Petroleum-Related Contaminants

Sites with oil from unknown sources must be tested for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, and polychlorinated biphenyls (PCBs) to determine if other potentially toxic constituents are present. The TPH guidelines in Table 2 are not designed to be protective of exposure to these constituents therefore they must be tested for, and compared to, their individual NMED soil screening guidelines.

Compositional assumption for waste oil developed by NMED is based on review of chromatographs of several types of waste oil. Sites with waste oil must be tested for VOCs, SVOCs, metals, and PCBs to determine if other potentially toxic constituents are present. The TPH guidelines in Table 2 are not designed to be protective of exposure to these constituents therefore they must be tested for, and compared to, their individual NMED soil screening guidelines.

The second standard is GW-2, which is applicable for sites where the depth to groundwater is less than 15 feet from the ground surface and within 30 feet of an occupied structure. The structure may be either residential or industrial. GW-2 standards are based upon "inhalation exposures that could occur to occupants of the building impacted by volatile compounds, which partition from the groundwater" (MADEP 2001). The GW-2 screening guidelines ONLY apply for the evaluation of inhalation exposures. If potential ingestion or contact with contaminated soil and/or

groundwater could occur, then the screening guidelines provided in Table 2.a should be applied. Table 2.b lists the TPH screening guidelines for the inhalation scenario.

Table 2b. TPH Screening Guidelines - Vapor Migration and Inhalation of Groundwater (GW-2)

	ТРН		
Petroleum Product	Residential Direct Exposure (mg/kg)	Industrial Direct Exposure (mg/kg)	Concentration in Groundwater (mg/L)
Diesel #2/crankcase oil	880	2200	30.4
#3 and #6 Fuel Oil	860	2150	35.3
Kerosene and jet fuel	940	2350	15.7
Mineral oil dielectric fluid	1560	3400	10.4
Unknown oil	800	2000	50.0
Waste Oil	2500	5000	Petroleum-Related Contaminants
Gasoline	Not applicable	Not applicable	Petroleum-Related Contaminants

Sites with oil from unknown sources must be tested for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, and polychlorinated biphenyls (PCBs) to determine if other potentially toxic constituents are present. The TPH guidelines in Table 2 are not designed to be protective of exposure to these constituents therefore they must be tested for, and compared to, their individual NMED soil screening guidelines.

Compositional assumption for waste oil developed by NMED is based on review of chromatographs of several types of waste oil. Sites with waste oil must be tested for VOCs, SVOCs, metals, and PCBs to determine if other potentially toxic constituents are present. The TPH guidelines in Table 2 are not designed to be protective of exposure to these constituents therefore they must be tested for, and compared to, their individual NMED soil screening guidelines.

Mineral oil based hydraulic fluids can be evaluated for petroleum fraction toxicity using the screening guidelines from Tables 2a and 2b specified for waste oil, because this type of hydraulic fluid is composed of approximately the same range of carbon fractions as waste oil. However, these hydraulic fluids often contain proprietary additives that may be significantly more toxic than the oil itself; these additives must be considered on a site- and product-specific basis (see ATSDR hydraulic fluids profile reference). Use of alternate screening guideline values requires prior written approval from the New Mexico Environment Department. TPH screening guidelines in Tables 2a and 2b must be used in conjunction with the screening levels for petroleum-related contaminants given in Table 3 because the TPH screening levels are NOT designed to be protective of exposure to these individual petroleum-related contaminants. Table 3 petroleum-related contaminants screening levels are based on the NMED Technical Background Document for Development of Soil Screening Levels, Rev 4.0 (June 2006).

The list of petroleum-related contaminants does not include polyaromatic hydrocarbons (PAHs) with individual screening levels that would exceed the total TPH screening levels (acenaphthene, anthracene, flouranthene, flourene, and pyrene). In addition, these TPH screening guidelines are based solely on human health, not ecological risk considerations, protection of surface water, or

potential indoor air impacts from soil vapors. Potential soil vapor impacts to structures or utilities are not addressed by these guidelines. Site-specific investigations for potential soil vapor impacts to structures or utilities must be done to assure that screenings are consistently protective of human health, welfare or use of the property. NMED believes that use of these screening guidelines will allow more efficient screenings of petroleum release sites at sites while protecting human health and the environment. Copies of the references cited below are available on the MADEP website at http://www.state.ma.us/dep/bwsc/vph_eph.htm and the NMED website at http://www.nmenv.state.nm.us/HWB/guidance.html.

Revised Table 3. Petroleum-Related Contaminants Screening Guidelines

		or Direct e to Soil	NMED DAF ^a 20 GW	
Petroleum-Related Contaminants	NMED Residential SSL (mg/kg)	NMED Industrial SSL (mg/kg)	Protection (mg/kg in soil)	NMED DAF ^b 1 GW Protection (mg/kg in soil)
Benzene	1.03E+01	2.58E+01	2.01E-02	1.00E-03
Toluene	2.52E+02	2.52E+02	2.17E+01	1.08E+00
Ethylbenzene	1.28E+02	1.28E+02	2.02E+01	1.01E+00
Xvlenes⁵	8.20E+01	8.20E+01	2.06E+00	1.03E-01
Naphthalene	7.95E+01	3.00≘+02	3.94E-01	1.97E-02
2-Methyl naphthalene ^d	5.00E+02	1.00Ξ+03	e	e
Benzo(a)anthracene	6.21E+00	2.34E+01	1.09E+01	5.43E-01
Benzo(b)fluoranthene	6.21E+00	2.34E+01	3.35E+01	1.68E+00
Benzo(k)fluoranthene	6.21E+01	2.34E+02	3.35€+02	1.68E+01
Benzo(a)pyrene	6.21E-01	2.34E+00	2.78E+00	1.39E-01
Chrysene	6.15E+02	2.31E+03	3.48E+02	1.74E+01
Dibenz(a,h)anthracene	6.21E-01	2.34E+00	1.04E+01	5.18E-01
indeno(1.2,3-c.d)pyrene	6.21E+00	2.34E+01	9.46E+01	4.73 €+00

^a DAF - Dilution Attenuation Factor

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1997. Toxicological Profile for Hydraulic fluids.

Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup and Office of Research and Standards. 1994. "Background Documentation for the Development of the MCP Numerical Standards."

Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup and Office of Research and Standards. 2002. "Characterizing Risks Posed by Petroleum

^b For contaminated soil in contact with groundwater.

[°] Based upon total xylenes

^d No NMED value available, value taken from Massachusetts Contingency Plan, 310 CMR 40.0985, 4/3/06.

⁶ No NMED value available and leachability-based value for DAF =1 or 20 not established in the Massachusetts Contingency Pian, 310 CMR 40.0985, 4/3/06.

Contaminated Sites: Implementation of the MADEP VPH/EPH Approach," Policy, October 31, 2002.

Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup and Office of Research and Standards. 2003. "Updated Petroleum Hydrocarbon Fraction Toxicity Values for the VPH/EPH/APH Methodology." November 2003.

New Mexico Environment Department, Hazardous Waste Bureau and Groundwater Quality Bureau Voluntary Remediation Program. 2006. "Technical Background Document for Development of Soil Screening Levels." June 2006. Revision 4.0.

Section 4.0 Monitoring Results

Title	l ab Number
Soil Gas Monitoring	1
Groundwater Monitoring	2
Groundwater Metals Analysis	3
Bioventing Wells Pressure Reading	4
GAC Analysis	5

Soil Gas Monitoring

	GRO (ug/L	49	67	330	65	210.0	48.0	15.0	0.06	95.0	1300.0	7.4	7300.0	8000.0	920.0	3100.0	8500.0	2800.0
	Xylene (ug/L)	12.0	3.3	100.0	24.0	31.0	6.3	4.1	11.0	12.0	390.0	1.0	1200.0	1000.0	170.0	210.0	2100.0	320.0
	Ethylben (ug/L)	2.2	94.0	16.0	3.8	8.0	0.2	0.42	6.0	9.0	75.0	0.28	150	140.0	36.0	<2.0	12.0	3.5
	Toluene (ug/L)	<0.10	0.12	<0.10	<0.10	<0.50	0.19	<0.10	<0.10	<0.10	<0.10	<0.10	8.20	8.30	<2.0	5.50	321.00	47.00
	Benzene (ug/L)	0.19	0.62	5.10	0.92	7.70	0.16	0.40	4.50	6.10	23.00	<0.10	6.10	<5.00	29.00	2.60	22.00	5.80
-	Carbon Dioxide (%)	00.0	0.10	1.10	0.00	0.00	00.0	0.00	0.40	0.70	4.20	0.40	0.30	0.30	0.10	0.50	0.10	1.30
	Oxygen (%)	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	19.3	17.9	19.0	20.4	20.8	20.6	18.9	20.7	15.0
	PID (ppm))	5.3	5.1	234.0	37.8	20.4	10.6	10.4	328.0	51.0	3275.0	301.0	1981.0	1146.0	85.5	1452.0	1534.0	1401.0
Sillis	Pressure (Inches of Water)	0.00	0.00	2.00	1.00	0.00	00.00	0.00	0.00	0.00	00.00	0.00	0.11	0.02	0.01	0.05	0.30	0.00
I COLLEGE	Depth to Water (ft)	4.90	4.90	5.26	4.91	4.85	5.37	3.97	3.63	5.29	6.24	5.67	7.79	7.42	5.68	6.8	8.04	5.14
000	Purge Volume	8.9	8.9	10.0	8.99	8.0	9.8	7.2	6.8	9.6	11.4	10.3	14.2	13.5	10.4	12.5	15.0	9.4
	DATE	Week of 10-05-09	Week of 9/10/09	Week of 4/20/09	Week of 3/02/09	Week of 11/10/08	Week of 7/14/08	Week of 5/12/08	Week of 03/10/08	Week of 10/29/07	Week of 8/20/07	Week of 6/18/07	Week of 2/26/07	Week of 12/04/6	Week of 9/11/06	Week of 6/17/06	Week of 3/06/06	Week of 1/09/06
	Sampling Activities	4th Quarter 2009	3rd Quarter 2009	2nd Quarter 2009	1st Quarter 2009	4th Quarter 2008	3rd Quarter 2008	2nd Quarter 2008	1st Quarter 2008	4th Quarter 2007	3rd Quarter 2007	2nd Quarter 2007	1st Quarter 2007	4th Quarter 2006	3rd Quarter 2006	2nd Quarter 2006	1st Quarter 2006	Pre-Dewater
	Sample Location			<u></u>		- <u></u>			ļ	# - 4T	. ,			·			. <u></u> .	

NR = Not Required (Voluntary Corrective Measures - Revised Monitoring Plan - October 2005)

NM = Not Measured

Soil Gas Monitoring

	GRO. (Ug/L)	<5.0	<5.0	290	370	78.0	410.0	310.0	18.0	<5.0	<5.0	10.0	88.0	120.0	<5.0	25.0	150.0	1100.0
	Xylene (ug/L)	0.34	<0.30	15.0	48.0	1.7	47.0	34.0	1.1	<0.10	<0.10	1.4	17.0	18.0	<0.10	2.8	17.0	88.0
	Ethylben (ug/L)	<0.10	<0.10	<0.10	1.10	0.14	1.20	7.10	0.36	<0.10	<0.10	<0.10	1.1	1.6	<0.10	0.12	4.1	8.0
	Toluënë (ugil.)	<0.10	<0.10	<0.10	<0.50	<0.10	0.78	<1.0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.23	1.80	11.00
	Benzene (uğ/L)	<0.10	<0.10	<0.10	<0.50	<0.10	<0.50	2.80	0.57	<0.10	<0.10	<0.10	<0.10	0.11	<0.10	0.21	0.36	7.80
	Garbon Dioxide (%)	0.00	0.10	0.00	0.00	0.00	0.10	0.10	0.00	0.00	0.00	0.10	0.10	0.00	0.00	0.00	0.00	6.40
	Oxygen (%)	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	19.7	19.9	20.1	20.6	20.9	20.9	20.9	20.9	4.0
	bib (pbm))	7.0	0.3	87.5	70.5	19.5	71.7	30.3	12.5	7.0	13.0	112.0	8.8	67.0	5.4	23.8	92.7	1589.0
oring	Pressure (Inches of Water)	3.10	2.50	8.30	10.50	6.00	5.00	1.20	1.20	0.00	0.00	0.10	0.10	0.08	0.01	0.15	0.05	0.00
MOHIL	Depth to Water (ff)	6.60	6.52	6.83	6.46	6.72	7.06	5.52	5.3	6.86	7.73	7.5	8.86	9.03	7.37	8.27	9.83	6.62
Son Gas Monnon	Pürge Völüme (L)	12.0	11.9	13.0	11.8	.c. 8	12.9	10.0	5.6	12.5	14.1	13.7	16.2	16.5	13.4	15.1	18.0	12.0
	DATE	Week of 10-05-09	Week of 9/10/09	Week of 4/20/09	Week of 3/02/09	Week of 11/10/08	Week of 7/14/08	Week of 5/12/08	Week of 03/10/08	Week of 10/29/07	Week of 8/20/07	Week of 6/18/07	Week of 2/26/07	Week of 12/04/6	Week of 9/11/06	Week of 6/17/06	Week of 3/06/06	Week of 1/09/06
	Sampling Activities	4th Quarter 2009	3rd Quarter 2009	2nd Quarter 2009	1st Quarter 2009	4th Quarter 2008	3rd Quarter 2008	2nd Quarter 2008	1st Quarter 2008	4th Quarter 2007	3rd Quarter 2007	2nd Quarter 2007	1st Quarter 2007	4th Quarter 2006	3rd Quarter 2006	2nd Quarter 2006	1st Quarter 2006	Pre-Dewater
	Sample Location	ı							7	:# - d1	_ _		_ 					

NR = Not Required (Voluntary Corrective Measures -Revised Monitoring Plan - October 2005)

NM = Not Measured

Soil Gas Monitoring

,-															-		i	
	GRO (úg/L)	NR.	<5.0	<5.0	<5.0	<5.0	5.6	<5.0	<5.0	<5.0	19.0	7.6	13.0	<5.0	<5.0	<5.0	1300.0	<5.0
	Xylene (ug/L)	NR	<0.30	<0.30	<0.30	<0.30	0.55	0.52	0.42	<0.1	1.3	1.0	1.2	<0.3	<0.1	<0.3	23.0	0.093
20 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	Ethylben (ug/L)	NR'	<0.10	<0.10	<0.10	<0.10	<0.10	0.15	<0.10	<0.10	<0.10	<0.10	0.11	<0.10	<0.10	<0.10	0.53	<0.05
	Toluene (ug/ti)	NR'	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	2.20	<0.05
	Benzene ™ (uĝ/L)≥	NR¹	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.55	<0.05
	Carbon Dioxide	NR'	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.10	0.10	0.10	0.50	0.10	1.00	0.60	0.00
	Oxygen (%)	NR'	20.9	20.9	20.9	20.9	20.9	20.9	20.9	19.2	19.6	20.5	20.4	19.7	20.9	20.9	18.6	17.80
	PID (ppm))-	NR'	0.0	0.3	0.0	0.5	8.0	8.0	2.1	0.4	16.0	19.0	5.2	1.3	6.6	2.9	179.8	W.Z
6,111,9	Inches of Water)	NR'	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Depth to Water (ft)	6.91	6.85	7.06	6.92	6.8	7.15	5.86	5.17	6.94	7.62	7.02	7.52	7.77	7.41	7.23	8.09	6.44
	Purge Volume (L)*	N.	12.5	13.0	12.6	10.0	13.1	11.0	9.0	12.7	13.9	12.8	13.7	14.0	13.5	13.2	15.0	11.8
	DATE	Week of 10-05-09	Week of 9/10/09	Week of 4/20/09	Week of 3/02/09	Week of 11/10/08	Week of 7/14/08	Week of 5/12/08	Week of 03/10/08	Week of 10/29/07	Week of 8/20/07	Week of 6/18/07	Week of 2/26/07	Week of 12/04/6	Week of 9/11/06	Week of 6/17/06	Week of 3/06/06	Week of 1/09/06
	Sampling Activities	4th Quarter 2009	3rd Quarter 2009	2nd Quarter 2009	1st Quarter 2009	4th Quarter 2008	3rd Quarter 2008	2nd Quarter 2008	1st Quarter 2008	4th Quarter 2007	3rd Quarter 2007	2nd Quarter 2007	1st Quarter 2007	4th Quarter 2006	3rd Quarter 2006	2nd Quarter 2006	1st Quarter 2006	Pre-Dewater
	Sample								8	:# - G T								

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Soil Gas Monitoring

	GRO (ug/L)	140	730	18	7.8	190.0	9.8	31.0	55.0	180.0	13000.0	9000.0	6100.0	8900.0	1200.0	1800.0	34000.0	150.0
	Xylene (ug/L)	50.0	180.0	9.7	2.4	45.0	2.9	8.8	12.0	46.0	910.0	1500.0	1000.0	1400.0	380.0	130.0	2000.0	38.0
	Ethylben (ug/L)	8.10	42.00	2.00	05'0	12.00	0.45	1.60	2.60	9.80	<0.10	<5.00	23.00	14.00	79.00	11.00	55.00	0.25
	Toluenë (ug/L)	<0.20	<0.10	<0.10	<0.10	<0.50	0.12	<0.10	<0.10	<0.10	<0.10	<5.00	9.80	15.00	<2.5	15.00	310.00	54.00
	Benzene (úg/L)	<0.20	<0.10	<0.10	<0.10	<0.50	<0.10	0.11	<0.10	<0.10	<0.10	<5.00	<5.00	6.10	<2.5	<10	00.69	0.13
	Carbon Diòxide (%)	0.10	0.10	0.00	0.00	0.00	1.40	0.00	0.00	0.30	2.60	1.90	0.60	0.90	1.40	1.40	0.10	1.10
	Oxygen (%)	20.9	20.9	20.9	20.9	20.9	18.7	20.9	20.9	19.3	16.9	18.6	19.8	19.3	18.6	18.6	19.7	16.0
	PID (ppm))	63.4	284.0	34.1	37.7	86.6	2.3	2.5	115.0	54.1	9890.0	1100.0	1268.0	1805.0	137.0	953.0	1534.0	103.5
81113	Pressure (Inches of Water)	00.0	0.00	0.50	0.20	0:30	0.40	00'0	0.00	00.0	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
	Depth to Water (ft)	4.57	4.54	4.96	4.86	4.54	4.76	3.43	3.15	4.78	6.97	6.62	5.59	5.95	5.32	5.24	7.81	4.70
	Purge Volume Depth to الله الله Water (الا)	8.3	8.3	9.0	8.8	7.8	8.7	6.3	5.7	8.7	12.7	12.1	10.2	11.0	9.7	9.6	14.0	8.6
	DATE	Week of 10-05-09	Week of 9/10/09	Week of 4/20/09	Week of 3/02/09	Week of 11/10/08	Week of 7/14/08	Week of 5/12/08	Week of 03/10/08	Week of 10/29/07	Week of 8/20/07	Week of 6/18/07	Week of 2/26/07	Week of 12/04/6	Week of 9/11/06	Week of 6/17/06	Week of 3/06/06	Week of 1/09/06
	Sampling. Activities	4th Quarter 2009	3rd Quarter 2009	2nd Quarter 2009	1st Quarter 2009	4th Quarter 2008	3rd Quarter 2008	2nd Quarter 2008	1st Quarter 2008	4th Quarter 2007	3rd Quarter 2007	2nd Quarter 2007	1st Quarter 2007	4th Quarter 2006	3rd Quarter 2006	2nd Quarter 2006	1st Quarter 2006	Pre-Dewater
	Sample Location									:# - 9T		-						

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Soil Gas Monitoring

	Xylene (ug/L) GRO	4.00	8.00	19.00	110.00	0.35	3.80	1.10	1.30	2.30	0.44	- <0.10	13.0	37.0	1.0	3.1	950.0	
	Ethylben (ug/L)	1.70	4.40	5.20	29.00	0.41	<0.10	0.34	0.49	0.39	<0.10	<0.10	1.00	2.30	0.18	<0.10	6.50	ć
	Toluene (ug/L)	<0.10	<0.10	<0.10	<0.10	<0.10	0.13	<0.10	<0.10	<0.10	<0.10	<0.10	<0.20	<0.50	<0.10	0.18	47.00	00 77
	Benzene (ug/L)	0.89	<0.10	<0.10	1.70	<0.10	<0.10	0.17	<0.10	<0.10	<0.10	<0.10	<0.20	<0.50	<0.10	<0.10	7.60	2 40
	Carbon Dioxide	0:30	0.20	00:0	0.10	0.00	00'0	0.00	0.00	0.20	0.60	0.70	0:30	09.0	09.0	0.50	0:30	Q
	Öxygen (%)	20.9	20.9	20.9	20.6	20.9	20.9	20.9	20.9	19.4	19.1	19.2	20.2	19.4	26.0	20.6	20.0	u u
	PID (ppm))	134.0	16.7	20.5	60.1	2.6	4.5	2.3	16.6	3.6	14.0	25.0	29.5	160.0	8.	56.9	1534.0	350.0
Sills	Pressure (Inches of Water)	00:0	0.00	1.00	0.50	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	o o
con cas montoning	e Depth to Water (ft)	5.49	5.47	5.93	5.86	5.4	5.67	4.33	4.02	5.7	7.65	7.32	6.39	6.61	6.17	6.18	8.61	A A3
5	Purge Volume Depth to :- (L) - Water (ft)	10.0	10.1	11.0	8.9	8.3	10.4	7.9	7.0	10.4	14.0	13.4	6.39	12.0	11.3	11.3	16.0	10.4
	DÅTE	Week of 10-05-09	Week of 9/10/09	Week of 4/20/09	Week of 3/02/09	Week of 11/10/08	Week of 7/14/08	Week of 5/12/08	Week of 03/10/08	Week of 10/29/07	Week of 8/20/07	Week of 6/18/07	Week of 2/26/07	Week of 12/04/6	Week of 9/11/06	Week of 6/17/06	Week of 3/06/06	Week of 1/09/06
	Sampling Activities	4th Quarter 2009	3rd Quarter 2009	2nd Quarter 2009	1st Quarter 2009	4th Quarter 2008	3rd Quarter 2008	2nd Quarter 2008	1st Quarter 2008	4th Quarter 2007	3rd Quarter 2007	2nd Quarter 2007	1st Quarter 2007	4th Quarter 2006	3rd Quarter 2006	2nd Quarter 2006	1st Quarter 2006	Pre-Dewater
	Sample Location		, <u>-</u> 1						9	# - 4 T								

NR = Not Required (Voluntary Corrective Measures - Revised Monitoring Plan - October 2005)

NM = Not Measured

Soil Gas Monitoring

Furge-Volume Depth to Pressure (LL) Water (ft) (Inches of Water) (10.0 6.48 0.00 10.00 10.5 5.48 0.00 10.00 10.5 5.48 0.00 10.	(ppm)), Oxygen (%) Carbon Dioxide	0.1 20.9 0.80	3.7 19.4 1.20	0.0 20.9 0.00	1.1 20.9 0.00	1.3 20.9 0.20	7.1 20.9 0.40	3.6 20.9 0.00	9.1 20.9 0.00	7.4 19.2 0.70	38.0 19.8 0.10	35.0 20.6 0.00	NR NR	NR NR	NR NR NR	NA NA	NR NR	NR NR NR
322-4-48	ssure PID of Water	0.00																R. N.
322-4-48	Furge Volume Depth to										9	.5						NR
Sample Sampling Activities DATE Location Wheek of	Sampling Activities DATE	4th Quarter 2009 Week of 10-05-09	3rd Quarter 2009 Week of 9/10/09	2nd Quarter 2009 Week of 4/20/09	1st Quarter 2009 Week of 3/02/09	4th Quarter 2008 Week of 11/10/08	3rd Quarter 2008 Week of 7/14/08	2nd Quarter 2008 Week of 5/12/08	1st Quarter 2008 Week of 03/10/08	4th Quarter 2007 Week of 10/29/07	3rd Quarter 2007 Week of 8/20/07	2nd Quarter 2007 Week of 6/18/07	1st Quarter 2007 Week of 2/26/07	4th Quarter 2006 Week of 12/04/6	3rd Quarter 2006 9/11/06	2nd Quarter 2006 Week of 6/17/06	1st Quarter 2006 Week of 3/06/06	Pre-Dewater Week of 1/09/06

NR = Not Required (Voluntary Corrective Measures - Revised Monitoring Plan - October 2005)

NM = Not Measured

NR1= Not Required (Approval With Direction - June 2009)

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Soil Gas Monitoring

	GRO (ug/L)	110	. 180	<5.0	<5.0	7.0	17.0	22.0	5.0	<5.0	6.2	<5.0	7100.0	4700.0	14.0	3700.0	7700.0	1800.0
	Xylene (ug/L)	25.00	35.00	<0.30	0.58	<0.30	2.00	2.00	1.20	0.57	0.78	<0.30	1400.0	710.0	0.43	460.0	1900.0	300.0
	Ethylben (ug/L)	4.90	7.00	<0.10	0.10	<0.10	0.11	0.48	0.23	0.11	<0.10	<0.10	130.00	50.00	0.13	2.20	13.00	.2.90
	Toluene (Ug/L)	<0.10	<0.10	<0.10	<0.10	<0.10	0.12	<0.10	<0.10	<0.10	<0.10	<0.10	9.50	7.40	<0.10	09.9	220.00	31.00
	Benzene (ug/L)	0.28	0.27	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<5.00	<5.00	<0.10	<2.00	8.80	6.90
	Carbon Diòxide (%)	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.10	0.30	0.40	0.00	01.0	0.10	8.90
	Oxygen (%)	10.9	20.9	20.09	20.9	20.9	20.9	20.9	20.9	19.7	19.7	20.1	20.4	20.5	20.9	20.9	20.7	4.6
	PID (ppm))	24.3	7.0	0.0	1.3	1.1	7.0	0.9	19.1	3.7	91.0	59.0	1775.0	555.0	11.2	1641.0	1534.0	1589.0
ornig	Pressure: (Inches of Water)	0.10	0.00	4.00	5.00	4.10	6.50	00'0	0.00	3.00	0.00	0.00	0.05	0.02	0.01	0.01	0.05	0.00
S PRIOTITE	Dèpth to Water (ft)	5.48	5.43	5.60	5.42	5.35	5.88	4.44	4.13	5.81	6.67	6.22	8.57	8.21	6.21	7.5	8.92	5.61
วงแ ชลร เขาปาแบบ	Purge Volume (L)	10	9.9	10.1	9.9	10.2	10.8	8.1	7.5	10.6	12.2	11.3	15.6	15.0	11.3	13.7	16.0	10.3
	DATE	Week of 10-05-09	Week of 9/10/09	Week of 4/20/09	Week of 3/02/09	Week of 11/10/08	Week of 7/14/08	Week of 5/12/08	Week of 03/10/08	Week of 10/29/07	Week of 8/20/07	Week of 6/18/07	Week of 2/26/07	Week of 12/04/6	Week of 9/11/06	Week of 6/17/06	Week of 3/06/06	Week of 1/09/06
	Sampling Activities	4th Quarter 2009	3rd Quarter 2009	2nd Quarter 2009	1st Quarter 2009	4th Quarter 2008	3rd Quarter 2008	2nd Quarter 2008	1st Quarter 2008	4th Quarter 2007	3rd Quarter 2007	2nd Quarter 2007	1st Quarter 2007	4th Quarter 2006	3rd Quarter 2006	2nd Quarter 2006	1st Quarter 2006	Pre-Dewater
	Sample Location								8	# - d1								

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NM = Not Measured

Soil Gas Monitoring

GRO (ug/L	<5.0	<5.0	. <5.0	<5.0	10.0	<5.0	8.8	<5.0	49.0	65.0	9.9	290.0	20.0	140.0	31.0	8.0	31.0
Xylene (ug/L)	<0.30	0.55	<0.30	<0.30	1.00	<0.30	2.1	<0.30	4.0	2.8	0.93	41.0	3.5	2.5	0.62	0.53	0.35
Ethylben (ug/L)	<0.10	0.11	<0.10	<0.10	0.21	<0.10	0.55	<0.10	0.56	<0.10	<0.10	4.30	0.16	0.18	0.10	90.0	0.18
. Toluene (ug/L)	<0.10	<0.10	<0.10	<0.10	<0.10	0.13	<0.10	<0.10	<0.10	<0.10	<0.10	0.15	<0.10	0.21	<0.10	0.09	0.05
Benzene (ug/L)	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.05	<0.05
Cárbon Dioxide	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.10	0.20	0.10	0.30	0.00	0.10	0.20
Öxygen (%)	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	19.7	19.9	20.6	20.6	20.9	20.3	20.9	20.6	17.2
Pio (ppm)) Oxygen (%	0.0	0.8	0.0	9.0	3.2	0.2	4.4	2.1	8.2	48.0	24.0	95.1	9.6	18.3	13.9	7.7	8.5
Pressure:	0.00	00'0	0.00	0.00	0.00	0.00	0.00	0,00	0.00	00.00	0.00	. 00.00	0.00	0.00	0.00	0.00	0.00
Deptil to Water (ft)	5.33	5.43	5.49	5.35	5.29	5.4	4.03	3.32	4.94	5.18	4.73	5.07	5.39	5.48	5.26	5.21	5.08
Purge Volume (u)	9.7	9.9	10.0	9.7	10.4	9.9	7.4	6.0	9.0	9.4	8.6	9.2	10.0	10.0	9:0	10.0	11.3
, DATE	Week of 10-05-09	Week of 9/10/09	Week of 4/20/09	Week of 3/02/09	Week of 11/10/08	Week of 7/14/08	Week of 5/12/08	Week of 03/10/08	Week of 10/29/07	Week of 8/20/07	Week of 6/18/07	Week of 2/26/07	Week of 12/04/6	Week of 9/11/06	Week of 6/17/06	Week of 3/05/06	Week of 1/09/06
Sampling Activities	4th Quarter 2009	3rd Quarter 2009	2nd Quarter 2009	1st Quarter 2009	4th Quarter 2008	3rd Quarter 2008	2nd Quarter 2008	1st Quarter 2008	4th Quarter 2007	3rd Quarter 2007	2nd Quarter 2007	1st Quarter 2007	4th Quarter 2006	3rd Quarter 2006	2nd Quarter 2006	1st Quarter 2006	Pre-Dewater
Sample								6	# - GT				·				

NR = Not Required (Voluntary Corrective Measures - Revised Monitoring Plan - October 2005)

NM = Not Measured

Soil Gas Monitoring

	GRO (ug/L)	NR'	<5.0	<5.0	<5.0	<5.0	9.7	<5.0	<5.0	<5.0	16.0	11.0	6.0	22.0	<5.0	14.0	25.0	<5.0
	Xylene (ug/L)	NR.	<0.30	<0.30	<0.30	<0.30	0.75	0.82	0.82	<0.30	1.0	1.0	0.94	2.7	<0.30	0.57	6.1	0.28
	Ethylben (ug/L)	NR¹	<0.10	<0.10	<0.10	<0.10	<0.10	0.27	0.16	<0.10	<0.10	<0.10	<0.10	0.20	<0.10	<0.10	0.05	<0.05
	Toluënë (ug/L)	NR.	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.16	0.62	<0.05
	Benzene (ug/L)	NR.	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.11	0.07	<0.05
	Carbon Dioxide (%)	NR.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.70	0.00	0.00	1,10	0.00
	Oxygen (%)	NR'	20.9	20.9	20.9	20.9	20.9	20.9	20.9	19.4	19.7	20.6	20.4	14.4	20.9	20.9	17.1	17.8
	PID (ppm))	NR'	0.0	0.1	0.2	0.3	3.2	2.8	2.4	0.5	42.0	38.0	3.3	18.0	4.7	6.7	21.9	0.0
81110	Pressure (Inches of Water)	NR¹	0.00	00:0	00:0	0.00	0.00	00.0	0.00	0.00	0.00	0.00	0.00	00.0	0.00	0.00	0.00	0.00
oon das monno	Depth to Water (ft)	4.83	4.79	4.88	4.77	5.23	4.88	3.78	2.83	4.74	5.32	4.62	5.23	5.57	5.26	5.23	5.86	5.08
20 - 00	Purge Volume (L)	NR'	8.77	8.9	8.7	8.6	8.9	6.9	5.0	8.7	9.7	8.5	9.5	10.0	9.6	9.6	11.0	9.3
	DATE	Week of 10-05-09	Week of 9/10/09	Week of 4/20/09	Week of 3/02/09	Week of 11/10/08	Week of 7/14/08	Week of 5/12/08	Week of 03/10/08	Week of 10/29/07	Week of 8/20/07	Week of 6/18/07	Week of 2/26/07	Week of 12/04/6	Week of 9/11/06	Week of 6/17/06	Week of 3/06/06	Week of 1/09/06
	Sampling Activities	4th Quarter 2009	3rd Quarter 2009	2nd Quarter 2009	1st Quarter 2009	4th Quarter 2008	3rd Quarter 2008	2nd Quarter 2008	1st Quarter 2008	4th Quarter 2007	3rd Quarter 2007	2nd Quarter 2007	1st Quarter 2007	4th Quarter 2006	3rd Quarter 2006	2nd Quarter 2006	1st Quarter 2006	Pre-Dewater
	Sample Location							,	0	l# - d.	1.							

NR = Not Required (Voluntary Corrective Measures - Revised Monitoring Plan - October 2005)

NR¹= Not Required (Approval With Direction - June 2009) NM = Not Measured

Soil Gas Monitoring

100000		THE RESERVE OF THE PERSON NAMED IN	· · · · · · · · · · · · · · · · · · ·	Site of Marie And All	P	CHARGE SERVICE CO.		17.6	TO THE STATE OF TH				
Sample Location	Sampling Activities	DATE	Purge volume Depth to	Veprin to Water (ft)	Pressure (Inches of Water)	PID (ppm))	Oxygen (%)	carbon Dioxide	Benzene (úg/L)	(ug/L)	(ug/L)	Xylene (ug/L)	GRO (ug/L)
	4th Quarter 2009	Week of 10-05-09	NR'	5.28	NR.	NR¹	NR'	NR¹	NR'	NR'	NR'	NR'	.NR1
	3rd Quarter 2009	Week of 9/10/09	9.6	5.25	0.00	0.0	20.9	0.00	<0.10	<0.10	<0.10	<0.30	<5.0
	2nd Quarter 2009	Week of 4/20/09	9.7	5.34	0.00	0.2	20.9	0.00	<0.10	<0.10	<0.10	<0.30	<5.0
	1st Quarter 2009	Week of 3/02/09	9.55	5.22	0.00	0.1	20.9	0.00	<0.10	<0.10	<0.10	<0.30	<5.0
	4th Quarter 2008	Week of 11/10/08	6.1	4.64	0.00	0.1	20.9	0.00	<0.10	<0.10	<0.10	<0.30	<5.0
	3rd Quarter 2008	Week of 77.14/08	10.0	5.47	0.00	2.2	20.9	0.00	<0.10	<0.10	<0.10	0.74	8.0
	2nd Quarter 2008	Week of 5/12/08	7.6	4.15	0.00	1.7	20.9	0.00	<0.10	<0.10	0.20	0.64	<5.0
ı	1st Quarter 2008	Week of 03/10/08	6.0	3.43	0.00	0.9	20.9	0.00	<0.10	<0.10	<0.10	<0.30	<5.0
l#-d	4th Quarter 2007	Week of 10/29/07	9.5	5.18	0.00	9.0	19.4	0.00	<0.10	<0.10	<0.10	<0.3	<5.0
L	3rd Quarter 2007	Week of 8/20/07	10.5	5.75	0.00	81.0	14.9	6.20	<0.10	<0.10	<0.10	1.4	39.0
	2nd Quarter 2007	Week of 6/18/07	9.5	5.17	0.00	45.0	20.6	0.00	<0.10	<0.10	<0.10	0.74	7.2
	1st Quarter 2007	Week of 2/26/07	10.4	5.69	0.00	5.9	19.0	1.00	<0.10	<0.10	0.11	1.4	11.0
	4th Quarter 2006	Week of 12/04/6	10.0	6.00	0.00	. 2.8	14.4	0.70	<0.10	<0.10	<0.10	<0.1	<5.0
	3rd Quarter 2006	Week of 9/11/06	10.3	5.69	0.00	2.8	19.1	1.40	<0.10	<0.10	0.24	1.5	9.0
	2nd Quarter 2006	Week of 6/17/06	10.3	5.61	0.00	2.6	18.8	1.40	<0.10	<0.10	<0.10	<0.3	<5.0
	1st Quarter 2006	Week of 3/06/06	11.0	6.31	0.00	13.2	20.0	0.40	0.06	0.32	0.053	3.3	13.0
,	Pre-Dewater	Week of 1/09/06	10.2	5.55	0.00	0.0	17.5	0.30	<0.05	<0.05	<0.05	0.14	<5.0

NR = Not Required (Voluntary Corrective Measures - Revised Monitoring Plan - October 2005)

NR1= Not Required (Approval With Direction - June 2009)

NM = Not Measured



Soil Gas Monitoring

	GRO (úg/L)	ZZ.	<5.0	<5.0	<5.0	<5.0	8.2	<5.0	<5.0	<5.0	14.0	6.0	61.0	120.0	<5.0	17.0	9.0	<5.0
	Xylene (ug/L)	ZR.	<0.30	<0.30	<0.30	<0.30	0.77	0.56	<0.30	<0.30	1.0	0.56	11.0	24.0	<0.3	0.52	2.3	0.3
	Ethylben (ug/L)	NR.	<0.10	<0.10	<0.10	<0.10	<0.10	0.17	<0.10	<0.10	<0.10	<0.10	1.10	0.28	0.10	<0.10	90.0	<0.05
	Toluene. (ug/L)	NR'	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	0.19	0.21	<0.05
	Benzene (ug/L)	NR.	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	0.12	0.05	<0.05
	Carbon Dioxide	NR.	00.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.20	1.60	0.00	0.00	1,40	0.00
	Oxygen (%)	NR'	20.9	20.9	20.9	20.9	20.9	20.9	20.9	19.4	19.8	20.6	20.4	18.5	20.9	20.9	18.7	17.8
	PID (ppm))	NR'	0.0	0.4	0.1	0.2	3.6	2.8	1.6	0.7	19.0	26.0	18.10	30.3	5.7	6.7	10.1	0.2
91119	Préssure (Inchès of Water)	NR.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Depth to Water (ff)	7.00	6.97	7.09	6.97	5.09	7.18	5.85	5.11	6.92	7.36	6.82	7.4	7.67	7.48	7.44	7.94	7.38
	Purge Volume (L)	NR'	12.7	12.9	12.7	12.3	13.1	10.7	9.0	12.7	13.4	12.5	13.5	14.0	13.6	13.6	15.0	13.5
	DATË	Week of 10-05-09	Week of 9/10/09,	Week of 4/20/09	Week of 3/02/09	· Week of 11/10/08	Week of 7/14/08	Week of 5/12/08	Week of 03/10/08	Week of 10/29/07	Week of 8/20/07	Week of 6/18/07	Week of 2/26/07	Week of 12/04/6	Week of 9/11/06	Week of 6/17/06	Week of 3/06/06	Week of 1/09/06
	Sampling Activities	4th Quarter 2009	3rd Quarter 2009	2nd Quarter 2009	1st Quarter 2009	4th Quarter 2008	3rd Quarter 2008	2nd Quarter 2008	1st Quarter 2008	4th Quarter 2007	3rd Quarter 2007	2nd Quarter 2007	1st Quarter 2007	4th Quarter 2006	3rd Quarter 2006	2nd Quarter 2006	1st Quarter 2006	Pre-Dewater
	Sample Location								z	l# - d.	L							

NR = Not Required (Voluntary Corrective Measures - Revised Monitoring Plan - October 2005)

NM = Not Measured

Soil Gas Monitoring

ſ	(ug/L)												<u> </u>				:	
	GRO	NR	<5.0	<5.0	<5.0	<5.0	11.0	<5.0	<5.0	<5.0	30.0	.c.	24.0	18.0	<5.0	27.0	8.6	<5.0
	Xylene (ug/L)	NR¹	<0.30	<0.30	<0.30	<0.30	1.40	0.54	06.0>	<0.30	1.3	09:0	2.9	2.4	<0.30	2.4	1.6	<0.05
	Ethylben (úg/L)	NR	<0.10	<0.10	<0.10	<0.10	<0.10	0.17	<0.10	<0.10	<0.10	<0.10	0.20	0.18	<0.10	0.11	0.09	<0.05
	Toluene (úg/L)	NR,	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.48	0.17	<0.05
	Bérizene (ug/L)	NR.	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.11	0.05	<0.05
	Carbon Dioxide	NR'	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.20	1.10	6.90	1.00	1.00	0.00
	Oxygén (%)	NR'	20.9	20.9	20.9	20.9	20.9	20.9	20.9	19.4	19.8	20.6	20.2	18.5	18.6	18.1	19.1	17.8
	PĺD (ppm))	NR.	0.0	0.1	0.2	0.2	3.2	1.5	- 1.1	0.7	128.0	97.0	4.10	13.8	1.8	19.5	12.6	0.1
99	Prēssurē (Incheš of Water)	NR"	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Depth to Water (ft)	5.85	5.80	5.98	5.66	6.83	5.97	4.69	3.92	5.8	6.1	5.63	6.16	6.51	6.33	6.35	6.78	6.24
	Purge Volume (L)	NR'	10.6	10.9	10.4	16.9	10.9	8.6	7.0	10.0	11.0	10.3	11.3	11.9	11.6	11.6	12.0	11.4
	pate	Week of 10-05-09	Week of 9/10/09	Week of 4/20/09	Week of 3/02/09	Week of 11/10/08	Week of 7/14/08	_Week of 5/12/08	Week of 03/10/08	Week of 10/29/07	Week of 8/20/07	week of 6/18/07	Week of 2/26/07	Week of 12/04/6	Week of 9/11/06	Week of 6/17/06	Week of 3/06/06	Week of 1/09/06
	Sámpling Activities	4th Quarter 2009	3rd Quarter 2009	2nd Quarter 2009	1st Quarter 2009	4th Quarter 2008	3rd Quarter 2008	2nd Quarter 2008	1st Quarter 2008	4th Quarter 2007	3rd Quarter 2007	2nd Quarter 2007	1st Quarter 2007	4th Quarter 2006	3rd Quarter 2006	2nd Quarter 2006	1st Quarter 2006	Pre-Dewater
	Sample Location								3	l# - d.	L							

NR = Not Required (Voluntary Corrective Measures - Revised Monitoring Plan - October 2005)

NM ≈ Not Measured



Soil Gas Monitoring

			JOHN GAS INDITITION	MICHIE	JIII Y								
Sample Location	Sampling Activities	DATE	Purgė Volume (L)	Depth to Water (ft)	Pressure (Inches of Water)	PID (ppm))	Oxygen (%)	Carbon Dioxide (%)	Benzene (úg/L)	Toluene (ug/L)	Ethylben (ug/L)	Xylene (ug/L)	GRO (ug/L)
	4th Quarter 2009	Week of 10-05-09	0.96	5.85	0.00	0.0	20.9	0.10	<0.10	<0.10	<0.10	<0.30	<5.0
	3rd Quarter 2009	Week of 9/10/09	95.0	5.82	0.00	0.0	20.9	0.20	<0.10	<0.10	<0.10	<0.30	<5.0
	2nd Quarter 2009	Week of 4/20/09	99.1	6.02	0.00	0.0	20.9	0.00	<0.10	<0.10	<0.10	<0.30	<5.0
	1st Quarter 2009	Week of 3/02/09	93.0	5.69	0.00	0.8	20.9	0.00	<0.10	<0.10	<0.10	<0.30	<5.0
	4th Quarter 2008	Week of 11/10/08	162.0	5.72	0.00	0.1	20.9	0.00	<0.10	<0.10	<0.10	<0.30	<5.0
	3rd Quarter 2008	Week of 7/14/08	8.96	5.89	00.0	0.2	20.7	0.60	<0.10	0.11	<0.10	<0.30	<5.0
<u>. </u>	2nd Quarter 2008	Week of 5/12/08	7.97	4.66	0.00	0.9	20.9	0.00	<0.10	<0.10	0.12	0.42	<5.0
L:	1st Quarter 2008	Week of 03/10/08	68.0	4.11	0.00	2.0	20.9	0.00	<0.10	<0.10	<0.10	<0.30	<5.0
# - MC	4th Quarter 2007	Week of 10/29/07	95.0	5.8	0.00	0.7	19.3	0.20	<0.10	<0.10	<0.10	<0.30	<5.0
1	3rd Quarter 2007	Week of 8/20/07	110.0	6.71	0.00	27.0	18.6	1.10	<0.10	<0.10	<0.10	0.48	9.0
	2nd Quarter 2007	Week of 6/18/07	95.6	5.81	0.00	9.0	18.6	1.80	<0.10	<0.10	<0.10	0.32	<5.0
	1st Quarter 2007	Week of 2/26/07	100.5	6.11	0.00	1.00	19.8	0.50	<0.10	<0.10	<0.10	<0.30	<5.0
	4th Quarter 2006	Week of 12/04/6	92.0	5.58	0.00	1.1	20.9	0.00	<0.10	<0.10	<0.10	<0.30	<5.0
	3rd Quarter 2006	Week of 9/11/06	105.0	6.39	0.00	7.8	18.8	1.30	<0.10	<0.10	<0.10	<0.30	<5.0
	2nd Quarter 2006	Week of 6/17/06	150.0	6.49	0.00	5.8	16.6	4.40	<0.10	<0.10	<0.10	0.33	8.6
	1st Quarter 2006	Week of 3/06/06	130.0	7.91	0.00	25.4	6.6	8.70	<0.05	0.61	0.17	5.2	61.0
·	Pre-Dewater	Week of 1/09/06	113.0	6.9	0.00	0.0	12.7	7.40	0.09	0.14	0.59	1.2	35.0

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MR1= Not Required (Approval With Direction - June 2009)

NM = Not Measured

Soil Gas Monitoring

	GRO (ug/L)	<5.0	<5.0	<5.0	<5.0	. <5.0	<5.0	<5.0	<5.0	<5.0	<5.0	11.0	<5.0	<5.0	<5.0	35.0	28.0	<5.0
	Xýlene (ug/L)	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.10	<0.30	<0.30	0.39	<0.30	<0.30	0.46	<0.30	1.4	8.9	0.34
	Ethylben (ug/L)	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.06	0.08
	Toluene (ug/L)	<0.10	<0.10	<0.10	<0.10	<0.10	0.11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	1.00	<0.05
	Benžene (ug/L)	<0.10	<0.10	<0.10	. <0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.05	<0.05
	Carbon Dioxide	1.10	2.30	0.20	0.30	0.60	2.60	0.00	0.00	1.60	5.00	3.00	0.60	1.00	2.80	2.70	1.00	1.00
	Oxygen (%)	20.9	19.1	20.9	20.5	20.9	18.1	20.9	20.9	18.2	15.7	17.4	19.8	19.0	17.7	16.8	19.2	17.1
	(måd) gia	0.0	0.0	0.0	0.4	0:1	0.2	1.0	2.0	1.1	22.0	64.0	1.60	2.1	3.5	16.1	20.3	0.0
81118	Pressure (Inches of Water)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Depth to Water (ft)	9.03	9.02	9.24	8.96	8.72	9.03	7.66	6.9	8.62	9.3	8.41	8.79	9.16	9.38	9.98	10.07	9.69
	Purge Volume (L)	0.99	65.0	67.7	65.0	60.0	66.2	56.2	50.0	63.0	68.0	61.6	64.4	67.0	68.0	73.0	74.0	71.1
	DATE .	Week of 10-05-09	Week of 9/10/09	Week of 4/20/09	Week of 3/02/09	Week of 11/10/08	Week of 7/14/08	Week of 5/12/08	Week of 03/10/08	Week of 10/29/07	Week of 8/20/07	Week of 6/18/07	Week of 2/26/07	Week of 12/04/6	Week of 9/11/06	Week of 6/17/06	Week of 3/06/06	Week of 1/09/06
	Sampling Activities	4th Quarter 2009	3rd Quarter 2009	2nd Quarter 2009	1st Quarter 2009	4th Quarter 2008	3rd Quarter 2008	2nd Quarter 2008	1st Quarter 2008	4th Quarter 2007	3rd Quarter 2007	2nd Quarter 2007	1st Quarter 2007	4th Quarter 2006	3rd Quarter 2006	2nd Quarter 2006	1st Quarter 2006	Pre-Dewater
	Sample Location								6	v# MV	V			-				

NR = Not Required (Voluntary Corrective Measures -Revised Monitoring Plan - October 2005)

NM = Not Measured





Ground Water Monitoring

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			i	!							9.8	Wacc	Method 80	Macc		TPH Screen	ing Guidelines
			Ϊ́	Field Measurements	Irements						MCL	ZONMAC	MCL	ZONMAC		Tal	Table 2a
											0.005	0.75	0.7	0.62		0.2	
Sample	Sampling Event	DATE	Depth to Water (ff below TOC)	Depth to Product (It below TOC)	Total Well Depth (ft below TOC)	** E.C. (umhos/cm)	Hd	TEMP (%)	D.O. (mg/L)	ORP (mv)	Benzene (mg/L)	Toluene (mg/L)	Ethylben (mg/L)	Xylene (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)
	4th Quarter 2009	Week of 10-05-09	4.90	MPP	9.28	2732	6.79	67.4	1.69	137	0.62	<0.10	3.40	15.00	<0.25	11.00	44.00
	3rd Quarter 2009	Week of 9/10/09	4.90	PP	9.28	2653	6.93	6.96	1.51	-42	0.81	<0.10	3.20	12.00	<0.250	7.80	39.00
	2nd Quarter 2009	Week of 4/20/09	5.26	ddN	9.28	2684	6.92	54.5	0.83	209	0.43	<0.10	2.50	14.00	<0.250	15.00	59.00
	1st Quarter 2009	Week of 3/02/09	4.91	adN	9.28	2920	6.91	46.6	10.35	194	0.85	<0.10	3.00	15.00	<0.250	14.00	46.00
	4th Quarter 2008	Week of 11/10/08	4.85	MPP	9.38	3050	6.81	61.1	0.56	241	1.20	<0.25	2.70	16.00	<0.63	17.00	51.00
	3rd Quarter 2008	Week of 7/14/08	5.37	ddN	9.38	4037	6.96	68.6	6.94	123	1.80	<0.05	3.30	17.00	<0.12	7.60	59.00
	2nd Quarter 2008	Week of 5/12/08	73.97	NPP	9.38	3572	6.83	58.6	1.40	262	2.50	<0.05	3.00	13.00	<0.12	2:00	54.00
	1st Quarter 2008	Week of 03/10/08	3.63	PPP	9.38	3533	6.96	49.4	4.55	210	2.10	<0.05	3.40	20.00	<0.12	2.40	62.00
ŀ# dI	4th Quarter 2007	Week of 10/29/07	5.29	PP	9.38	4123 .	6.78	63.4	0.49	223	1.50	<0.001	3.80	.18.00	<0.25	1.80	64.00
	3rd Quarter 2007	Week of 8/20/07	6.24	PPP	85. 85.	4661	6.93	74.4	4.19	237	1.20	<0.10	4.20	20:00	<0.25	3,30	80.00
	2nd Quarter 2007	Week of 6/18/07	5.67	APP	9.38	4907	6.93	65.9	0.31	185	1.90	<0.10	4.00	19.00	<0.25	1-2.10	70.00
	1st Quarter 2007	Week of 2/26/07	67.7	AdN	9.38	3825	6.82	50.3	0.65	134	2.00	<0.10	. 6.30	32.00	<0.25	3.00	160.00
	4th Quarter 2006	Week of 12/04/06	7.42	NPP	9.38	3631	6.39	57.3	Z Z	96	1.60	<0.10	3.20	20.00	<0.25	3.30	95.00
	3rd Quarter 2006	Week of 9/11/06	5.68	APP	9.38	3053	7.00	72.8	0.71	-50	3.20	<0.10	3.80	20.00	<0.25	3.50	98.00
	2nd Quarter 2006	Week of 6/17/06	6.80	NPP	9.38	2372	6.96	67.3	0.56	-15	2.60	<0.25	3,30	18.00	<0.62	4.30	40.00
	1st Quarter 2006	Week of 3/06/06	8.04	фdN	9.38	2233	7.04	52.0	0.83	186	1,50	<0.05	4.10	30,00	<0.12	3,80	72.00
	Baseline	Week of 8/15/05	5.35	NPP	9.38	2034	6.92	70.6	NR	N.	1.40	0.05	3.80	23.00	<0.05	1.90	66.00

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Ground Water Monitoring

					River		Terrace										
	Ground	Water	Ground Water Monitoring	βl													
			i i	Field Measurements	rements					p.umer A	MOL	WQCC ZONMAC	EPA Method 8021B	WQCC ZONMAC		EPA Met TPH Screen	EPA Method 8015B TPH Screening Guidelines Table 2a
			•							- Security	0.005	0.75	7:0	0.62		0.2	
Sample Location	Sampling Event	DATE	Depth to Water (ft.below.TOC)	Depth to Product (ff. below TOC)	Total Well Depth :(ft below TOC)	E.C. (umhos/cm)	Hď	TEMP: (°F)	io (7/6m)	ORP (mV)	Benzene (mg/L)	Toluene (mg/L)	Ethylben =(mg/L)	Xylene (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)
	4th Quarter 2009	Week of 10-05-09	6.60	MPP	9.92	1789	6.84	64.6	2.38	157	0.79	0.015	2.10	4.20	<0.025	5:00	16.00
	3rd Quarter 2009	Week of 9/10/09	6.52	APP	9.92	1926	6.97	66.5	0.75	109	0.65	0.017	1.50.	3.60	<0.025	4.30	13.00
	2nd Quarter 2009	Week of 4/20/09	6.89	d d N	9.92	2175	6.90	57.4	0.73	215	0.69	<0.01	1.80	2.10	<0.025	6.70	14.00
	1st Quarter 2009	Week of 3/02/09	6.46	NPP	9.92	2358	7.00	49.8	8,1	207	0.39	<0.0005	0.50	0.58	<0.013	6.00	3.70
	4th Quarter 2008	Week of 11/10/08	6.72	NPP	9.92	2619	68.8	59.9	3.58	174	0.31	<0.01	0.73	0.93	<0.025	7.50	5.80
	3rd Quarter 2008	Week of 7/14/08	7.06	NPP	9.92	3363	6.98	66.4	3.48	162	0,80	<0.02	3.00	3.40	<0.05	1.40	19.00
	2nd Quarter 2008	Week af 5/12/08	5.52	NPP	9.92	2664	6.85	56.7	0.44	118	110	<0.02	2.20	4:00	<0.05	7.30	19.00
	1st Quarter 2008	Week of 03/10/08	5.30	MPP	9.92	2748	7.00	51.3	1.89	171	1.20	<0.02	.2.30	4.20	<0.05	1.70	18.00
7# 러그	4th Quarter 2007	Week of 10/29/07	6.86	MPP	9.92	3507	96.9	62.4	0.85	217	1:50	<0.10	2.40	3.70	<0.25	1,40	22.00
	3rd Quarter 2007	Week of 8/20/07	7.73	ddN	9.92	3771	6.97	71.0	1.78	217	0.64	<0.10	2.00	4.80	<0.25.	1.00	28.00
	2nd Quarter 2007	Week of 6/18/07	7.50	ddN	9.92	2576	6.87	67.5	0.70	191	1.40	0.32	3.80	15:00	<0.25	*<1.00	47.00
	1st Quarter 2007	Week of 2/26/07	8.86	NPP	9.92	3783	6.82	51.4	1.45	171	4.30	<0.10	4.30	19.00	<0.25	2.10	94.00
	4th Quarter 2006	Week of 12/04/06	9.03	d d N	9.92	3548	6.92	53.5	2.14	177	1,70%	<0.10	2.40	12:00	<0.25	1.50	41.00
	3rd Quarter 2006	Week of 9/11/06	7.37	ddN	9.92	2531	7.03	67.4	0.65	-13	3.30	0.27	2.80	15.00	<0.25	1.30	77.00
	2nd Quarter 2006	Week of 6/17/06	8.27	Z dd Z	9.92	3586	6.93	62.8	0.94	-216	3.60	2.40	2:80	14,00	<0.12	4.90	42.00
	1st Quarter 2006	Week of 3/06/06	9.83	ddN	9.92	1802	7.08	53.2	9.48	184	6.20	1.70	0.51	5.00	<0.12	9.90	27.00
	Baseline	Week of 8/15/05	6.84	ddN	9.92	2225	6,85	65.2	Z Z	NR	6.10	8.70	4.20	.25.00	<0.05	1.10	84,00
																İ	

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*Per NMED letter Approval with Direction 2008 Groundwater Remediation and Monitoring Annual Report (Comment 9) dated Sept. 1, 2009 all future DRO analysis will be analyzed at a lower detection level of 0.2mg/L by EPA Method 8015B.





Ground Water Monitoring

EPA Method 8015B	TPH Screening Guidelines Table 2a		GRO (mg/L)	N E	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EPA Me	TPH Screen	5.0.	DRO (mg/L)	NR.	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00
1200 SAR			MTBE (mg/L)	NR.	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
21日上海沿海	ZONMAC	0.62	Xylene (mg/L)	NR.	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.003	<0.003	<0.003	<0.003	0.0012
EPA Method 8021B	MCL	7:0	Ethylben (mg/L)	NR.	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
Water EP/	WOCC	0.75	Toluene (mg/L)	NR.	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
では、	MCL	0.005	Benzene (mg/L)	NR.	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
			ORP (mV)	NR.	27.1	231	278	216	240	122	223	254	246	211	248	242	233	621	256	S.
			D.O. (mg/L)	NR.	5.38	3.20	3.04	1.75	1.56	3.95	2.87	3.40	2.67	3.12	1.65	1.32	0.33	0.98	0.21	A.
			TEMP (°F)	Z Z	67.9	55.5	49.7	60.1	64.5	55.7	48.5	62.3	66.2	80.8	47.0	54.8	68.0	62.1	47.9	68.4
			Hd	NR1	6.85	6.91	7.07	06.9	6.99	6.86	68.89	6.87	6.97	6.85	6.89	7.06	6.99	66.9	6.94	6.85
		,	(umhos/cm)	NR:	208	752	812	1096	867	775	602	908	815	560	839	673	677	958	1050	1295
	urements		Total Well Depth (ft below TOC);	12.35	12.35	12.35	12.35	12.35	12.35	12.35	12.35	12.35	12.35	12.35	12.35	12.35	12.35	12.35	12.35	12.35
	Field Measurements		Depth to Product (ft below TOC)	ddN	ddN	APP	NPP	NPP	ddN	NPP	NPP	ddN	ddN	ddN	NPP	ddN	ddN	ddN	NPP	МРР
	证		Depth to Water (ft below TOC)	6.91	6.85	7.06	6.46	6.80	7.15	5.86	5.17	6.94	7.62	7.02	7.52	7.77	7.41	7.23	8.09	6.61
			DATE	Week of 10-05-09	Week of 9/10/09	Week of 4/20/09	Week of 3/02/09	Week of 11/10/08	Week of 7/14/08	Week of 5/12/08	Week of 03/10/08	Week of 10/29/07	Week of 8/20/07	Week of 6/18/07	Week of 2/26/07	Week of 12/04/06	Week of 9/11/06	Week of 6/17/06	Week of 3/06/06	Week of 8/15/05
			Sampling Event	4th Quarter 2009	3rd Quarter 2009	2nd Quarter 2009	1st Quarter 2009	4th Quarter 2008	3rd Quarter 2008	2nd Quarter 2008	1st Quarter 2008	4th Quarter 2007	3rd Quarter 2007	2nd Quarter 2007	1st Quarter 2007	4th Quarter 2006	3rd Quarter 2006	2nd Quarter 2006	1st Quarter 2006	Baseline
			Sample Location									Е# фТ								

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River Terrace

Ground Water Monitoring

EPA Method 8015B	IPH Screening Guidelines Table 2a		GRO (mg/L	40.00	33.00	49.00	37.00	38,00	50.00	46.00	52.00	56.00	69.00	78.00	85.00	50.00	110.00	34.00	59.00	56.00
EPA Me	IPH Screen	- 0,2	DRO (mg/L)	7.10	8.00	11.00	12.00	8:50	110	*<1.00	*<1.00	1.20	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	1.20
			MTBE (mg/L)	<0.025	<0.025	<0.025	<0.025	<0.025	<0.05	<0.05	<0.050	<0.0025	<0.25	<0.25	<0.025	<0.120	<0.025	<0.025	<0.05	<0.05
021B	20NMAC	.0.62	Xylene (mg/L)	15:00	13.00	15.00	14.00	12:00	18.00	13.00	.17.00	17.00	22.00	21:00	18,00	10:00	16.00	.16.00	20.00	21.00
ERA Method 8021B	MCL	0.7	Ethylben (mg/L)	1.90	1.30	2.40	1:80	2.40	1.90	1.10	1:60	2.60	00°E	3.50	0£;F	1.20	3.10	1.60	0.28	3.50
AND ER	ZONMAC	0.75	Toluene (mg/L)	<0.01	<0.01	0.011	<0.01	0.01	<0.02	<0.02	<0.020	<0.001	<0.10	<0.10	<0.01	<0.050	<0.01	<0.001	<0.02	<0.005
	MCL	0.005	Benzene (mg/L)	<0.005	<0.005	0.025	0.019	0.02	<0.02	50.0	<0.020	<0.001	0.30	0.34	<0.01	70,0	<0.01	0.05	0.20	0.35
			ORP* (mV)	212	152	106	176	129	159	54	216	229	129	148	219	229	149	39	-51	N.
			, D.O. (mg/L)	4.57	1.12	0.69	3.33	1.23	1.49	1.32	2.34	0.23	0.17	0.80	0.79	1.36	0.29	0.05	0.52	X X
		•	TEMP (%)	67.4	72.6	55.2	49.2	61.8	69.8	56.8	47.4	66.5	8.69	63.9	49.6	56.0	71.0	65.3	54.1	68.7
			Hd 🕠	6.76	7.04	6.69	7.07	6.83	6.95	6.87	6.82	7.04	6.88	6.87	6.87	66.9	7.09	6.94	7.03	6.90
			(umhos/cm)	759	794	1128	1092	981	852	702	656	857	911	884	1027	1377	879	686	747	923
	rements		Total Well Depth (ft.below,TOC)	8.84	8.84	8.84	8.84	8.84	8.84	8.84	8.84	8.84	8.84	8.84	8.84	8.84	8.84	8.84	8.84	8.84
	Field Measurements		Depth to ** Product (ft below TOC)	PPP	PPP	ddN	ddN	PPP	APP	MPP	NPP	ĄdN	PPP	MPP	NPP	ddN	ddN	APP	дdN	ddN
	ΙĒ		Deptil to Water (ft below TOC)	4.57	4.54	4.96	4.86	4.54	4.76	3.43	3.15	4.78	6.97	6.62	5.59	5.95	5.32	5.24	7.81	5.91
			рАте	Week of 10-05-09	Week of 9/10/09	Week of 4/20/09	Week of 3/02/09	Week of 11/10/08	Week of 7114/08	Week of 5/12/08	Week of 03/10/08	Week of 10/29/07	Week of 8/20/07	Week of 6/18/07	Week of 2/26/07	Week of 12/04/06	Week of 9/11/06	Week of 6/17/06	Week of 3/06/06	Week of 8/15/05
			Sampling Event	4th Quarter 2009	3rd Quarter 2009	2nd Quarter 2009	1st Quarter 2009	4th Quarter 2008	3rd Quarter 2008	2nd Quarter 2008	1st Quarter 2008	4th Quarter 2007	3rd Quarter 2007	2nd Quarter 2007	1st Quarter 2007	4th Quarter 2006	3rd Quarter 2006	2nd Quarter 2006	1st Quarter 2006	Baseline
			Sample		·							8# dT								

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Ground Water Monitoring

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Ground Water Monitoring

EPA Method 8015B	TPH Screening Guidelines	Table 2a	0.2	DRO GRO (mg/L) (mg/L)	*<1.00 <0.05	*<1.00 <0.05	*<1.00 <0.05	*<1.00 0.063	*<1.00 <0.05	*<1.00 <0.05	*<1.00 <0.05	*<1.00 <0.05	*<1.00 <0.05	*<1.00 <0.05	*<1.00 <0.05	NN NN	NR NR	NR NR	NR RN	NR NR	*<1.00 <0.05
できる できる ない	· · · · · · · · · · · · · · · · · · ·			MTBE (mg/L)	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	NR	N.	N.	NR.	NR	<0.0025
21B	MOCC	20NMAC.	0.62	Xylene (mg/L)	<0.002	<0.002	0.008	0.021	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	NR	N.	NR	NR	NR	0.0049
EPA Method 8021B		MCL	7.0	Ethylben (mg/L)	<0.001	<0.001	0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	S.	X X	N R	N.	S.	0.00065
V EPA		-35kb4v	0.75	Toluene (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	R.	X X	NR	X X	R.	<0.0005
100 march 100 mg		MOL	0.005	Benzene (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NR	N.	N	NR	NR	<0.0005
				ORP (mV)	247	236	250	251	221	. 229	179	244	253	245	222	X X	A A	NR	Z Z	N.	Z Z
				D:0. (mg/L)	06:0	1.01	0.92	2.84	1.64	0.74	1.29	4.67	1.10	1.01	0.39	N R	NR	Z.	Z.	N.	œ Z
				TEMP (%)	65.3	71.6	52.1	47.3	58.1	68.0	55.1	45.8	59.7	67.6	59.2	N.	N.	N R	. Z	N.	80
				Hd	6.93	7.04	96.9	7.05	7.04	6.93	6.89	6.97	6.89	7.09	6.83	NR	NR	N. A.	, NR	R.	or or
				E.C. (umhos/cm)	753	749	875	896	751	778	1850	2022	1066	2267	2795	NR	N R	N R	NR	R	1740
		Irements		rotal Well Depth (ff below TOC)	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.72	NR	NR	N.	NR	NR	9.72
		Field Measurements		Depth to Product (ft below TOC)	APP	ddN	NPP	ddN	NPP	МРР	NPP	MPP	APP	dдN	qqN	NR	N R	NR	NR	N. R.	a a 2
8		ΙĹ		Depth to Water (ft below TOC)	5.48	5.46	5.78	5.55	5.35	5.43	4.17	3.63	5.42	6.20	5.40	N R	N.	NR	NR	NR	5 72
				DÂTE	Week of 10-05-09	Week of 9/10/09	Week of 4/20/09	Week of 3/02/09	Week of 11/10/08	Week of 7/14/08	Week of 5/12/08	Week of 03/10/08	Week of 10/29/07	Week of 8/20/07	Week of 6/18/07	Week of 2/26/07	Week of 12/04/06	Week of 9/11/06	Week of 6/17/06	Week of 3/06/06	Week of 8/15/05
				Sampling Event	4th Quarter 2009	3rd Quarter 2009	2nd Quarter 2009	1st Quarter 2009	4th Quarter 2008	3rd Quarter 2008	2nd Quarter 2008	1st Quarter 2008	4th Quarter 2007	3rd Quarter 2007	2nd Quarter 2007	1st Quarter 2007	4th Quarter 2006	3rd Quarter 2006	2nd Quarter 2006	1st Quarter 2006	Baseline
5				Sample		•						•	∠# d ⊥						•		

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Ground Water Monitoring

											温暖ではます。	EPA	EPA Method 8021B	218	100 · 100 ·	EPA Met	EPA Method 8015B
			豆	Field Measurements	ırements						MCL	WOCC	MCL	WOCC		TPH Screen	TPH Screening Guidelines Table za
						•					0,005	0,75	7.0	0.62		0.2	
Sample Location	Sampling	DATE	Depth to Water (ft below, TOC)	Depth to Product (ft below TOC)	Total Well Depth (ft below TOC)	E.C. (umhos/cm)	Hď	TEMP (°F)	D.O. (mg/L)	ORP (mV)	Benzene (mg/L)	Toluene (mg/L)	Ethylben (mg/L)	Xylene (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)
	4th Quarter 2009	Week of 10-05-09	5.48	MPP	9.72	1250	6.77	7.99	1.23	226	0.0081	<0.005	0.24	2.1	<0.013	4.9	6.2
	3rd Quarter 2009	Week of 9/10/09	5.43	ďďN	9.72	1187	6.98	71.2	1.65	163	0.0059	<0.005	0.22	2.00	<0.013	4.70	5.70
	2nd Quarter 2009	Week of 4/20/09	5.6	MPP	9.72	1581	68.9	52.3	1.09	253	0.014	<0.01	0.35	3.60	<0.025	6:80	18.00
	1st Quarter 2009	Week of 3/02/09	5.42	ddN	9.72	1685	6.78	47.9	4.43	229	0.0089	<0.005	0.29	2.8	<0.013	5.6	1.6
	4th Quarter 2008	Week of 11/10/08	5.29	dan	9.72	1810	6.96	60.4	4.70	230	<0.005	<0.005	72.0	0.92	<0.013	8.60	9.60
	3rd Quarter 2008	Week of 7/14/08	5.88	NPP	9.72	1627	6.86	68.9	0.49	264	<0.01	<0.01	0.34	2:40	<0.025	1:30	14.00
	2nd Quarter 2008	Week of 5/12/08	4.44	HPP	9.72	1863	6.91	56.6	1.39	175	<0.07	<0.01	0.39	2.40	<0.025	1.10	19.00
1	1st Quarter 2008	Week of 03/10/08	4.13	ddN	9.72	1877	6.90	49.0	1.69	214	<0.01	<0.01	0.37	1.80	<0.025	1.40	.15.00
8# d.L	4th Quarter 2007	Week of 10/29/07	5.81	NPP	9.72	2555	6.88	64.1	7.70	185	<0.01	<0.01	0.38	1.50	<0.025	1.60	14.00
	3rd Quarter 2007	Week of 8/20/07	6.67	AdN	9.72	3084	6.89	74.4	. 0.36	245	<0.01	<0.01	0.48	3.70	<0.025	1.70	31.00
	2nd Quarter 2007	Week of 6/18/07	6.22	dd.N	9.72	2704	6.92	663	1.21	160	<0.01	<0.01	0.29	8.60	<0.025	1.20	35.00
	1st Quarter 2007	Week of 2/26/07	8.57	ddN	9.72	2964	6.95	50.5	2.45	208	<0.01	<0.01	1.30	13.00	<0.025	2.10	70.00
	4th Quarter 2006	Week of 12/04/06	8.21	d d N	9.72	1855	7.04	57.3	1.56	187	0.04	<0.010	1.30	12.00	<0.025	1.40	79.00
	3rd Quarter 2006	Week of 9/11/06	6.21	а С.	9.72	2977	7.03	74.6	0.43	107	<0.01	<0.010	0.58	1.60	<0.025	5.60	57.00
	2nd Quarter 2006	Week of 6/17/06	7.50	9 0 0	9.72	2032	7.01	67.6	0.48	143	0.26	<0.100	0.64	.6,30	<0.025	6.80	19.00
	1st Quarter 2006	Week of 3/06/06	8.92	a ad N	9.72	1613	7.03	52.6	0.61	228	0.35	<0.10	1.10	10.00	<0.025	18.00	37.00
	Baseline	Week of 8/15/05	6.61	NPP	9.72	1934	6.94	72.4	N.	Z Z	1:10	<0.05	3.20	25,00	<0.25	7.80	84.00

NR = Not Required (Voluntary Corrective Measures - Revised NR* Not Required (Approval With Direction - June 2009) NM = Not Measured Measured (Approval With Direction - June 2009) NM = Not Measured

*Per NMED letter Approval with Direction 2008 Groundwater Remediation and Monitoring Annual Report (Comment 9) dated Sept. 1, 2009 all future DRO analysis will be analyzed at a lower detection level of 0.2mg/L by EPA Method 8015B.

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River Terrace

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EPA Method 8015B	IPH Screening Guidelines Table 2a		GRO (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.72	<0.05	0.09	1.10
EPA M	IPH Scree	0.2	DRO (mg/L)	^<1.00	. *<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	.<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00
Molfoga			MTBE (mg/L)	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.027
21B	20NMAC.	0.62	Xylene (mg/L)	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.003	<0.003	<0.003	<0.003	0.02
EPA Method 8021B	MCL	7,0	Ethylben (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.001	<0.003	<0.003
EP/	ZONMAC	0.75	Toluene (mg/lt)	. <0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
を変なる。	MCL	0.005	Benzene (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	.<0.001	<0.001	<0.001	<0.001	<0.005
			ORP (mV)	273	287	. 275	219	119	216	147	245	218	136	224	173	254	219	169	214	N R
			D.O. (mg/L)	1.67	2.38	0.93	1.45	3.72	0.78	1:98	1.66	0.41	1.15	0.31	0.85	1.37	1.09	0.39	0.75	N.
			TEMP (°F)	61.2	67.6	53.2	48.0	57.9	61.6	51.8	45.3	61.7	67.5	58.5	46.1	51.9	64.8	9.09	47.8	62.8
			Hd	6.81	7	6.94	6.93	6.87	9.95	6.87	6.83	6.98	7.11	6.90	6.85	7.06	7.04	7.02	7.02	6.92
			E.C. (umltos/cm)	2006	2034	2406	2557	2074	1712	1471	1559	875	1342	2035	2379	2149	1809	1883	1944	1968
	rements		Total Well Depth (ft. below TOC)	10.97	10.97	10.97	10.97	10.97	10.97	10.97	10.97	10.97	10.97	10.97	10.97	10.97	10.97	10.97	10.97	10.97
	Field Measurements		Depth to Product (ft below TOC)	NPP	PP	MPP	ddN .	PPP	NPP	ddN	PPP	NPP	qdN	PPP	PP	APP	PPP	PP	d d N	APP
	证		Depth to Water (ft below TOC):	5.33	5.43	5.49	5.34	5.23	5.40	4.03	3.32	4.94	5.18	4.73	5.07	5.39	5.48	5.26	5.21	5.12
			DATE	Week of 10-05-09	Week of 9/10/09	Week of 4/20/09	Week of 3/02/09	Week of 11/10/08	Week of 7/14/08	Week of 5/12/08	Week of 03/10/08	Week of 10/29/07	Week of 8/20/07	Week of 6/18/07	Week of 2/26/07	Week of 12/04/06	Week of 9/11/06	Week of 6/17/06	Week of 3/06/06	Week of 8/15/05
			Sampling	4th Quarter 2009	3rd Quarter 2009	2nd Quarter 2009	1st Quarter 2009	4th Quarter 2008	3rd Quarter 2008	2nd Quarter 2008	1st Quarter 2008	4th Quarter 2007	3rd Quarter 2007	2nd Quarter 2007	1st Quarter 2007	4th Quarter 2006	3rd Quarter 2006	2nd Quarter 2006	1st Quarter 2006	Baseline
			Sample Location									5# d.I.								

NR = Not Required (Voluntary Corrective Measures - Revised NR's Not Required (Approval With Direction - June 2009) . NM = Not Measured Monitoring Plan - October 2005)

*Per NMED letter Approval with Direction 2008 Groundwater Remediation and Monitoring Annual Report (Comment 9) dated Sept. 1, 2009 all future DRO analysis witl be analyzed at a lower detection level of 0.2mg/L by EPA Method 8015B.

Ground Water Monitoring

EPA Method 8015B	TPH Screening Guidelines Table 2a		GRO (mg/L	NR¹	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	\$0.0>	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EPA Me	TPH Screen	0.2	DRO (mg/L)	Z. Z.	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00
			MTBE. (mg/L)	NR.	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
218	WQCC 20NMAC	0.82	Xylene (mg/L)	NR'	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.003	<0.003	<0.003	<0.003	0.0025
EPA Method 8021B	NCL	0.7	Ethylben (mg/L)	NR1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
EP/	WQCC 20NMAC	-,0.75	Toluene (mg/L)	NR¹	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
	MCE	0.005	Benzene (mg/L)	N.	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
			ORP (mV)	NR.	259	207	. 269	198	212	107	213	253	230	213.	233	269	247	168	224	NR
			D.O. (mg/L)	N.	1.05	1.26	1.45	1.48	1.13	7.70	2.52	2.28	1.16	7.32	3.87	1.44	0.45	1.52	1.72	NR
		-	TEMP (*F)	NR.	63.8	51.7	43.0	50.7	66.5	53.7	43.5	51.3	61.8	57.2	41.1	44.9	62.6	59.8	42.8	71.2
			Hď	NR.	6.92	6.95	7.06	7.06	7.11	6.88	6.94	6.90	6.98	98.9	6.85	7.00	6.97	7.01	66.9	6.94
		٠	E.C. (umhos/cm)	NR1	322	357	342	343	405	479	279	307	368	268	426	387	395	325	355	377
	rements		Total Well Depth (ft below TOC)	9.95	9,95	9.95	9.95	9.95	9.95	9.95	9.95	9.95	9.95	9.95	9.95	9.95	9.95	9.95	9.95	9.95
	Field Measurement		Depth to Product (If below TOC)	NPP	NPP	NPP	A d N	QPD	qqN	NPP	NPP	ddN	APP	NPP	ddN	g G	APP	NPP	N G	ddy
	<u>Έ</u> -		Depth to Water (ft below TOC)	4.83	4.79	4.88	4.77	4.64	4.88	3.78	2.83	4.74	5.32	4.62	5.23	5.57	5.26	5.23	5.86	5.10
			DATE	Week of 10-05-09	Week of 9/10/09	Week of 4/20/09	Week of 3/02/09	Week of 11/10/08	Week of 7/14/08	Week of 5/12/08	Week of 03/10/08	Week of 10/29/07	Week of 8/20/07	Week of 6/18/07	Week of 2/26/07	Week of 12/04/06	Week of 9/1,1/06	Week of 6/17/06	Week of 3/06/06	Week of 8/15/05
			Sampling Event	4th Quarter 2009	3rd Quarter 2009	2nd Quarter 2009	1st Quarter 2009	4th Quarter 2008	3rd Quarter 2008	2nd Quarter 2008	1st Quarter 2008	4th Quarter 2007	3rd Quarter 2007	2nd Quarter 2007	1st Quarter 2007	4th Quarter 2006	3rd Quarter 2006	2nd Quarter 2006	1st Quarter 2006	Baseline
		,	Sample Location								C)!# 리1	-							

NR* Not Required (Approval With Direction - June 2009) NM = Not Measured NR = Not Required (Voluntary Corrective Measures - Revised Monitoring Pian - October 2005)

*Per NMED letter Approval with Direction 2008 Groundwater Remediation and Monitoring Annual Report (Comment 9) dated Sept 1, 2009 all future DRO analysis will be analyzed at a lower detection level of 0.2mg/L by EPA Method 80158.

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Ground Water Monitoring

EPA Method 8015B	TPH Screening Guidelines		GRO (mg/L	NR¹	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EPA Me	TPH Screer	0.2	DRO (mg/L)	NR.	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	1.00
を			MTBE (mg/L)	N 'A'	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.0081	0.0049	<0.0025	0.0028
021B	WQCC 20NMAC	0,62	r Xylene (mg/L)	NR.	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.003	<0.003	<0.003	<0.003	0.0042
EPA Method 8021B	MCL	0.7	Ethylben (mg/L)	NR.	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00055
EP.	WQCC 20NMAC	0.75	Toluene (mg/L):	NR1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
	. MCL	0,005	Benzene (mg/L)	NR1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
			ORP (mV)	NR.	282	237	248	279	250	142	264	271	238	242	205	. 252	237	. 157	. 242	N.
			. D.O. . (mg/L).	NR.	4.27	0.91	1.90	1.10	0.46	0.77	1.75	0.56	1.6	2.04	1.73	3.11	0.91	0.26	0.19	X X
			TEMP (*F)	NR.	60.1	52.6	46.9	53.8	58.9	53.9	47.9	54.3	57.1	. 2.95	48.2	52.8	60.0	55.9	48.0	64.1
			М	N R,	6.85	6.91	7.04	6.87	6.97	6.85	6.86	6.85	6.97	6.81	6.92	6.99	6.98	7.00	6.91	6.88
			(umhos/cm)	NR1	1491	723	752	1059	526	771	1197	1745	2189	1750	952	855	1875	1171	1234	2143
	Field Measurements		Total Well-Depth (ft.below.TOC)	11.79	. 11,79	11.79	11.79	11.79	11.79	11.79	11.79	11.79	11.79	11.79	11.79	11.79	11.79	11.79	11.79	11.79
	eld Meası		Depth to Product (ft below TOC)	qqN	NPP	NPP	NPP	NPP	ddN	NPP	qqN	MPP	, GGN	NPP	ddN	PPP	APP	QQN	. dqn	NPP
	正		Depth to Water (ft below TOC)	7.00	6.97	7.09	6.97	6.83	7.18	5.85	5.11	6.92	6.36	6.82	7.40	7.67	7.48	7.44	7.94	7.43
			рате	Week of 10-05-09	Week of 9/10/09	Week of 4/20/09	Week of 3/02/09	Week of 11/10/08	Week of 7/14/08	Week of 5/12/08	Wéek of 03/10/08	Week of 10/29/07	Week of 8/20/07	Week of 6/18/07	Week of 2/26/07	Week of 12/04/06	Week of 9/11/06	Week of 6/17/06	Week of 3/06/06	Week of 8/15/05
			Sampling Event	4th Quarter 2009	3rd Quarter 2009	2nd Quarter 2009	1st Quarter 2009	4th Quarter 2008	3rd Quarter 2008	2nd Quarter 2008	1st Quarter 2008	4th Quarter 2007	3rd Quarter 2007	2nd Quarter 2007	1st Quarter 2007	4th Quarter 2006	3rd Quarter 2006	2nd Quarter 2006	1st Quarter 2006	Baseline
			Sample								7	i# di								

NR = Not Required (Voluntary Corrective Measures - Revised NR - Not Required (Approval With Direction - June 2009) NM = Not Measured Monitoring Plan - October 2005)

*Per NMED letter Approval with Direction 2008 Groundwater Remediation and Monitoring Annual Report (Comment 9) dated Sept. 1, 2009 all future DRO analysis will be analyzed at a fower detection level of 0.2mg/L by EPA Method 8015B.

Ground Water Monitoring

EPA Method 8015B	TPH Screening Guidelines Table 2a		GRO (mg/L	NR.	<0.05	<0.05	<0.05	<0.05	<0,05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EPA Me	TPH Screen Ta	0.2	DRO (mg/L)	NR.	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	· <1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	1.00
八百二十五十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二			°, MTBE (mg/L)	NR	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.0081	0.0049	<0.0025	0.0028
021B	WOCC 20NMAC	0.62	Xylene (mg/L)	R	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.003	<0.003	<0.003	<0.003	0.0042
EPA Method 8021B	MCL	0.7	Ethylben (mg/L)	NR.	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00055
EP	WQCC 20NMAC	0.75	Toluene (mg/L)	NR.	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
	MCL	0.005	Benzene (mg/L)	NR.	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
			ORP (mV)	NR.	282	237	248	279	250	142	264	271	238	242	205	252	237	157	242	X X
			D.O." (mg/L)	NR.	4.27	0.91	1.90	1.10	0.46	0.77	1.75	0.56	1.6	2.04	1.73	3,11	0.91	0.26	0.19	N R
			TEMP (PF)	N R	60.1	52.6	46.9	53.8	58.9	53.9	47.9	54.3	57.1	56.7	48.2	52.8	60.0	55.9	48.0	64.1
			Hd	NR.	6.85	6.91	7.04	6.87	6.97	6.85	6.86	6.85	6.97	6.81	6.92	66.9	86.9	7.00	6.91	6.88
		,	E.C. (umhos/cm)	NR:	1491	723	752	1059	526	771	1197	1745	2189	1750	952	855	1875	1171	1234	2143
	ırements		Total Well Depth (ft below TOC)	11.79	11.79	11.79	11.79	11.79	11.79	11.79	11.79	11.79	11.79	11.79	11.79	11.79	11.79	11.79	11.79	11.79
	Field Measuremen		Depth to Product (ft below TOC):	APP	A d N	APA	d d V	MPP	NPP	NPP	qqN	ddN	PP	d d V	APP	ddN	NPP	A P P	d d N	NPP
	ΙĒ		Depth to Water (ft below TOC)	7.00	6.97	7.09	6.97	6.83	7.18	5.85	5.11	6.92	6.36	6.82	7.40	7.67	7.48	7.44	7.94	7.43
			DATE	Week of 10-05-09	Week of 9/10/09	Week of 4/20/09	Week of 3/02/09	Week of 11/10/08	Week of 7/14/08	Week of 5/12/08	Week of 03/10/08	Week of 10/29/07	Week of 8/20/07	Week of 6/18/07	Week of 2/26/07	Week of 12/04/06	Week of 9/11/06	Week of 6/17/06	Week of 3/06/06	Week of 8/15/05
			Sampling Event	4th Quarter 2009	3rd Quarter 2009	2nd Quarter 2009	1st Quarter 2009	4th Quarter 2008	3rd Quarter 2008	2nd Quarter 2008	1st Quarter 2008	4th Quarter 2007	3rd Quarter 2007	2nd Quarter 2007	1st Quarter 2007	4th Quarter 2006	3rd Quarter 2006	2nd Quarter 2006	1st Quarter 2006	Baseline
			Sample Location					••••			7	(I# 41								

NR = Not Required (Voluntary Corrective Measures - Revised Monitoring Plan - October 2005)

NR¹² Not Required (Approval With Direction - June 2009) NM = Not Measured

*Per NMED letter Approval with Direction 2008 Groundwater Remediation and Monitoring Annual Report (Comment 9) dated Sept. 1, 2009 all future DRO analysis will be analyzed at a lower detection level of 0.2mg/L by EPA Method 8015B.

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River Terrace

Ground Water Monitoring

EPA Method 8015B	TPH Screening Guidelines		GRO (mg/L	Z.	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EPA Me	TPH Screer	0.2	DRO (mg/L)	NR¹	*<1.00	`<1.00	*<1.00	*<1.00	•<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	.<1.00	*<1.00	*<1.00
STANDAY			MTBE (mg/L):	NR'	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
218	WOCC ZONMAC:	0.62	Xylene (mg/L)	NR'	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.003	<0.003	<0.003	<0.003	0.0037
EPA Method 8021B	1,72₩	0.7	Ethylben (mg/L)	NR	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
EP.	WGCC ZONMAC	0.75	Toluene (mg/L)	NR'	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
非现在主要	Лом	0.005	Benzene . (mg/L)	NR1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
			ORP (mv)	NR.	. 568	234	261	228	240	122	257	237	220	207	236	251	244	240	242	X.
			D O (mg/L)	NR,	1.21	1.08	1.61	1.21	0.53	0.77	4.58	0.74	1.29	1.43	1.86	0.97	0.54	0.28	0.28	N.
	:		TEMP (%)	NR'	64.3	51.2	46.7	57.2	56.7	52.8	45.6	58.6	58.3	56.3	46.7	53.9	63.9	58.6	46.3	58.4
			Hd	NR	6.87	6.97	7.07	6.96	7.02	6.88	6.89	6.99	7.04	6.86	6.97	7.08	6.98	7.02	6.90	6.97
		.*	E.C. (Úmhos/cm)	NR.	336	460	471	422	584	500	478	342	472	563	449	515	554	526	508	1226
	rements		Total Well Depth (ff below TOC)	16.09	16.09	16.09	16.09	16.09	16.09	16.09	16.09	16.09	16.09	16.09	16.09	16.09	16.09	16.09	16.09	16.09
	Field Measurement		Depth to Product (It below TOC)	ddN	ddN	ddN	ddN	ddN	ddN	ddN	ddN	ddN	NPP	APP	ddN	ddN	ddN	HPP	ddN	ddN
	ίΞ		Depth to Water (ft below,TOC)	5.85	5.80	5.98	5.66	5.72	5.97	4.69	3.92	5.80	6.17	5.63	6.16	6.51	6.33	6.35	6.78	6.27
			DATE	Week of 10-05-09	Week of 9/10/09	Week of 4/20/09	Week of 3/02/09	Week of 11/10/08	Week of 7/14/08	Week of 5/12/08	Week of 03/10/08	Week of 10/29/07	Week of 8/20/07	Week of 6/18/07	Week of 2/26/07	Week of 12/04/06	Week of 9/11/06	Week of 5/17/06	Week of 3/06/06	Week of 8/15/05
			Sampling Event	4th Quarter 2009	3rd Quarter 2009	2nd Quarter 2009	1st Quarter 2009	4th Quarter 2008	3rd Quarter 2008	2nd Quarter 2008	1st Quarter 2008	4th Quarter 2007	3rd Quarter 2007	2nd Quarter 2007	1st Quarter 2007	4th Quarter 2006	3rd Quarter 2006	2nd Quarter 2006	1st Quarter 2006	Baseline
			Sample								{	i# di								

NR = Not Required (Voluntary Corrective Measures - Revised NR's Not Required (Approval With Direction - June 2009) NM = Not Measured Maniforing Plan - October 2005)

Per NMED letter Approval with Direction 2008 Groundwater Remediation and Monitoring Annual Report (Comment 9) dated Sept. 1, 2009 all future DRO analysis will be analyzed at a lower detection level of 0.2mg/L by EPA Method 8015B.

Ground Water Monitoring

)			88									YOU	EDA Marthad 9004D	2.0	200	FDA Mot	EDA Mothod 2015D
										<u></u>		WOCC	no nomam	WOCC I		TPH Screen	TPH Screening Gindelines
			运 ,	Field Measurements	<i>Irements</i>						MCL	20NMAC	MCL	20NMAC	T. Company	Tal	Table 2a
										7.73.4	0:005	3.0.75 s	7.0	0.62		0.2	
Sample Location	Sampling Event	DATE	Depth to Water (ft below TOC)	Depth to Product (fi below TOC)	Total Well Depth (ft below TOC)	(umhos/cm)	Hd	TEMP (%)	0.0 (mg/L):	ORP (mV)	Benzene (mg/L):	Toluene (mg/L)	Ethylben (mg/L)	Xylene (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)
	4th Quarter 2009	Week of 10-05-09	5.85	ddN	15.62	2409	6.89	67.4	1.67	-12	<0.001	<0.001	<0.001	<0.002	<0.0025	*<1.00	<0.05
	3rd Quarter 2009	Week of 9/10/09	5.82	NPP	15.62	2443	6.86	69.2	1.96	281	<0.005	<0.01	<0.01	<0.02	<0.025	*<1.00	<0.05
	2nd Quarter 2009	Week of 4/20/09	6.02	MPP	15.62	2512	6.83	51.9	0.85	261	<0.005	<0.01	<0.01	<0.02	<0.025	*<1.00	<0.05
	1st Quarter 2009	Week of 3/02/09	5.69	APP	15.62	2558	67.4	49.9	1.56	242	<0.001	<0.001	<0.001	<0.002	<0.0025	*<1.00	<0.05
	4th Quarter 2008	Week of 11/10/08	5.72	NPP	15.62	2462	6.78	59.4	2.06	159	<0.001	<0.001	<0.001	<0.002	<0.0025	*<1.00	<0.05
	3rd Quarter 2008	Week of 7/14/08	5.89	NPP	15.62	2443	6.93	65.5	0.59	160	<0.001	<0.001	<0.001	<0.002	<0.0025	*<1.00	<0.05
	2nd Quarter 2008	Week of 5/12/08	4.66	NPP	15.62	2568	6.87	54.7	2.98	204	<0.001	<0.001	<0.001	<0.002	<0.0025	*<1.00	<0.05
1	1st Quarter 2008	Week of 03/10/08	4.11	PPP	15.62	2804	6.73	44.5	1.58	239	<0.001	<0.001	<0.001	<0.002	<0.0025	*<1.00	<0.05
# M .□	4th Quarter 2007	Week of 10/29/07	5.80	NPP	15.62	1990	6.88	62.9	0.62	294	<0.001	<0.001	<0.001	0.01	<0.0025	*<1.00	90.0
	3rd Quarter 2007	Week of 8/20/07	6.71	d d N	15.62	1928	7.05	65.7	0.27	155	<0.001	<0.001	<0.001	0.01	<0.0025	*<1.00	0.29
	2nd Quarter 2007	Week of 6/18/07	5.81	APP	15.62	2548	6.75	58.6	4.59	257	<0.001	<0.001	<0.001	0.0026	<0.0025	*<1.00	0.15
	1st Quarter 2007	Week of 2/26/07	6.11	QPN	15.62	3126	6.88	48.1	0.65	235	<0.001	<0.001	<0.001	<0.002	<0.0025	*<1.00	0.29
	4th Quarter 2006	Week of 12/04/06	5.58	qqN	15.62	2789	7.01	52.7	1.24	281	<0.001	<0.001	<0.001	<0.003	<0.0025	*<1.00	60.0
	3rd Quarter 2006	Week of 9/11/06	6.39	APN	15.62	2067	7.04	66.2	0:30	258	<0.005	<0.005	<0.005	<0.015	<0.012	*<1.00	1.20
	2nd Quarter 2006	Week of 6/17/06	6.49	PP	15.62	2329	96.9	58.0	0.42	143	<0.001	<0.001	0.016	0.12	<0.0025	1.60	06.0
	1st Quarter 2006	Week of 3/06/06	7.91	GUN	15.62	2118	6.95	50.2	0.75	-64	<0.005	<0.005	0.041	0.23	<0.012	2.20	2.80
	Baseline	Week of 8/15/05	6.43	PP	15.62	1226	6.97	58.4	N R	NR	<0.001	<0.001	<0.001	0.0031	<0.001	N.	N.

NR's Not Required (Approval With Direction - June 2009) NM = Not Measured NR = Not Required (Voluntary Corrective Measures - Revised Monitoring Plan - October 2005)

*Per NMED letter Approval with Direction 2008 Groundwater Remediation and Monitoring Annual Report (Comment 9) dated Sept. 1, 2009 all future DRO analysis will be analyzed at a lower detection level of 0.2mg/L by EPA Method 8015B.

Ground Water Monitoring

EPA Method 8015B	TPH Screening Guidelines Table 2a		GRO (mg/L)	<0.05	<0.05	0.18	0.083	<0.05	0.24	0.25	0.09	0.05	<0.05	<0.05	0.05	0.081	0.23	<0.05	0.074	æ	
EPA Mer	TPH Screen	0.2	DRO (mg/L)	*<1.00	.*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	•<1.00	*<1.00	.<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	*<1.00	.<1.00	R	
Shear Second		200	MTBE (mg/L)	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.002	
21B	20NMAC	0.62	Xylene (mg/L)	<0.002	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.003	<0.003	<0.003	0.0061	0.0041	
EPA Method 8021B	MCL	2.0	Ethylben (mg/L)	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001.	0.015	
S. S. EP.	WOCC 20NMAC	0.75	Toluene (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	
	MCL	0,005	Benzene (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.093	
			ORP (mV)	621	295	284	223	237	148	187	246	265	192	217	265	295	234	181	190	N R	
			, D.O. (mg/L)	1.58	2.39	76.0	1.61	1.16	0.59	2.61	1.75	0.39	0.52	0.49	0.73	0.78	0.89	0.26	0.33	NR	
			TEMP (%)	65.0	61.8	51.6	50.9	0.09	61.1	52.8	47.3	62.3	63.9	57.5	48.4	56.2	64.4	57.9	51.9	59.8	
			Нd	6.95	6.86	6.84	6.88	7.02	6.98	6.92	6.75	6.95	6.86	6.95	6.90	7.07	7.04	7.01	7.07	6.96	
			ΕC (umhos/cm)	1510	1574	1873	1982	2413	2280	2831	3947	2740	-924	1217	2568	2356	1736	701	961	2393	
	urements		Total Well Depth (ft below TOC)	16.48	16.48	16.48	- 16.48	16.48	16.48	16.48	16.48	16.48	16.48	. 16.48	16.48	16.48	16.48	16.48	16,48	16.48	
	Field Measurement		Depth to Product (ft below TOC)	ddN	APP	ddN	APP	ddN	ddN	ddN	ddN	ddN	МРР	MPP	ddN	MPP	МРР	ddN	МРР	MPP	
	证		Depth to Water (ft below TOC)	9.03	9.02	9.24	8.96	8.72	9.03	7.66	6.95	8.62	9.30	8.41	8.79	9.16	9.38	86.6	10.07	9.57	
			DATE	Week of 10-05-09	Week of 9/10/09	Week of 4/20/09	Week of 3/02/09	Week of 11/10/08	Week of 7/14/08	Week of 5/12/08	Week of 03/10/08	Week of 10/29/07	Week of 8/20/07	Week of 6/18/07	Week of 2/26/07	Week of 12/04/06	Week of 9/11/06	Week of 6/17/06	Week of 3/06/06	Week of 8/15/05	·
			Sampling Event	4th Quarter 2009	3rd Quarter 2009	2nd Quarter 2009	1st Quarter 2009	4th Quarter 2008	3rd Quarter 2008	2nd Quarter 2008	1st Quarter 2008	4th Quarter 2007	3rd Quarter 2007	2nd Quarter 2007	1st Quarter 2007	4th Quarter 2006	3rd Quarter 2006	2nd Quarter 2006	1st Quarter 2006	Baseline	
			Sample Location						 		6	₩ M V	N				·				

NR'= Not Required (Approval With Direction - June 2009) NM = Not Measured NR = Not Required (Voluntary Corrective Measures - Revised Monitoring Plan - October 2005)

*Per NMED letter Approval with Direction 2008 Groundwater Remediation and Monitoring Annual Report (Comment 9) dated Sept. 1, 2009 all future DRO analysis will be analyzed at a lower detection level of 0.2mg/L by EPA Method 80158.

Groundwater Monitoring

	Total Motals		WQCC 20N	MAC 6.2.3103/	40 CFR	141:62 (MCL)	
	Total Metals		1.00	0.05	0.015	0.002	
Sample	Sampling	DATE	Ba	Cr	Lead	∂Mercury	
Location	- Event	Week of	(mg/L) =	(mg/L)	(mg/上)	(mg/L)	
	4th Quarter 2009	10-05-09	NR	NR	0.039	NR	
·	3rd Quarter 2009	Week of 9/10/09	NR	NR	0.058	NR	
	2nd Quarter 2009 (Annual)	Week of 4/20/09	.0.075	<0.006	0.042	NR	
	1st Quarter 2009	Week of 3/02/09	NR	NR	0.04	NR	
	4th Quarter 2008	Week of 11/10/08	NR	NR	-0.042	NR	97
TP #1	3rd Quarter 2008	Week of 7/14/08	NR	NR	0.085	NR	
<u>a</u> [2nd Quarter 2008 (Annual)	Week of 5/12/08	. 0.044	<0.006	0.045	NR	
	1st Quarter 2008	Week of 03/10/08	NR	NR	0.093	NR	
	4th Quarter 2007	Week of 10/29/07	NR	NR	0.044	NR	Ę
	3rd Quarter 2007	Week of 8/20/07	NR	NR	:0.074	NR	A M
	2nd Quarter 2007 (Annual)	Week of 6/18/07	0.14	<0.006	0.240	NR	ethod
	1st Quarter 2007	Week of 2/26/07	NR	NR	NR	NR	EPA Method 6010
Heider (Milliam V.), Committee op haart, ook al thing of	4th Quarter 2009	Week of 10-05-09	NR	NR	0.019	NR	0 & 7470
	3rd Quarter 2009	Week of 9/10/09	NR	NR	.0.02	NR	70
	2nd Quarter 2009 (Annual)	Week of 4/20/09	0.22	<0.006	0.011	NR	
	1st Quarter 2009	Week of 3/02/09	NR	NR	0:019	NR	
	4th Quarter 2008	Week of 11/10/08	NR	NR	0.012	NR	
#2	3rd Quarter 2008	Week of 7/14/08	NR	NR	0:035	NR	
41	2nd Quarter 2008 (Annual)	Week of 5/12/08	0.13	<0.006	0.020	NR	
	1st Quarter 2008	Week of 03/10/08	NR	NR	0.019	NR	
	4th Quarter 2007	Week of 10/29/07	NR	NR	0.007	NR	
	3rd Quarter 2007	Week of 8/20/07	NR	NR	0.019	NR	
	2nd Quarter 2007 (Annual)	Week of 6/18/07	0.29	<0.006	0.067	NR	
	1st Quarter 2007	Week of 2/26/07	-NR	NR	NR	NR	

NR = Not Required (Voluntary Corrective Measures - Revised Monitoring Plan - October 2005)

Groundwater Monitoring

	Total Matala		⊪WQCC 20N	MAC 6.2.3103	40.CFR 1	41.62 (MCL)
	Total Metals		1:00	0:05	#0:015 · I	0:002
Sample Location	Sampling Event	DATE	Ba (mg/L)	Cr (mg/L)	Lead (mg/L)	Mercury (mg/L)
	4th Quarter 2009	Week of 10-05-09	NR¹	NR¹	NR¹	NR¹
	3rd Quarter 2009	Week of 9/10/09	NR	NR	0.025	NR
	2nd Quarter 2009 (Annual)	Week of 4/20/09	0.1	<0.006	<0.005	NR
	1st Quarter 2009	Week of 3/02/09	NR	NR	<0.005	NR
	4th Quarter 2008	Week of 11/10/08	NR	NR	<0.005	NR
TP #3	3rd Quarter 2008	Week of 7/14/08	NR	NR	0.005	NR
Ŧ	2nd Quarter 2008 (Annual)	Week of 5/12/08	0.089	<0.006	<0.005	NR
	1st Quarter 2008	Week of 03/10/08	NR	NR	<0.005	NR
	4th Quarter 2007	Week of 10/29/07	NR	NR	<0.005	NR
	3rd Quarter 2007	Week of 8/20/07	NR	NR	0.010	
	2nd Quarter 2007 (Annual)	Week of 6/18/07	0.2	0.008	0.007	NR
	1st Quarter 2007	Week of 2/26/07	NR	NR.	NR .	NR
Prince of the Pr	4th Quarter 2009	Week of 10-05-09	- NR	NR	:0:025	NR
	3rd Quarter 2009	Week of 9/10/09	NR	NR	0.033	NR
	2nd Quarter 2009 (Annual)	Week of 4/20/09	0.47	<0.006	. 0:026	NR
	1st Quarter 2009	Week of 3/02/09	NR	NR	-0:026	NR
	4th Quarter 2008	Week of 11/10/08	NR	NR	2:0:029	NR
#2	3rd Quarter 2008	Week of 7/14/08	NR	NR	- 0.043	NR
T	2nd Quarter 2008 (Annual)	Week of 5/12/08	0.31	<0.006	0:039	NR
	1st Quarter 2008	Week of 03/10/08	NR	NR .	0.051	NR
	4th Quarter 2007	Week of 10/29/07	NR	NR	0.032	NR
	3rd Quarter 2007	Week of 8/20/07	NR	NR	, 0.044	NR
	2nd Quarter 2007 (Annual)	Week of 6/18/07	0.21	<0.006	£0:09	NR
	1st Quarter 2007	Week of 2/26/07	NR	NR	NR	NR

NR = Not Required (Voluntary Corrective Measures - Revised Monitoring Plan - October 2005)

Groundwater Monitoring

	Total Motals		WQCC 20N	MAC 6.2.3103	40 CFR	141.62 (MCL)
	Total Metals		-1.00	0.05	0.015	0.002
Sample ocation	Sampling Event	DATE	Ba (mg/L)	⊕ Cr (mg/L) ⊸	Lead (mg/L)	Mercury ((mg/L)
	4th Quarter 2009	Week of 10-05-09	NR	NR	0.023	NR
	3rd Quarter 2009	Week of 9/10/09	NR	· NR	0.028	NR
	2nd Quarter 2009 (Annual)	Week of 4/20/09	. 0.34	<0.006	0.036	NR
	1st Quarter 2009	Week of 3/02/09	NR	NR	0.019	NR
	4th Quarter 2008	Week of 11/10/08	NR	NR .	0.018	NR
TP #6	3rd Quarter 2008	Week of 7/14/08	NR	NR	0.051	NR
TP [2nd Quarter 2008 (Annual)	Week of 5/12/08	0.15	<0.006	0:022	NR
	1st Quarter 2008	. Week of 03/10/08	NR	NR	0.028	NR
	4th Quarter 2007	Week of 10/29/07	NR	NR	<0.005	NR
	3rd Quarter 2007	Week of 8/20/07	NR	·NR	0.009	- NR
	2nd Quarter 2007 (Annual)	Week of 6/18/07	0.38	<0.006	0.03	NR
	1st Quarter 2007	Week of 2/26/07	NR	NR	NR	NR
	4th Quarter 2009	Week of 10-05-09	NR	NR	0.0085	NR
	3rd Quarter 2009	Week of 9/10/09	NR	NR	<0.005	NR
	2nd Quarter 2009 (Annual)	Week of 4/20/09	0.065	<0.006	<0.005	NR
	1st Quarter 2009	Week of 3/02/09	NR	NR	<0.005	NR
	4th Quarter 2008	Week of 11/10/08	NR	NR	<0.005	NR
TP #7	3rd Quarter 2008	Week of 7/14/08	NR	NR	<0.005	NR
<u> </u>	2nd Quarter 2008 (Annual)	Week of 5/12/08	0.032	<0.006	0.007	NR
-	1st Quarter 2008	Week of 03/10/08	NR	NR	<0.005	NR
	4th Quarter 2007	Week of 10/29/07	NR	NR	<0.005	NR
	3rd Quarter 2007	Week of 8/20/07	NR	NR	0.006	NR
	2nd Quarter 2007 (Annual)	Week of 6/18/07	0.075	<0.006	<0.005	NR
	1st Quarter 2007	Week of 2/26/07	NR	NR	NR	NR

NR = Not Required (Voluntary Corrective Measures - Revised Monitoring Plan - October 2005)

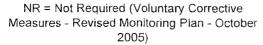
Groundwater Monitoring

	Total Metals		WQCC 20N	MAC 6:2.3103	40 CFR 11	41.62 (MCL)	
			1:00:	0.05	0.015	0.002	
Sample Location	Sampling Event	DATE	⊸ Ba ∹(mg/L)	Cr (mg/L)	Lead (mg/L)	Mercury (mg/L)	
	4th Quarter 2009	Week of 10-05-09	NR	NR	0.033	NR	網馬沙麦
	3rd Quarter 2009	Week of 9/10/09	NR	NR	0.04	NR	10 m
	2nd Quarter 2009 (Annual)	Week of 4/20/09	0.38	<0.006	0:03	NR	\$6.25.Com
	1st Quarter 2009	Week of 3/02/09	NR	NR	0.033	NR	語語を
	4th Quarter 2008	Week of 11/10/08	NR	NR	0.017	NR	14 Sept. 15
TP #8	3rd Quarter 2008	Week of 7/14/08	NR	NR	0.066	NR	
TP	2nd Quarter 2008 (Annual)	Week of 5/12/08	0.07	<0.006	<0.005	NR	報道のい
	1st Quarter 2008	Week of 03/10/08	NR	NR .	0.043	NR	
	4th Quarter 2007	Week of 10/29/07	NR	NR	0.30	NR	
	3rd Quarter 2007	Week of 8/20/07	NR	NR	0.027	NR .	
	2nd Quarter 2007 (Annual)	Week of 6/18/07	0.44	<0.006	0.054	NR	
	1st Quarter 2007	Week of 2/26/07	NR	NR	NR	NR	
EUZBARA (1944) Projet - Secret al Albanderia	4th Quarter 2009	Week of 10-05-09	NR	NR	0.045	N R.	Water Comment
	3rd Quarter 2009	Week of 9/10/09	NR	NR	0.009	NR	N-001
	2nd Quarter 2009 (Annual)	Week of 4/20/09	0.081	<0.006	0.0089	NR	Mary Congress Will
	1st Quarter 2009	Week of 3/02/09	NR	NR	<0.005	NR	- CON - CON - CON
	4th Quarter 2008	Week of 11/10/08	NR	NR	0,008	NR	10 MARKET 1
6# 0	3rd Quarter 2008	Week of 7/14/08	NR	NR	0.007	NR	
4	2nd Quarter 2008 (Annual)	Week of 5/12/08	0.11	<0.006	0.013	NR	2000 C
	1st Quarter 2008	Week of 03/10/08	. NR	NR	0.009	NR	PKER APPARE
	4th Quarter 2007	Week of 10/29/07	NR	NR	<0.005	NR	XX22 00 11 2
	3rd Quarter 2007	Week of 8/20/07	NR	NR	0.013	NR	ekselik Orks
	2nd Quarter 2007 (Annual)	Week of 6/18/07	0.91	0.018	. 0.020	NR	
	1st Quarter 2007	Week of 2/26/07	NR	NR	NR	NR	

NR = Not Required (Voluntary Corrective Measures - Revised Monitoring Plan - October 2005)

Groundwater Monitoring

	Total Matala	-WQCC 20N	MAC 6:2.3103	40 CFR	141.62 (MCL)	132	
	Total Metals		1.00	0.05	-0.015	0.002	
Sample Location	Sampling Event	DATE	Ba. (mg/L)	Cr (mg/L)	Lead (mg/L)	Mercury (mg/L)	
	4th Quarter 2009	Week of 10-05-09	NR¹	NR¹	NR¹	NR¹	
	3rd Quarter 2009	Week of 9/10/09	NR	NR	0.007	NR	
	2nd Quarter 2009 (Annual)	Week of 4/20/09	0.11	<0.006	<0.005	NR	
	1st Quarter 2009	Week of 3/02/09	NR	NR	<0.005	NR	
	4th Quarter 2008	Week of 11/10/08	NR	NR	0.006	NR	
¥10	3rd Quarter 2008	Week of 7/14/08	NR	NR	<0.005	NR	
TP #10	2nd Quarter 2008 (Annual)	Week of 5/12/08	0.11	<0.006	<0.005	. NR	
	1st Quarter 2008	Week of 03/10/08	NR	NR	<0.005	NR	
	4th Quarter 2007	Week of 10/29/07	NR	NR	<0.005	NR	
	3rd Quarter 2007	Week of 8/20/07	NR ·	NR	0.006	NR	EPA Method 6010
	2nd Quarter 2007 (Annual)	Week of 6/18/07	0.41	0.024	0.009	NR	thod
	1st Quarter 2007	Week of 2/26/07	NR	NR	NR	NR	6010
kim pilit il cision v vo medicalisti in sin e e e	4th Quarter 2009	Week of 10-05-09	NR¹	NR¹	NR¹	NR¹	& 7470
	3rd Quarter 2009	Week of 9/10/09	NR	NR	0.007	NR	
	2nd Quarter 2009 (Annual)	Week of 4/20/09	0.088	<0.006	<0.005	NR	
	1st Quarter 2009	Week of 3/02/09	NR	NR	<0.005	NR	
	4th Quarter 2008	Week of 11/10/08	NR	NR	0.006	NR	
TP #11	3rd Quarter 2008	Week of 7/14/08	NR	NR	0.008	NR	
<u>₽</u>	2nd Quarter 2008 (Annual)	Week of 5/12/08	0.068	<0.006	<0.005	NR	
	1st Quarter 2008	Week of 03/10/08	NR	NR	<0.005	NR	
	4th Quarter 2007	Week of 10/29/07	NR	NR	0.006	NR	
	3rd Quarter 2007	Week of 8/20/07	NR	NR	0.010	NR	
	2rid Quarter 2007 (Annual)	Week of 6/18/07	0.33	0.013	0.015	NR	
	1st Quarter 2007	Week of 2/26/07	NR	NR	NR	NR	



Groundwater Monitoring

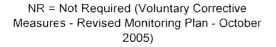
Total Metals			WQCC 20N	MAC 6.2.3103	40 CFR	141.62 (MCL)
			1.00	0.05	0:015	0.002
Sample Location	Sampling ⇒ Event	DATE	Ba (mg/L)	Cr ⊭(mg/L)	Lead (mg/L)	Mercury (mg/L)
	4th Quarter 2009	Week of 10-05-09	NR¹	NR¹	NR1	NR¹
	3rd Quarter 2009	Week of . 9/10/09	NR	NR	<0.005	NR
	2nd Quarter 2009 (Annual)	Week of 4/20/09	0.047	<0.006	· <0.005	NR .
	1st Quarter 2009	Week of 3/02/09	NR	NR	0.0057	NR
	4th Quarter 2008	Week of 11/10/08	NR	NR	<0.005	NR
TP #12	3rd Quarter 2008	Week of 7/14/08	NR	NR	0.005	NR
<u>T</u>	2nd Quarter 2008 (Annual)	Week of 5/12/08	0.043	<0.006	<0.005	NR
	1st Quarter 2008	Week of 03/10/08	NR	NR	0.006	NR
	4th Quarter 2007	Week of 10/29/07	NR	NR	0.010	NR
	3rd Quarter 2007	Week of 8/20/07	NR	NR	0.021	NR .
·	2nd Quarter 2007 (Annual)	Week of 6/18/07	0.21	0.010	0.016	NR NR NR
	1st Quarter 2007	Week of 2/26/07	NR	NR	NR	NR
	4th Quarter 2009	Week of 10-05-09	NR¹	NR¹	NR¹	NR¹
	3rd Quarter 2009	Week of 9/10/09	NR	NR	0.009	NR
. [2nd Quarter 2009 (Annual)	Week of 4/20/09	0.21	<0.006	<0.005	NR
	1st Quarter 2009	Week of 3/02/09	NR	NR	<0.005	NR
	4th Quarter 2008	Week of 11/10/08	NR	NR	0.007	NR
TP #13	3rd Quarter 2008	Week of 7/14/08	NR	NR	<0.005	NR
라	2nd Quarter 2008 (Annual)	Week of 5/12/08	0.22	<0.006	<0.005	NR
	1st Quarter 2008	Week of 03/10/08	NR	NR	<0.005	NR
	4th Quarter 2007	Week of 10/29/07	NR	NR	<0.005	NR
	3rd Quarter 2007	Week of 8/20/07	NR	NR	0.012	NR
	2nd Quarter 2007 (Annual)	Week of 6/18/07	0.42	0.019	0.011	NR
	1st Quarter 2007	Week of 2/26/07	NR	NR	NR	NR

NR = Not Required (Voluntary Corrective Measures - Revised Monitoring Plan - October 2005)

NR¹= Not Required (Approval With Direction - June 2009)

Groundwater Monitoring

	Total Metals	Carlot Conf.			141.62 (MCL)	
V				0.05	0.015	0.002
Sample Location.	Sampling Event	DATE	Ba (mg/L)	Cr (mg/L)	Lead (mg/L)	Mercury (mg/L)
	4th Quarter 2009	Week of 10-05-09	NR	NR	0.0057	<0.0002
	3rd Quarter 2009	Week of 9/10/09	NR	NR	<0.005	Laboratory Error No Analysis
	2nd Quarter 2009 (Annual)	Week of 4/20/09	0.61	<0.006	<0.005	0.0008
	1st Quarter 2009	Week of 3/02/09	NR	NR	<0.005	<0.001
	4th Quarter 2008	Week of 11/10/08	NR	NR	<0.005	No Analysis
DW #1	3rd Quarter 2008	Week of 7/14/08	NR	NR	<0.005	<0.001
Š Č	2nd Quarter 2008 (Annual)	Week of 5/12/08	0.12	<0.006	<0.005	<0.001
	1st Quarter 2008	Week of 03/10/08	NR	NR	<0.005	<0.0002
	4th Quarter 2007	Week of 10/29/07	NR	NR	<0.005	<0.0002
	3rd Quarter 2007	Week of 8/20/07	NR	NR	0.009	<0.0002
	2nd Quarter 2007 (Annual)	Week of 6/18/07	0.93	<0.03	<0.025	<0.0002
	1st Quarter 2007	Week of 2/26/07	NR	<0.006	<0.005	0.002
	4th Quarter 2009	Week of 10-05-09	NR	NR	0.0052	NR
ľ	3rd Quarter 2009	Week of 9/10/09	NR	NR	<0.005	NR
ļ	2nd Quarter 2009 (Annual)	Week of 4/20/09	0.062	<0.006	<0.005	NR
Ì	1st Quarter 2009	Week of 3/02/09	NR	NR	<0.005	NR ·
	4th Quarter 2008	Week of 11/10/08	NR -	NR	0.007	NR
MW #49	3rd Quarter 2008	. Week of 7/14/08	NR	NR	<0.005	NŘ
MW	2nd Quarter 2008 (Annual)	Week of 5/12/08	0.066	<0.006	<0.005	NR
	1st Quarter 2008	Week of 03/10/08	NR	NR	<0.005	NR
	4th Quarter 2007	Week of 10/29/07	NR	NR	<0.005	NR
ļ	3rd Quarter 2007	Week of 8/20/07	NR	NR	<0.005	NR
	2nd Quarter 2007 (Annual)	Week of 6/18/07	0.064	<0.006	<0.005	NR
	1st Quarter 2007	Week of 2/26/07	NR	<0.006	<0.005	NR



BV Air Pressure 2009						
Sample Location	Sampling Activities	Date	Time	Velocity (scfm)	Pressure (psi)	
	4th Quarter	10/6/2009	1535	6.0	0.5	
	3rd Quarter	9/14/2009	940	7.0	0.5	
BV	2nd Quarter	4/22/2009	903	6.0	0.5	
	1st Quarter	3/4/2009	1425	5.0	0.5	
	4th Quarter	10/6/2009	1534	6.0	0.5	
. 7	3rd Quarter	9/14/2009	941	7.0	0.5	
B	2nd Quarter	4/22/2009	902	8.0	0.5	
	1st Quarter	3/4/2009	1428	5.0	0.5	
	4th Quarter	10/6/2009	1535	8.0	0.5	
, (C)	3rd Quarter	9/14/2009	945	8.0	0.5	
98	2nd Quarter	4/22/2009	859	14.0	0.5	
	1st Quarter	3/4/2009	1440	12.0	0.0	
	4th Quarter	10/6/2009	1536	8.0	1.0	
4	3rd Quarter	9/14/2009	946	7.0	0.5	
BV	2nd Quarter	4/22/2009	900	60.0	0.5	
	1st Quarter	3/4/2009	1435	5.0	0.0	
	4th Quarter	10/6/2009	1538	8.0	1.0	
r.	3rd Quarter	9/14/2009	943	8.0	0.5	
BV	2nd Quarter	4/22/2009	851	18.0	0.5	
	1st Quarter	3/4/2009	1459	12.0	0.0	
	4th Quarter	10/6/2009	1537	9.0	1.5	
9 -	3rd Quarter	9/14/2009	948	8.0	0.5	
BV	2nd Quarter	4/22/2009	901	12.0	0.5	
	1st Quarter	3/4/2009	1432	12.0	0.0	
	4th Quarter	10/6/2009	1539	8.0	1.0	
1 - 7	3rd Quarter	9/14/2009	942	6.0	0.5	
BV	2nd Quarter	4/22/2009	852	10.0	0.5	
	1st Quarter	3/4/2009	1452	12.0	0.0	

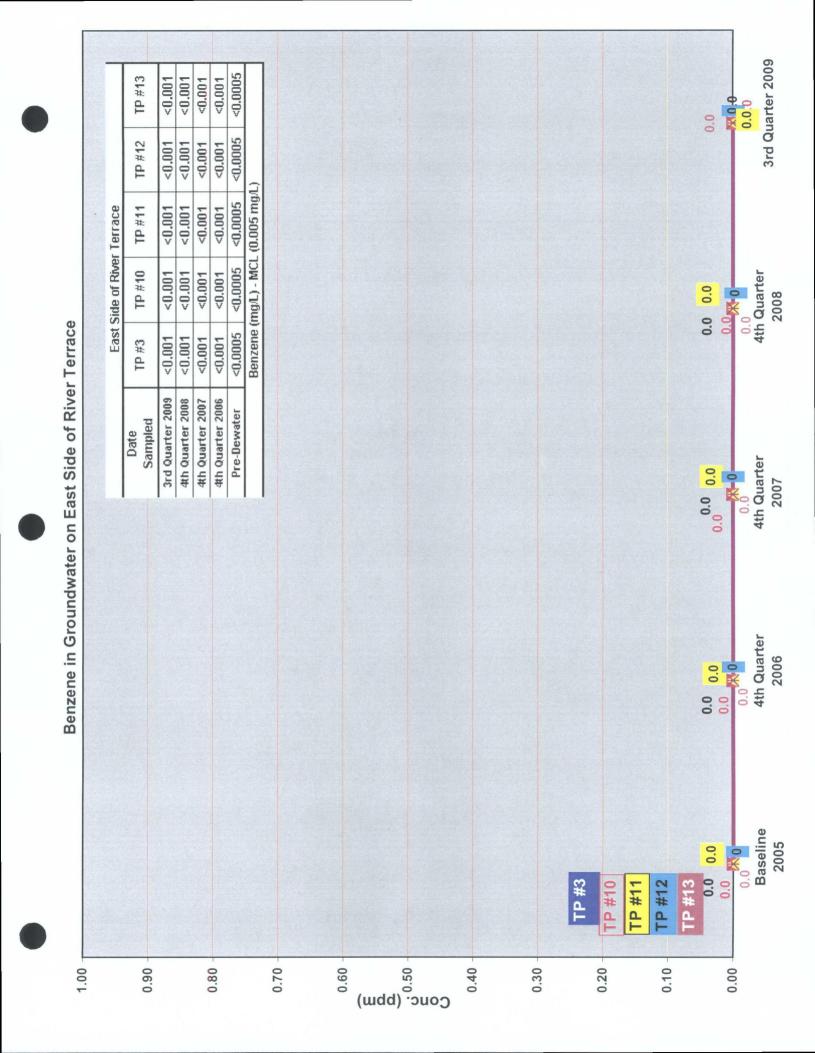
BV Air Pre	BV Air Pressure 2009						
Sample Location	Sampling Activities	Date	Time	Velocity (scfm)	Pressure (psi)		
	4th Quarter	10/6/2009	1530	8.0	1.0		
∞ '	3rd Quarter	9/14/2009	950	7.0	0.5		
BV	2nd Quarter	4/22/2009	853	14.0	0.5		
	1st Quarter	3/4/2009	1457	5.0	0.0		
	4th Quarter	10/6/2009	1533	6.0	1.0		
6 - 7	3rd Quarter	9/14/2009	952 -	7.0	0.5		
BV	2nd Quarter	4/22/2009	857	6.0	0.5		
	1st Quarter	3/4/2009	1442	5.0	0.0		
	4th Quarter	10/6/2009	1531	8.0	1.0		
- 10	3rd Quarter	9/14/2009	949	7.0	0.5		
BV	2nd Quarter	4/22/2009	854	6.0	0.5		
	1st Quarter	3/4/2009	1455	5.0	0.0		
_	4th Quarter	10/6/2009	1532	8.0	1.0		
- 11	3rd Quarter	9/14/2009	944	8.0	0.5		
B\	2nd Quarter	4/22/2009	858	8.0	0.5		
	1st Quarter	3/4/2009	1445	12.0	0.0		
0.	4th Quarter	10/6/2009	1540	10.0	1.0		
- 12	3rd Quarter	9/14/2009	947	7.0	0.5		
BV	2nd Quarter	4/22/2009	855	12.0	0.5		
	1st Quarter	3/4/2009	1450	11.0	0.0		
	4th Quarter	10/6/2009	1541	6.0	0.5		
- 13	3rd Quarter	9/14/2009	951	7.0	0.5		
BV	2nd Quarter	4/22/2009	856	6.0	0.5		
	1st Quarter	3/4/2009	1447	5.0	0.0		
e	4th Quarter	10/6/2009	1540	A Company of the Comp	2.8		
eral sten	3rd Quarter	9/14/2009	956		2.1		
Overall System Pressure	2nd Quarter	4/22/2009	910		3.8		
	1st Quarter	3/4/2009	1500		3.1		

GAC F	ilter Mor	nitoring	2006 - 12 - 12 - 12 - 12 - 12 - 12 - 12 - 12	EPA Metho	d 8021B		EPA Meth	od 8015B
An	2009 nual Rep	ort	MCL	WQCC 20NMAC 6:2:3103	MGL	WQCC 20NMAC 6.2.3103	**************************************	
Sample	Sampling :	DATE	0.005 Benzene	0.75 Toluene	0.70 Ethylben	0.62 Xylene	0.2 DRO	GRO
Location	Event⊸	DATE	(mg/L)	(mg/L)	(mg/L)	∦(mg/L) =	(mg/L)	- (mg/L)
L L	4th Quarter	10/01/09	0:045	<0.005	0.610	0.96	*<1.0	3.80
IN IN	3rd Quarter	07/01/09	<0.005	<0.005	0.41	3.6	2.6	18
GAC INLET	2nd Quarter	04/01/09	0.052	<0.002	0.180	0.260	2.2	1.50
S S	1st Quarter	01/06/09	<0.005	<0.01	0.430	4.10	3.6	14.00
		12/02/08	<0.001	<0.001	<0.001	<0.002	*<1.0	<0.05
_		11/17/09	<0.001	<0.001	< 0.001	<0.002	*<1.0	<0.10
ilte	4th Quarter	10/01/09	<0.001	<0.001	<0.001	<0.002	*<1.0	<0.10
Lead Filter (V-611) North Filter		09/08/09	<0.001	1.5	0.25	2.8	2.4	11
No		08/03/09	<0.001	<0.001	<0.001	<0.002	*<1.0	<0.05
12	3rd Quarter	07/01/09	<0.001	<0.001	<0.001	<0.002	*<1.0	<0.05
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		06/01/09	<0.001	<0.001	<0.001	<0.002	*<1.0	<0.05
ter		05/04/09	<0.001	<0.001	<0.001	<0.002	2.7	<0.05
l 🖺	2nd Quarter	04/01/09	<0.001	<0.001	<0.001	<0.002	*<1.0	<0.05
-eac		03/05/09	<0.001	<0.001	<0.001	<0.002	*<1.0	<0.05
		02/12/09	<0.001	<0.001	<0.001	<0.002	*<1.0	<0.05
	1st Quarter	01/06/09	<0.001	<0.001	<0.001	<0.002	*<1.0	<0.05
EFF South r	4th Quarter	10/01/09	<0.001	<0.001	<0.001	<0.002	*<1.0	<0.10
1 - " 2	3rd Quarter	07/01/09	<0.001	<0.001	<0.001	<0.002	*<1.0	<0.05
GAC 7-612) Fill	2nd Quarter	4/001/09	<0.001	<0.001	<0.001	<0.002	2.7	<0.05
خ ت	1st Quarter	01/06/09	<0.001	<0.001	<0.001	<0.002	*<1.0	<0.05

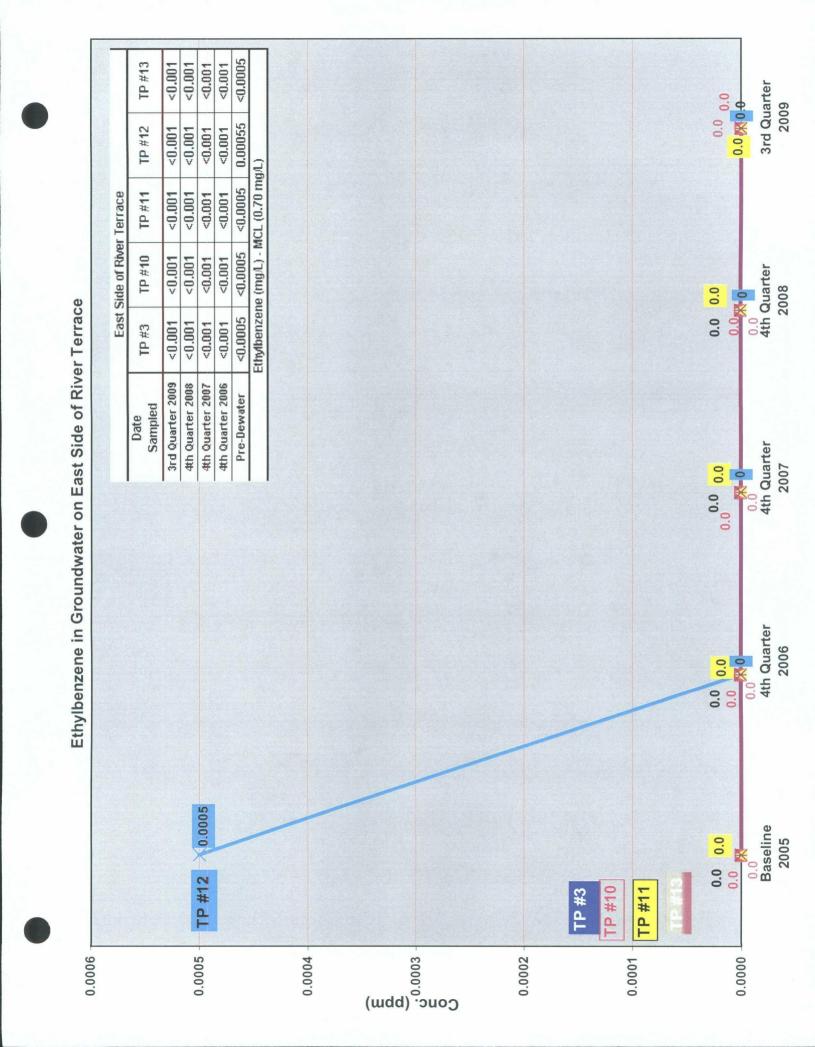
^{*}Per NMED letter Approval with Direction 2008 Groundwater Remediation and Monitoring Annual Report (Comment 9) dated Sept. 1, 2009 all future DRO analysis will be analyzed at a lower detection level of 0.2mg/L by EPA Method 8015B.

Section 5.0 BTEX Concentration VS Time Charts

Title	Tab Number
BTEX Concentration East Side	6
BTEX Concentration West Side	7
BTEX Concentration Remaining Wells	8

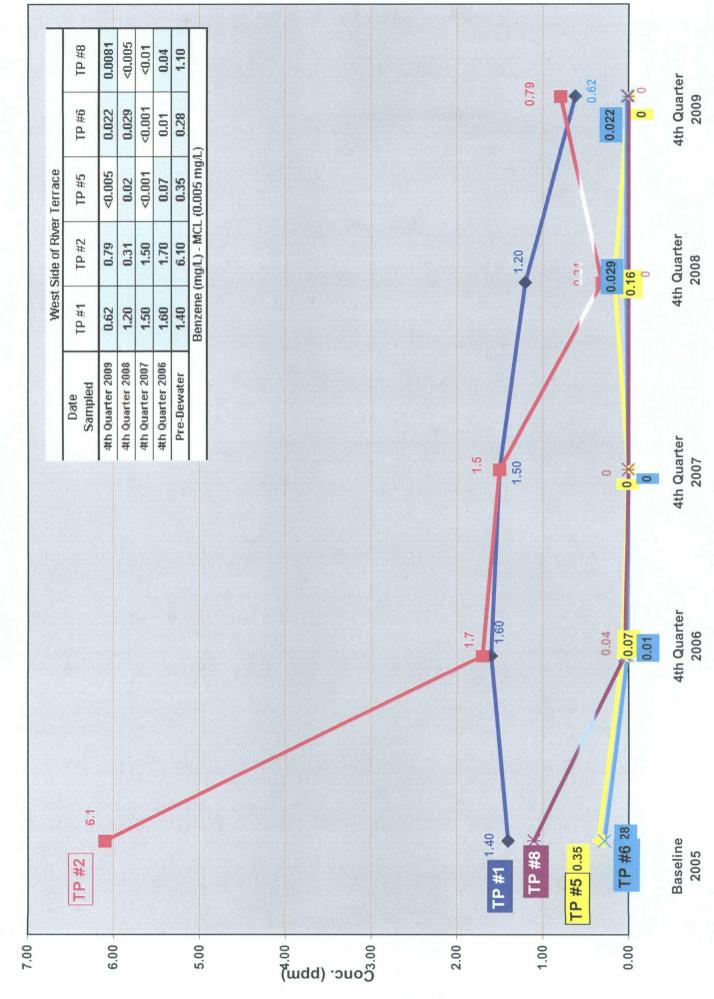


TP #13 <0.0005 3rd Quarter 2009 <0.001 <0.001 <0.001 <0.001 0.0 <0.0005 <0.001 <0.001 TP #12 <0.001 <0.001 Toluene (mg/L) - WQCC 20NMAC (0.75 mg/L) <0.0005 <0.001 <0.001 TP #11 <0.001 East Side of River Terrace <0.001 0.0 4th Quarter <0.0005 TP #10 <0.001 <0.001 <0.001 <0.001 0.0 0.0 2008 Toluene in Groundwater on East Side of River Terrace <0.0005 <0.001 <0.001 <0.001 TP #3 <0.001 3rd Quarter 2009 4th Quarter 2008 4th Quarter 2007 4th Quarter 2006 Pre-Dewater Sampled Date 0.0 4th Quarter 0.0 0.0 2007 4th Quarter 2006 0.0 0.0 Baseline 2005 0.0 0.0 TP #3 TP #11 TP #12 TP #10 TP #13 Conc_o (ppm) 1.00 06.0 0.80 0.70 0.60 0.40 0.30 0.20 0.10 0.00

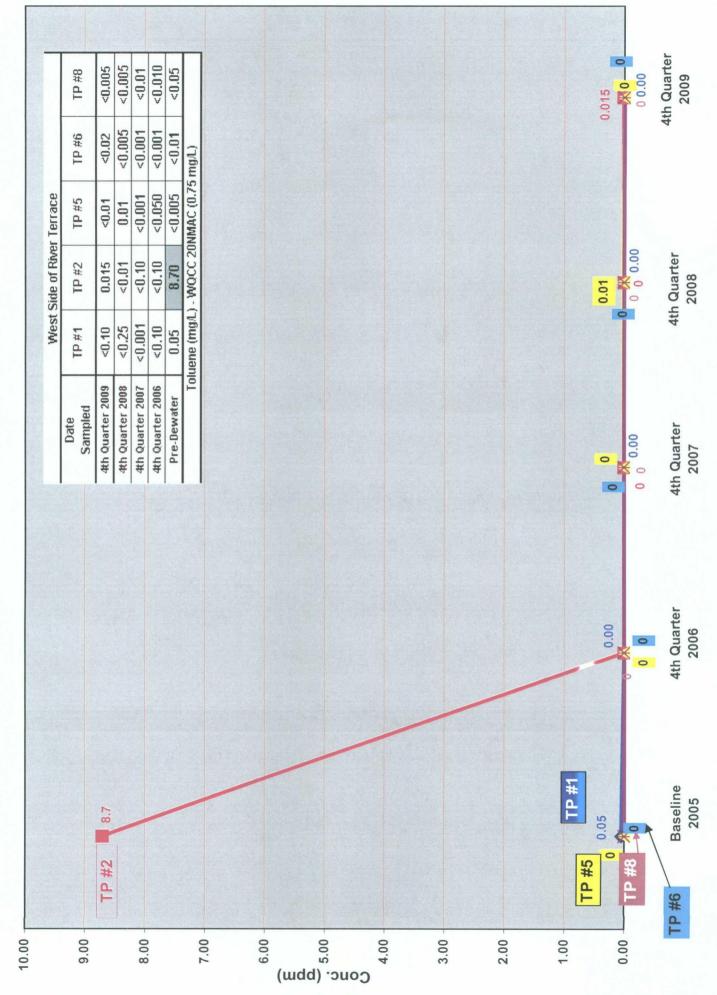


<0.002 <0.002 <0.002 0.0037 TP #13 <0.003 3rd Quarter TP #12 <0.002 <0.002 0.0042 <0.002 <0.003 Xylene (mg/L) - WQCC 20NMAC (0.62mg/L) <0.002 <0.002 <0.002 TP #11 0.0028 East Side of River Terrace <0.003 TP #10 <0.002 <0.002 <0.002 0.0025 <0.003 0.0 4th Quarter 0.0 2008 Xylene in Groundwater on East Side of River Terrace <0.002 <0.002 <0.002 <0.003 0.0012 TP #3 3rd Quarter 2009 4th Quarter 2008 4th Quarter 2007 4th Quarter 2006 Pre-Dewater Sampled Date 4th Quarter 2007 4th Quarter 0.0 0.0042 TP #12 0.0028 Baseline TP #3 TP #13 TP #11 TP #10 0.0 Conc. (ppm) 0.0040 0.0030 0.0005 0.0015 0.0045 0.0035 0.0010 0.000.0

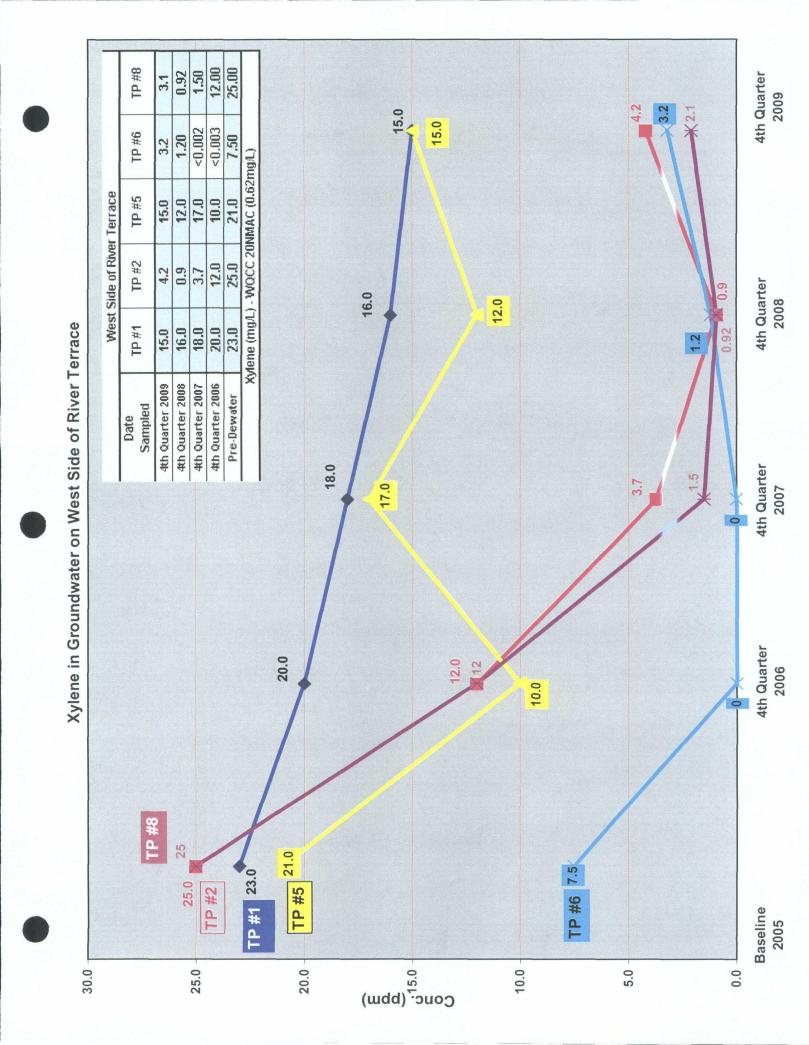
Benzene in Groundwater on West Side of River Terrace

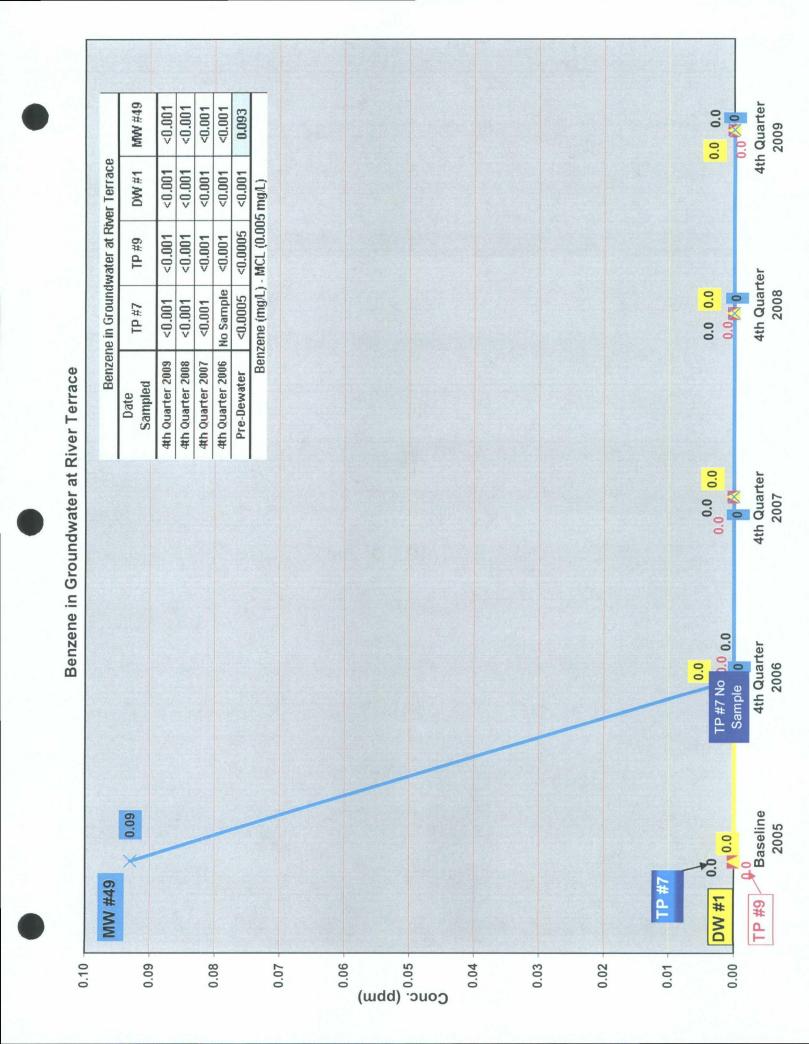


Toluene in Groundwater on West Side of River Terrace

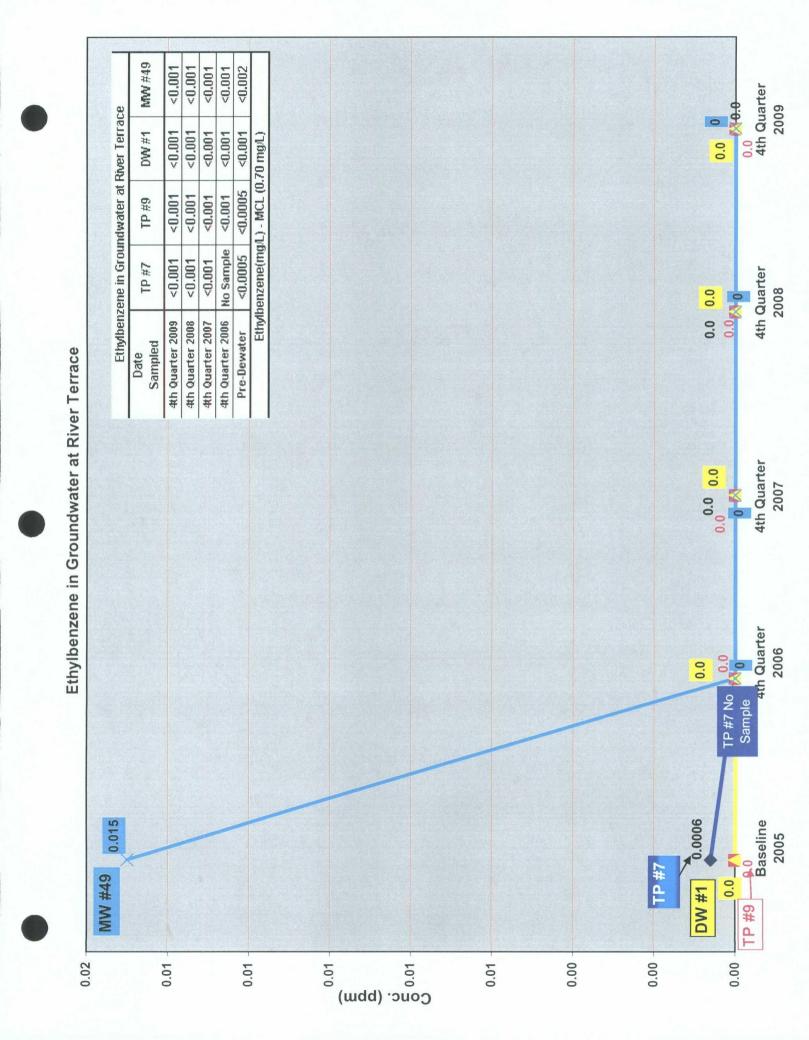


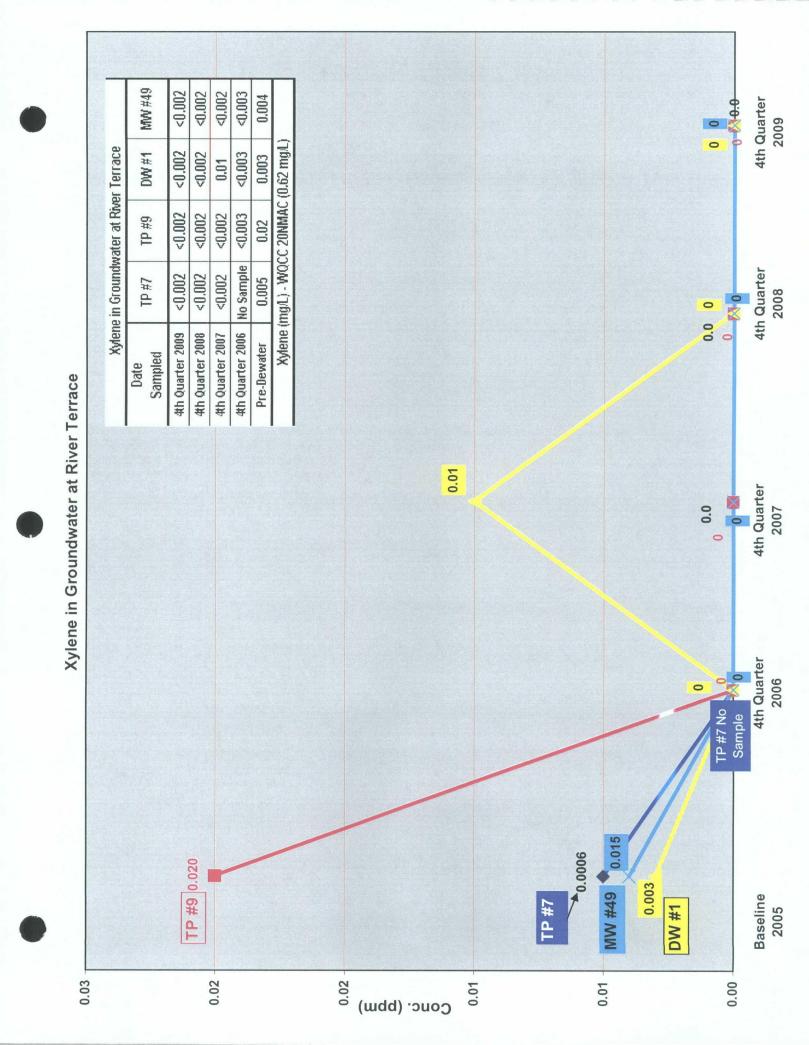
1P #8 0.38 3.20 0.24 0.27 4th Quarter 2009 3.40 2.1 0.24 <0.001 <0.001 9# d1 0.430 1.9 2.80 1.20 Ethylbenzene (mg/L) - MCL (0.70 mg/L) West Side of River Terrace TP #5 2.60 3.50 1.90 TP #2 0.73 2.40 4.20 2.10 4th Quarter 2008 2.70 Ethylbenzene in Groundwater on West Side of River Terrace 2.4 0.27 TP #1 3.40 3.80 3.80 0.43 4th Quarter 2008 4th Quarter 2006 4th Quarter 2009 4th Quarter 2007 Pre-Dewater Sampled Date 4th Quarter 2.6 2007 2.4 3.80 2.4 4th Quarter 3.20 2006 **TP#2** 3.80 4.2 3.5 2.8 TP #8 **TP #5** TP #1 9# d1 Baseline 2005 0.00 Conc. (ppm) 4.50 4.00 3.50 3.00 1.50 1.00 0.50





MW #49 <0.001 <0.001 <0.001 <0.002 0.0 4th Quarter 2009 <0.001 Toluene (mg/L) - WQCC 20NMAC (0.75 mg/L) Toluene in Groundwater at River Terrace 0.0 DW #1 <0.001 <0.001 <0.001 <0.001 <0.001 <0.0005 <0.001 <0.001 <0.001 <0.001 TP #9 No Sample <0.0005 <0.001 <0.001 <0.001 4th Quarter TP #7 0.0 0.0 4th Quarter 2006 4th Quarter 2008 4th Quarter 2009 4th Quarter 2007 Pre-Dewater Sampled Date Toluene in Groundwater at River Terrace 4th Quarter 2007 0.0 0.0 4th Quarter 2006 TP #7 No MW #49 Baseline 2005 0.0 0.0 **TP#7** DW #1 1P #9 Conc. (ppm) 1.00 0.90 0.80 0.70 09.0 0.40 0.30 0.20 0.10 0.00





Section 6.0 In-Situ Respiration Test

Title	Tab Number
Soil Gas Summary	9
Oxygen Utilization Rate Trend Graphs	10
Cumulative Depth to Groundwater Summary	11
Cumulative Soil Gas Summary	12
Oxygen Concentration VS Time Graphs	13

1 IN-SITU RESPIRATION TESTING

1.1 Purpose

The purpose of the in-situ respiration testing is to evaluate the effectiveness of the River Terrace bioventing system by assessing the in-situ biodegradation rates in the impacted soil zone. The respiration rate test consists of monitoring the rate at which oxygen is depleted and carbon dioxide is generated after the air supply is turned off. An in-situ respiration test was conducted during the week of October 26th, 2009. This was the third in-situ respiration test completed since the commissioning of the River Terrace bioventing system in January 2006. The activities performed during the 2009 in-situ respiration test are in accordance with the Bioventing System Monitoring Plan Amendment (MPI, 2006), and in compliance with the approved in-situ respiration test protocol modification letter submitted to NMED dated October 16, 2009 (NMED, 2009).

The 2009 in-situ monitoring data was compared to the data collected during the in-situ respiration tests conducted in May 2006 and September 2007. Comparison of the three data sets allow for interpretation of bioremediation activity at the River Terrace over the past 41 months of system operation.

1.2 Background

The objective of a bioventing system is to elevate depressed oxygen concentrations in soil gas in the presence of biodegradable organic compounds, like petroleum hydrocarbons. When petroleum hydrocarbons are introduced to soils, naturally-occurring bacteria use oxygen to metabolize the hydrocarbons for energy and cell growth. Hydrocarbon impacted shallow soils (approximately 0 to 3 feet below grade) are commonly treated under natural conditions because oxygen is constantly replenished from the atmosphere, supporting constant microbial activity. Hydrocarbon releases that penetrate deeper into the subsurface may reach a depth at which the atmosphere is unable to naturally replenish oxygen that is consumed by the microbes as hydrocarbons are consumed. Therefore, in a deeper impacted soil zone, oxygen concentrations in soil gas commonly decrease to near 0% by volume while carbon dioxide concentrations increase. Once the oxygen is gone, biodegradation of hydrocarbons by aerobic processes stops.

Bioventing systems are designed to provide adequate oxygen to support continuing aerobic metabolism of organics by soil microbes within the deeper area of the subsurface. Once oxygen levels in soil gas are elevated above 5% by volume through air injection, the concentration of oxygen is no longer limiting the rate at which the biodegradation reaction proceeds. With such abundant oxygen, the concentration of the food source, or hydrocarbon, is usually the factor that determines biodegradation rates.

At the Bloomfield Refinery, a bioventing system was installed to provide oxygen to the subsurface and support aerobic biodegradation of petroleum hydrocarbons that were identified in soil along the western portion of the River Terrace to a depth of approximately 8 feet below existing grade surface (bgs). The bioventing system includes a dewatering system, which consists of two dewatering wells and a collection gallery. The dewatering wells are equipped with variable-speed submersible pumps, which were installed and operational in January 2006. The collection gallery, consisting of a 4-inch perforated pipe with an 8-inch diameter vertical riser pipe and submersible pump, was installed and placed into operation by early October 2009. The dewater

system is used to enhance the effectiveness of the bioventing system by dewatering the influenced area. The more efficient the dewatering system operates, the larger vadose zone that is exposed to air injection, and thus supporting enhanced bioremedial activity.

2 2009 IN SITU RESPIRATION TEST

During the week of October 26th, 2009, an in-situ respiration test was performed. During the respiration test, the supply of oxygen from the engineered system was turned off while the dewatering system remained operational. With no oxygen being added to the subsurface, oxygen, carbon dioxide, and volatile organic compound (VOC) concentrations in soil gas were monitored over a 72-hour period using a multi-gas meter and photo ionization detector (PID). Oxygen concentration trend graphs were developed to estimate oxygen utilization and biodegradation rates within the soils.

2.1 Data Collection

Groundwater Level Monitoring

Prior to starting the respiration test, depth-to-groundwater measurements were collected from each of the TP wells within the bioventing system well field while the dewatering system and air injection system remained operational. Depth-to-groundwater measurements were not measured from the BV wells in order to maintain air injection into the subsurface until respiration monitoring commenced. The dewatering system consists of two wells (DW-2 and MW-48) each equipped with variable-speed pumps, and a collection gallery equipped with a single speed sump pump. The collection gallery was placed into operation approximately 5 days prior to the start of the 2009 respiration test.

The groundwater level measurements were used to ensure the dedicated soil gas sampling tubing extended into the screened interval, above the detected groundwater surface. Table 1 summarizes the depth-to-groundwater measurements collected prior to initiating the respiration test.

Table 1
Groundwater Level Data Summary
2009 In-Situ Test

Well ID	Depth to Groundwater (ft below TOC)	
TP-1	7.58	
TP-2	8.60	
TP-5	5.38	
TP-6	6.25	
TP-8	7.74	
TP-9	5.5	

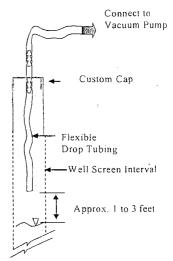
Note:

ft below TOC = feet below top of casing

Soil Gas Sampling

In order to collect soil gas samples, each BV and designated TP sample well was equipped with dedicated Teflon tubing and an air-tight well seal to prevent ambient air from filling the well casing between sample collection intervals. Sample tubing extended down into each well casing to approximately 2 to 4 feet above the groundwater surface.

Initial soil gas samples were collected from each temporary piezometer (TP) within the bioventing area shortly after the air supply was turned off. The initial baseline samples were collected to ensure the entire well field was sufficiently oxygenated (with oxygen concentrations above 10% by volume), and to be able to calculate the change in oxygen concentration levels over the 72 hour test period.



Typical Set-Up for Soil Gas Sampling

With the supply of oxygen from the engineered system turned off, soil gas samples were collected from each BV well (BV-1

through BW-13) and specified TP wells (TP-1, -2, -5, -6, -8, and -9) at a frequency approved by NMED (NMED, 2009). Soil gas samples were collected from the designated TP wells every hour for the first eight hours, and then three times per day for the remaining 72 hours of the respiration test period. At each of the BV wells, soil gas samples were collected three times per day during the 72 hour respiration test period. Each soil gas sample was analyzed in the field for oxygen, carbon dioxide, and VOCs using a mulit-gas meter and VOC analyzer (PID instrument).

A minimum of three well volumes of soil gas was purged before collecting each soil gas sample. After the soil gas sample was collected, the end of the dedicated tubing at each well head was sealed to prevent air from being drawn into the well between sample collection events. **TAB 9** includes the summary of soil gas sample results for each sample location.

3 2009 DATA ANALYSIS AND CONCLUSIONS

3.1 Data Analysis

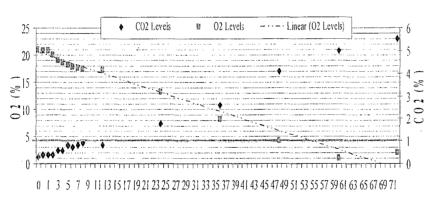
The most important data that reflects the in-situ biodegradation rate is the rate at which oxygen is consumed by soil microbes, known as the oxygen utilization rate (OUR). The rate at which petroleum hydrocarbons are being degraded in-situ is derived from the OUR by using stoichiometry and estimates of soil properties at the River Terrace. This in-situ biodegradation rate is expressed in terms of the mass of hydrocarbons (in milligrams) being degraded per unit of soil (in kilograms) per unit of time (usually days), or mg/kg-d.

Oxygen Utilization Rate

Oxygen and carbon dioxide concentration versus time plots were developed for each TP and BV well within the influenced area. A linear trend line was fitted to each O_2 data set using Microsoft Excel. The negative slope of the trend line is interpreted as the oxygen utilization rate, which by using soil properties and stoichiometry, translates into an estimate of the rate at which organics are being biodegraded by the soil microbes. The oxygen utilization rate trend graphs for each data set are provided in **TAB 10**. Oxygen concentration levels greater than 5% by volume represent in-situ conditions in which oxygen is not limiting the rate of biodegradation.

The R² value for each linear regression line reflects how closely the estimated values for the trendline correspond to the actual data. **Table 2** below summarizes the R² values for each data set.

Example of Soil Gas Data Trend Graph



Test Duration (hrs)

Biodegradation Rate

Variables used in calculating the biodegradation rate from the oxidation utilization rate, chemical properties, and soil properties are as follows:

Gas-Filled Pore Space, mg3*gas / cm3*soil Biodegradation Rate, mg/kg*day Density of Oxygen, mg/liter Oxygen Utilization Rate, %/day $\theta_a = 0.25$

k_b Calculated

 $\rho_{02} = 1330$

k_o from linear regression

Mass Ratio of Hydrocarbons to Oxygen
Required for Mineralization, gm of HC/gm of
O₂

C = 0.283

Soil Bulk Density, gm/cm3

 $p_{s} = 1.4$

Therefore, the biodegradation rate is calculated using the following equation:

$$k_b = \frac{(-k_o * \rho_{O2} * \theta_a * C * 0.01)}{os}$$

The biodegradation rate for each data set was calculated using the above equation and calculated OUR. A summary of the biodegradation rates calculated for each designated TP and BV well are summarized in **Table 2**.

Table 2: Oxygen Utilization, Biodegradation, & Data Correlation Summary

Well ID	Oxygen Utilization Rate	Oxygen Utilization Rate	Biodegradation Rate	Data Correlation
	(%/hr)	(%/day)	(mg/kg-day)	(R² Value)
TP-1	-0.1189	-2.8536	1.9180	0.7683
TP-2	-0.0527	-1.265	0.85	0.8698
TP-5	-0.0499	-1.198	0.80	0.162
TP-6	-0.0764	-1.834	1.232	0.1997
TP-8	-0.08	-1.920	1.29	0.7773
TP-9	-0.0077	-0.1848	0.1242	0.3187
BV-1	-0.0306	-0.7344	0.4936	0.769
BV-2	-0.0391	-0.9384	0.6307	0.827
BV-3	-0.0469	-1.1256	0.7565	0.8845
BV-4	-0.0412	-0.9888	0.6646	0.8767
BV-5	-0.0169	-0.4056	0.2726	0.7475
BV-6	-0.038	-0.912	0.6130	0.8358
BV-7	-0.0271	-0.6504	0.4372	0.3973
BV-8	-0.0257	-0.6168	0.4146	0.5672
BV-9	-0.1197	-2.8728	1.9309	0.9682
BV-10	-0.0625	-1.500	1.0082	0.8188
BV-11	-0.0749	-1.7976	1.2082	0.9249
BV-12	-0.1168	-2.8032	1.8841	0.9709
BV-13	-0.0525	-1.2600	0.8469	0.92

The calculated biodegradation rate for each monitoring location was plotted on a well location map to show the biodegradation rate distribution throughout the area influenced by the bioventing system (refer to **Figure 1**).

4 Conclusions - 2009 In-Situ Respiration Test

Based on evaluation of the 2009 data collected during the in-situ respiration, the following data interpretations/conclusions were made:

- The average depth-to-groundwater for TP-1, TP-2, TP-6, TP-8, and TP-9 was 7.14 feet below top of casing (Refer to Table 1 above). The deepest measurement was collected at TP-2, located in the vicinity of the newly installed collection gallery. TP-5 was not included in the average calculation since TP-5 is a surface completion well, and the other TP wells are constructed with stick-up completions.
- The linear regression line R² (data correlation) value for each data set reflects the precision of the data. The data correlation values were generally higher than 0.75, with the average correlation value being 0.72 (Refer to Table 2 above). Linear regression lines with R² values above 0.7 are considered indicators of good and consistent sample collection techniques.
- The distribution of the data sorted by biodegradation rate revealed that the TPs generally yielded greater oxidation utilization rates than the BV wells (even though spatial distribution of both well types is about the same), with the exception of TP-9 (Refer to Table 2 above). The average biodegradation rate based on data collected from the BV wells is 0.86 mg/kg-d; with the highest rate detected at BV-9 (1.92 mg/kg-d). The average biodegradation rate from data collected at the TP wells is 1.04 mg/kg-d, with the highest rate detected at TP-1 (1.91 mg/kg-d).

The calculated range of biodegradation rates within the well field is approximately 0.12 to 1.9 mg/kg-d, which indicates a narrow variability in the data. The average biodegradation rate observed in the TP wells within the bioventing area is within the expected range of in-situ biodegradation rates observed at many TPH bioventing systems operated around the country (1 to 20 mg/kg-d).

 The increasing concentration of carbon dioxide with a decrease concentration of oxygen during a respiration test is a common indicator of biodegradation; however other factors including vadose zone thickness and seasonal temperature fluctuations can impact bioactivity.

TP Wells

The 2009 data for TP-1, TP-5, and TP-8 show a change in carbon dioxide that appears to correlate with the fluctuation in oxygen detected (decreased oxygen detected concentrations correlate with an increase in detected carbon dioxide concentrations, and vice versa). TP-2 and TP-9 show a similar data correlation following 50 hours into the respiration test. Oxygen concentrations remained relatively stable for TP-6, with slight respective carbon dioxide concentrations detected.

BV Wells

The 2009 data for BV-9, BV-10, and BV-12 indicate a delayed increase in carbon dioxide with decreasing detected oxygen concentrations. The remaining ten BV wells show no significant change in CO_2 concentrations over time. The lag in the oxygen utilization rates and thus lower biodegradation rates at the BV wells is likely attributed to how the wells are constructed. The larger bore hole and filter pack around the BV well casings create a longer diffusion pathway for vapors from the soil to migrate, and thus requires a longer time to equilibrate between the soil formation and the inside of the well bore.

5 BIOVENTING SYSTEM PROGRESS ASSESSMENT

Following comparison of the field data collected during the 2006, 2007, and 2009 in-situ respiration test activities, the following conclusions were derived regarding the progress of bioremediation within western portion of the River Terrace area.

Dewatering System

Groundwater elevation at the River Terrace is influenced by the operation efficiency of the dewatering system, and the operating level of the San Juan River. The 2006 In-Situ Test was conducted shortly after the bioventing system was commissioned. At that time, the dewatering system consisted of two dewatering wells equipped with variable-speed submersible pumps. During the first year of operation, the dewatering system was effective at dewatering the biovent area. This dewatering effect increased the exposed vadose zone, and thus optimized bioremediation of the exposed impacted soil zone.

Over time, mechanical issues with the dewatering pumps due to fluctuation in river flowrates and increased silt in the San Juan River water compromised the operating efficiency of the dewatering pumps. Fluctuation in the San Juan River flowrate caused increased on/off cycling of the dewatering pumps. In addition, scale build up over time would shield the pumps in-take, causing the pumps to eventually fail and require replacement.

In 2009, Western optimized the effectiveness of the dewatering system by installing a groundwater collection gallery equipped with a single-speed pump and located within the southwest portion of the biovent area. The pump in the collection gallery was placed into operation approximately one week prior to the start of the 2009 In-Situ Respiration Test.

TAB 11 includes a data summary table showing the depth-to-groundwater collected prior to each in-situ respiration test. Based on review of the groundwater elevation during the past three in-situ respiration test, the following conclusions were made:

- Comparison of the depth-to-water data collected during the 2007 and 2006 in-situ
 respiration testing show that a slightly smaller vadose zone was being targeted by
 the bioventing system due to the higher groundwater elevation during the 2007 test
 period. This was most likely due to the lower efficiency operation of the dewatering
 system at that time.
- Comparison of the depth-to-groundwater measurements during the three testing periods show that the groundwater surface elevation during the 2009 test period was approximately one foot lower than it was during the 2007 test period. The most significant groundwater elevation change was detected at TP-1, located within the vicinity of the collection gallery. This data supports the notion that the collection gallery has enhanced the dewatering effects within the biovent area.

Air Injection Effectiveness

Bioventing systems are designed to provide adequate oxygen to support continuing aerobic metabolism of organics by soil microbes within the deeper area of the subsurface. Once oxygen levels in soil gas are elevated above 5% by volume through air injection, the concentration of oxygen is no longer limiting the rate at which biodegradation reaction proceeds.

Since in-situ biodegradation rates are measured indirectly through measurements of soil gas oxygen and carbon dioxide concentrations, factors such as soil pH, soil alkalinity, and iron content can effect the measured soil gas concentrations thus affecting the calculated biodegradation rates. Oxygen utilization has proven to be a more useful measure of biodegradation rates than carbon dioxide production (Leeson and Hinchee, 1997). Increasing carbon dioxide concentrations with decreasing oxygen concentrations is a secondary indicator of microbial activity. However, the absence of increasing carbon dioxide concentrations does not necessarily equate to the absence of microbial activity due to other possible natural occurring contributing factors.

Based on review of the soil gas data collected during the past three in-situ respiration test (see **TAB 12**), the following conclusions were made:

- Initial oxygen readings for all three in-situ tests show that the bioventing system continues to be successful in providing sufficient oxygen to sustain bioremedial activity. The average oxygen concentration measured at each TP and BV well prior to and/or immediately after turning off the blower, as shown by the field soil gas measurements collected during each in-situ respiration test, is above normal atmospheric conditions (greater than 18 percent by volume).
- Data of increased carbon dioxide concentrations over-time, specifically at the TP wells locations, supports the conclusions of on-going active bioremediation.

Bioremediation Activity

Bioremedial activity is estimated by the rate of which oxygen is depleted over-time (oxygen utilization rate) after the air supply is turned off. **Table 3** provides a summary of the calculated biodegradation rates for each of the three in-situ respiration monitoring events.

TABLE 3
In-Situ Respiration Results Summary (2006 – 2009)

	Biodegradation Rate (2009)	Biodegradation Rate (2007)	Biodegradation Rate (2006)
Well ID	(mg/kg-day)	(mg/kg-day)	(mg/kg-day)
TP-1	1.92	1.20	4.74
TP-2	0.85	1.39	3.10
TP-5	0.80	3.56	3.97
TP-6	1.232	0.063	0.90
. TP-8	1.29	1.92	3.10
TP-9	0.12	-0.13	_ N/A
Average:	1.04	1.33	3.16
BV-1	0.494	0.30	N/A
BV-2	0.631	0.75	2.12
BV-3	0.757	0.44	N/A
BV-4	0.665	1.16	2.41
BV-5	0.273	0.45	1.53
BV-6	0.613	1.77	2.62
BV-7	0.437	0.30	1.71
BV-8	0.415	0.68	1.98
BV-9	1.931	0.33	1.76
BV-10	1.008	0.65	1.79
BV-11	1.208	0.90	1.22
BV-12	1.884	0.42	2.02
BV-13	0.847	0.56	0.85
Average:	0.86	0.67	1.82

mg/kg-day = milligrams of contaminant per kilogram of soil per day.

A review of the three respiration data sets show that the biodegradation rate has declined since the initial respiration test was performed in 2006. Refer to **TAB 13** for summary graphs of oxygen concentration versus time for each monitoring location. Based on the construction methods for the BV wells, and since they also serve as the air injection points to the River Terrace subsurface, it is expected that the biodegradation rates at the BV wells will be relatively lower than the TP well and thus not as representative of the general biodegradation rate in the area.

Since the average biodegradation rate calculated at each designated TP well remains above 1 mg/kg-day, it reflects positive indications of bioremedial activity. Possible factors that could contribute to lower biodegradation rates since the initial respiration testing are as follows:

- Ongoing progress in bioremedial activity results in decreasing the food source (i.e. petroleum impacted soil) for the microbes, and thus resulting is lower respiration rates (decreasing rate of oxygen utilization). Therefore lower rates may be indicators of remedial progress within the River Terrace area.
- Increased groundwater elevation minimizes the amount of exposed vadose zone, and thus the area available for the microbial activity. Although the average biodegradation rate in 2009 is lower than monitored in 2007, higher

biodegradation rates at individual monitoring points in 2009 compared to 2007 (i.e. TP-1 and TP-6) support the notion that the collection gallery is enhancing the dewatering system to expose more vadose zone, and thus targeting residual impacted soils.

The location and production capacity of the collection gallery appears to have optimized the biovening dewatering system, and thus has allowed to enhance bioremedial activity in source areas (i.e. TP-1 area).

6 REFERENCES

- 1. Leeson, A. and R.E. Hinchee (Leeson and Hinchee), 1997. "Soil Bioventing Principles and Practice," CRC Press. NY.
- 2. Malcolm Pirnie, Inc. (MPI), 2005. "Bioventing System Monitoring Plan (Revised)," Giant Refinery Company Bloomfield, October 28, 2005.
- 3. Malcolm Pirnie, Inc. 2006. "Bioventing System Monitoring Plan Amendment," Giant Refinery Company Bloomfield, May 18, 2006.
- 4. New Mexico Environment Department (NMED), 2009. "Approval of Changes to the 2009 In-Situ Respiration Test at the River Terrace," October 27, 2009.



TAB 9
2009 In-situ Respiration Test
TP Well Soil Gas Data Summary

	TP-1					
Hour Into Testing (hr)	O2 (%)	CO2 (%)	VOCs (ppm)			
0	20.9	0.5	583.0			
1	20.9	0.7	433.0			
2	20.9	0.6	411.0			
3	20.9	0.3	267.0			
4	19.8	0.6	630.0			
5	19	0.7	963.0			
6	18.7	0.7	1207.0			
7	16.8	1.1	1652.0			
8	18.2	0.7	1265.0			
24	16.7	1.4	196			
28	12.6	2.6	419.0			
32	16.6	1.0	237.0			
48	14.3	1.8	172.0			
52	16.1	1.4	144.0			
56	12	2.8	177.0			
72	12	3.2	205.0			

	TF	P-2	
Hour Into Testing (hr)	O2 (%)	CO2 (%)	VOCs (ppm)
0	21.2	0.0	0.0
1	21.7	0.0	11.6
2	21.2	0.1	110.0
3	20.9	0.1	25.9
4	20.9	0.1	281.0
5	20.9 ·	0.0	78.5
6	20.9	0.0	339.0
7	20.9	0.0	127.0
8	20.9	0.0	231.0
24	19.4	0.0	25.7
28	19.8	0.0	27.3
32	19.4	0.0	30.3
48.	19.8	0.0	12.7
52	18.9	0.0	11.0
56	17.1	0.1	20.5
72	17.6	0.2	1.7.3

	TP-5													
Hour Into Testing (hr)	O2 (%)	CO2 (%)	VOCs (ppm)											
0	20.1	0.8	206.0											
1	20.9	0.4	37.4											
2	20.9	0.7	32.7											
3	-20.3	0.7	105.0											
4	17.3	1.5	285.0											
5	18.2	0.9	230.0											
6	17.5	1.0	222.0											
7	16.8	1.0	270.0											
8	17.0	0.9	206.0											
24	14.9	1.5	172											
28	13.3	1.5	84.3											
32	11.3	1.9	72.9											
48	17.1	0.5	9.8											
52	17.5	0.5	14											
56	12.6	1.4	6.0											
72	19.4	0.1	9.7											

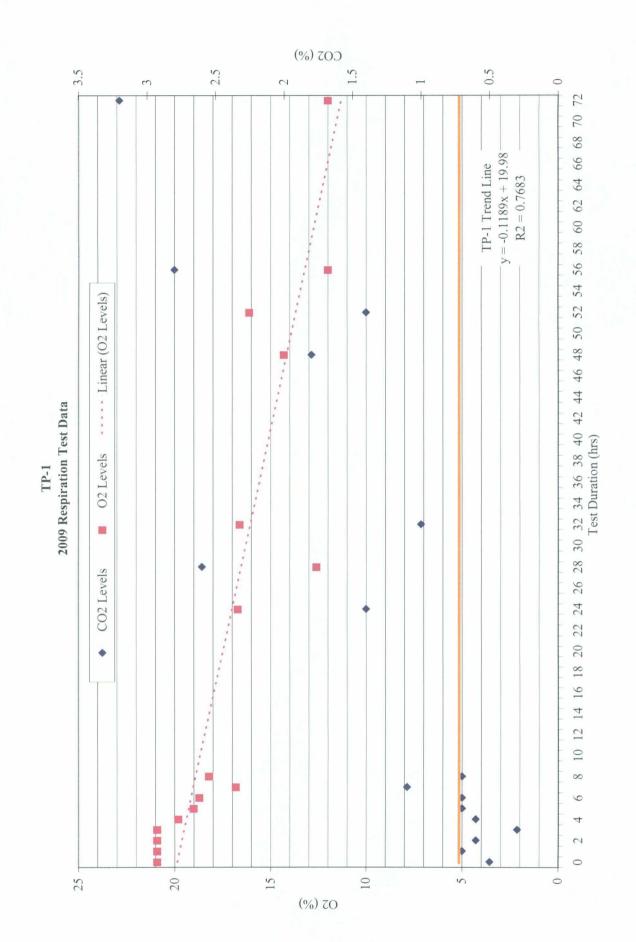
TP-6												
Hour	02		VOC									
Into	O2	CO ₂	VOCs									
Testing	(%)	(%)	(ppm)									
(hr)												
0	20.9	0.5	1.0									
1	19.8	0.7	13									
2	20.9	0.1	1.3									
3	18.6	0.7	3.0									
4	18.0	0.7	4.6									
5	17.9	0.6	5.1									
6	18.4	0.5	5.7									
7	18.6	0.5	3.3									
8	17.9	0.7	3.2									
24	18.4	8.0	0.5									
28	18.2	0.7	0.8									
32	18	0.7	1.2									
48	18.2	0.6	1.0									
52	18.4	0.5	0.9									
56	18.2	0.5	5.9									
72	186	0.5	0.9									

	TP-8													
Hour														
Into	O2	CO ₂	VOCs											
Testing	(%)	(%)	(ppm)											
(hr)	····													
0	20.9	0.1	280											
1	21	0.2	300.0											
2	20.9	0.2	266											
3	20.9	0.1	259											
4·	20.9	0.1	131											
5	20.8	0.1	881											
6	20.2	0.2	959											
7	20.1	0.2	1284											
8	19.4	0.2	1225											
24	19.1	0.3	125											
28	17.3	0.4	239											
32	17.3	0.3	247											
48	18.7	0.1	62.8											
52	17.9	0.2	54.0											
56	14.9	0.5	111.0											
72	17.9	0.3	40.3											

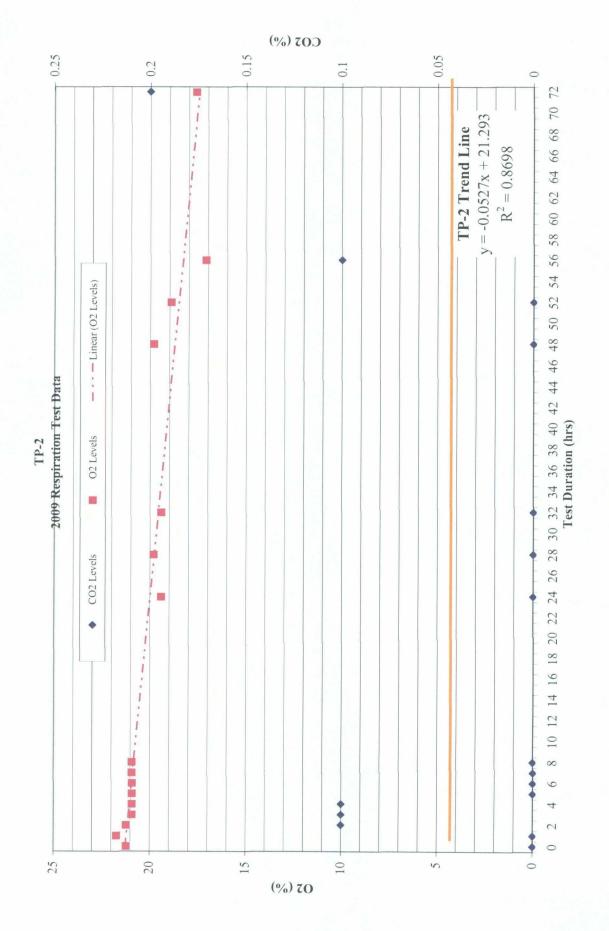
TP-9													
Hour Into Testing (hr)	O2 (%)	CO2 (%)	VOCs (ppm)										
0	20.1	3.2	0.3										
1	20.9	1	0.5										
2	20.9	0.9	1.0										
3	20.9	0.4	0.4										
4 ·	20.9	0.6	3.4										
5	20.9	0.3	1.2										
6	20.9	0.2	12.9										
7	20.9	0.1	2.5										
8	20.9	0.2	4.5										
24	20.9	0.2	0.8										
28	20.9	0.0	0.9										
32	20.9	0.0	2.1										
48	20.7	0.0	2.4										
52	20.4	0.1	1.9										
56	20.0	0.4	4.5										
72	20.3	0.6	1.8										

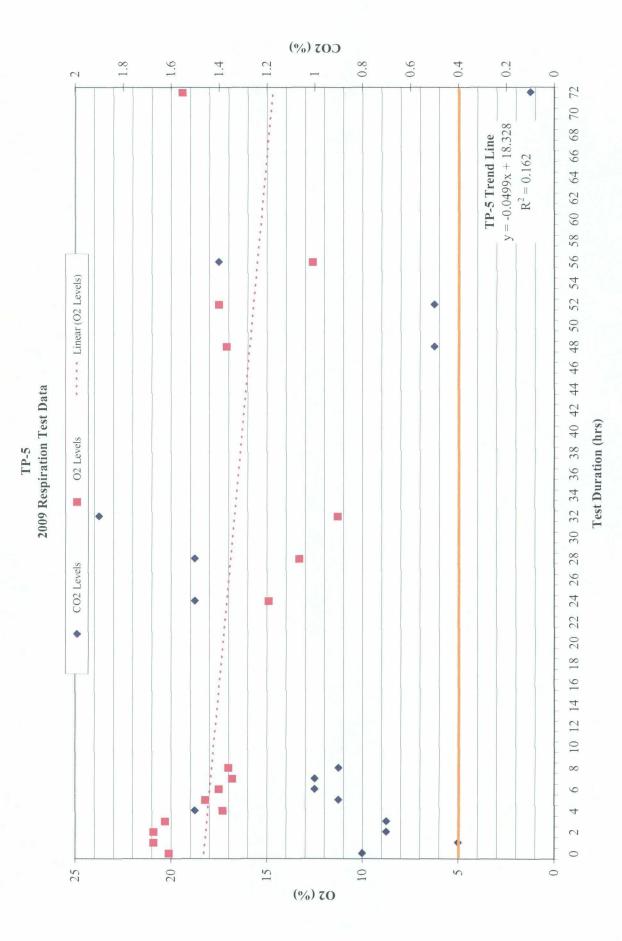
TAB 92009 In-situ Respiration Test
BV Well Soil Gas Data Summary

		VOCs	(mdd)	8.7	8 7	62.8	74.8	37.8	68.7	40,3	27.7	14.1	26.8	20.4																														
13		C02	(%)	0 1	0 1	0.0	0	0.0	0	0	0.0	0.0	00	0.0																														
RV-13		07	(%)	21.6	216	209	20.9	20.9	30.1	20.1	18.5	681	18.0	18.2																														
		Hour Into	(hr)	0	-	5	6	24	28	32	48	52	26	.72																							,							
	Ī	vocs	(mdd)	8.8	8.8	72.9	101	9.5	15.8	18.2	6.1	6.4	5.5	4.8			VOC.	(mdd)	ď	6.7	N F	2 2	= =	1 0	2.2	2 20	6.2	5.3	5.2			VOCs	(mdd)	0.5	0.5	79.9	91.2	23.6	20.5	18.0	12.0	= :	10.9	14.1
		C02		0.1	0.1	0	0	0.0	0.0	0.0	0.0	0	0	0.0				(%)		0. 0	<u> </u>	> c		2.0	0.0	0.0	0.0	0.0	0.1			C02		0.1	0.1	0	0	0.0	0.0	0.0	0.2	0.2	4.0	5.5
RV-8		07	(%)	21.6	21.6	20.9	20.9	20.9	19.8	19.1	20,3	20.14	19.4	19.8		BV-10	ĉ	(%)	, ; ;	0.12	0.12	6.02 0.05	6.07	107	17.1	88	18.6	17.5	17.1		BV-12	07	(%)	21.7	21.7	20.9	50.9	20.0	18.7	19.0	16.2	16.4	14.7	1.0.1
		Hour Into	l esting (hr)	0	-	5	6	24	28	32	48	52	56	72			Hour Into	Testing	0	o -	L	na	ŗć	+ 7° C	2.5 C.£) 4 1 00	52	56	72			Hour Into	Testing (hr)	0	-	5	6	24	28	32	48	52	3 %	4
	ľ	VOCs H		8.1	8.1	9.86	48.6	10.5	10.2		2.1	2.1	3.4	2.0	[H H			5.51	0 (6.29	 	7 0	7.0.7	6.6	6.7	4 8	1.8			VOCs H		30.3	30.3	82.8	8.99	14.7	34.8	28.8	7.0	6.6	6.0	7
	1	CO2 V		0.1	0.1	0.1	0	0.0	0.0	0.0	0.0	0	0	0.0			A (0)			5 6	> 0	0.0	0.0	0.0		000	0.0	0.1	0.2			C02 V		0.1	0.1	0	0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
RV-7	1	02 ((%)	21.6	21.6	20.9	50.9	20.3	0.61	18.2	20.1	19.8	19.4	8.61		BV-9	,,,			21.7	20.0	6.02	6.07	7.01	0.01	191	16.6	7	13.1		BV-11	07		21.7	21.7	50.9	50.9	50.9	1.61	20.1	17.9	18.5	17.1	2
-		_	lesting (hr)	il		S	6	24	. 58	32	. 48	52	56	72			_	ō	luc)	-	- 1	n 0	` .	4, c	0 7 6	4 4 8	52	56	72				Testing (0	_	5	6	24	28	32	48	52	56	7,1
L	J: T			C.	0.2	5.	∞.		0.1	9	. '0		0.5	0.3	[[_			0.0	- ·	 O, -	- (21.10		1 5	0.5	9	0.4]				10.	9.0	9.0	9	0.4	ε.	0.1	9	5	9.0]]]
		VOCs	(mdd)											٥			707	(mdd)														VOC	(mdd)											
,	4	C02	(%)	0.1	0.1	0	0	0	0.0	0.0	00	0.0	0.0	0.0		-4	5	(%)		0.1	- 0	0.0	2 6	2 6	0.0	0.0	0.0	0.0	0.0		9	C02	(%)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	V.0
RV-2		07	(%)	21.6	21.6	20.9	20.9	20.9	20.1	161	- 61	193	61	19.1		BV-4	5	3 3		21.6	21.0	20.9	20.9	0.07	7.61	19.4	18.9	18.7	19.0		BV-6	0	(%)	21.6	21.6	20.9	20.9	20.9	20.3	19.4	19.1	19.3	18.9	17.3
-		Hour Into	resting (hr)	0		ν,	6	24	28	32	48	52	99	72			Hour Into	Testing	(llr)	0 -	- 1	Λ (· ;	74	07	1 87	. 52	56	72			Hour Into	Testing	0	_	5	6	24	. 28	32	48	52	26	1/2
	T	VOCs	(mdd)	0.2	0.2	6.0	1.2	6.0	8.0	1.3	0.5	0.5	2.6	0.4			2007	(ppm)		0.0	5	2 (5.3	200	0.0	7.0	0.7	3.2	9.0			VOCe	(mdd)	31.8	31.8	4	2.1	2.1	0.7	1.2	9.0	0.6	6.1	IC.U
		C02	(%)	9.0	9.0	0.5	0.4	0.5	0.4	0.4	0.3	03	03	0.3				38		0.1	- ·	0.0	00	0.0	0.0	9 6	0.0	0	0.0			(0)	(₁ %)	0	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I.V.	T-AG	07	(%)	20.9	20.9	20.9	20.6	20.4	19.4	161	0 % 1	161	6	19.3		BV-3	8	3 3		23.6	21.0	20.9	20.9	20.3	9.61	18.6	18.6	18.6	18.7		BV-5	0,	(%)	20.9	20.9	50.9	20.9	20.9	20.9	20.6	20.1	20.0	9.61	1.02
		Hour Into	l esting (hr)	0		2	0	25	28	32	84	5.5	26	72			Hour Into	Testing	(hr)	0 -	- '	'n	· ;	4.5	87	2) 00	525	56	72			Hour-Into	Testing	C	_	5	6	24	28	32	48	52	26	17

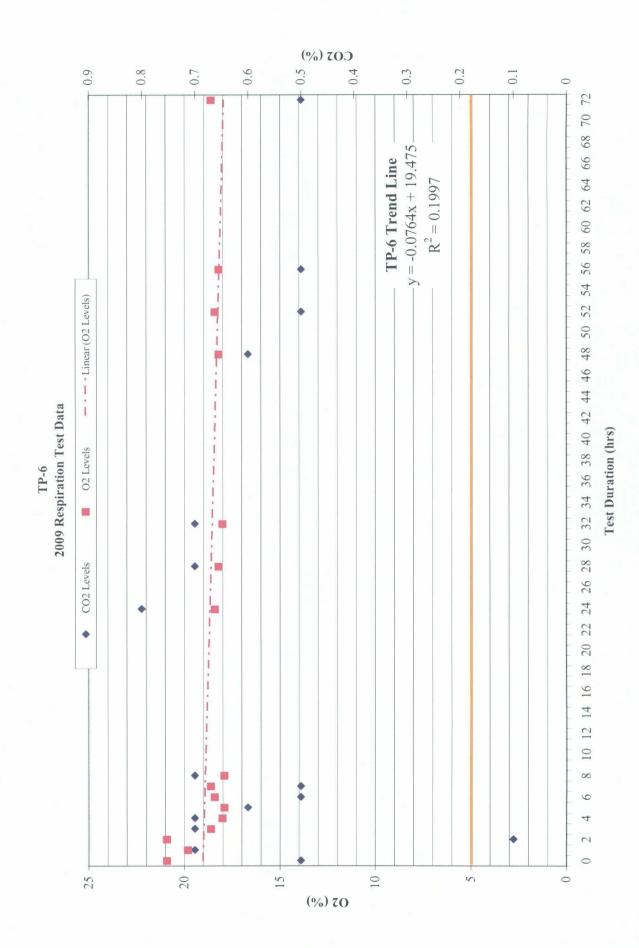


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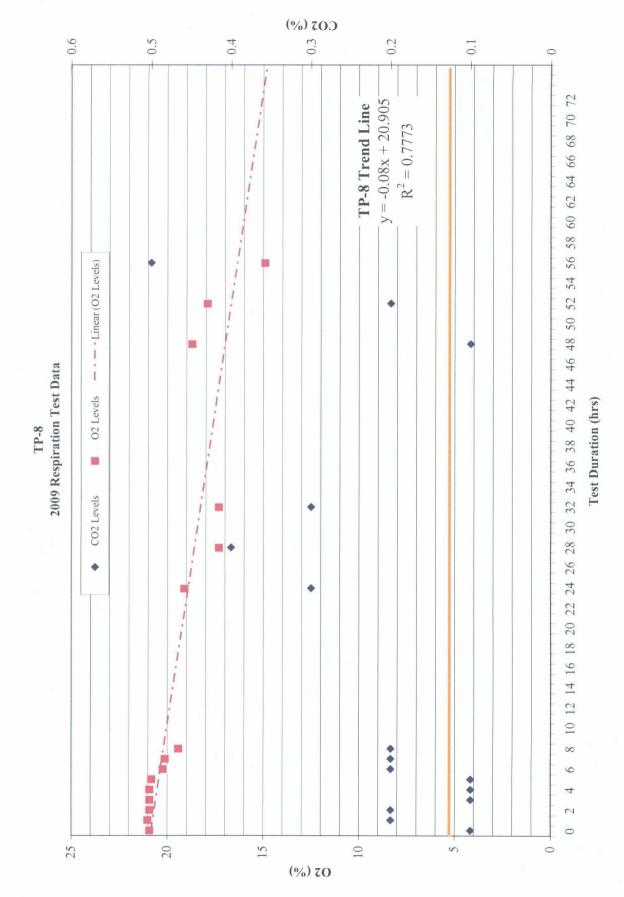




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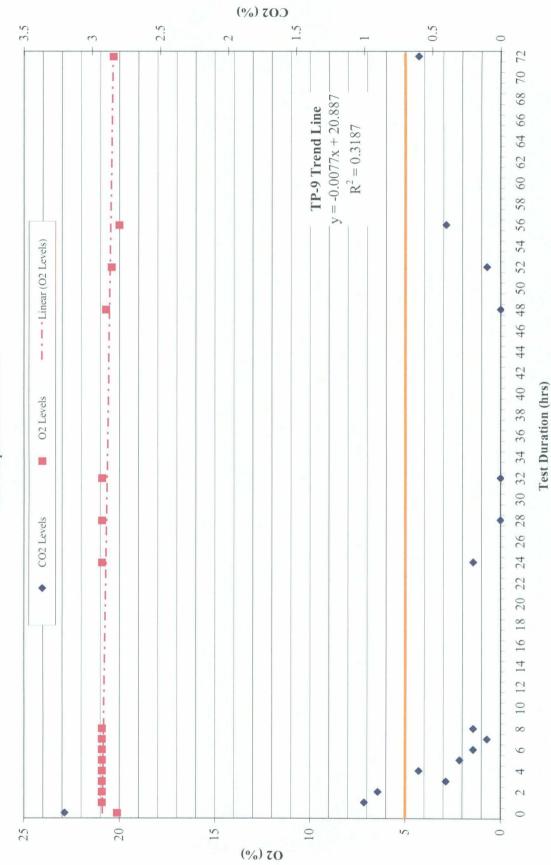


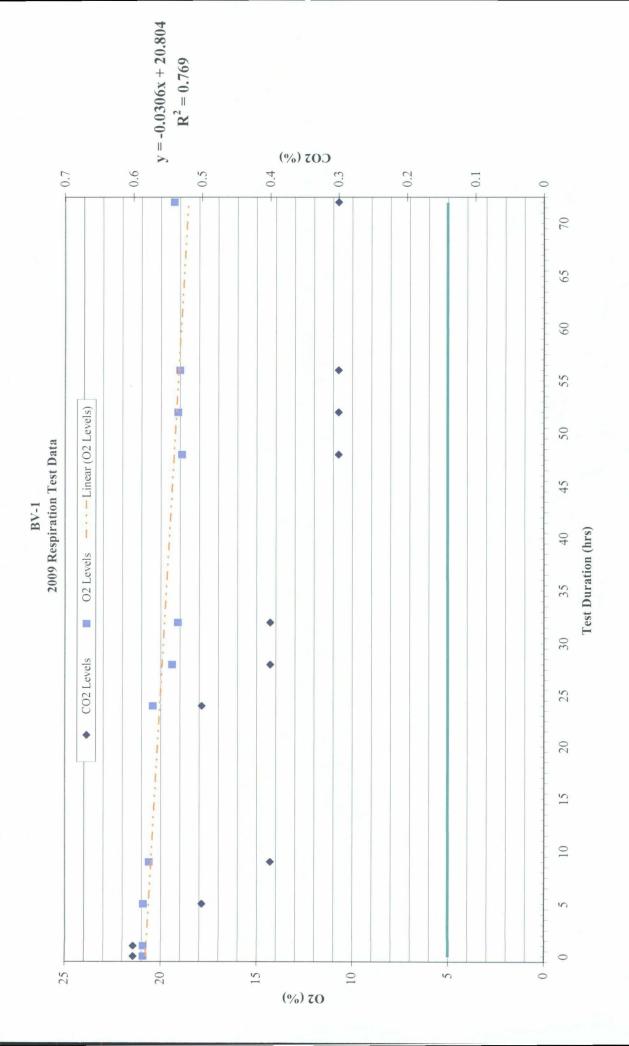
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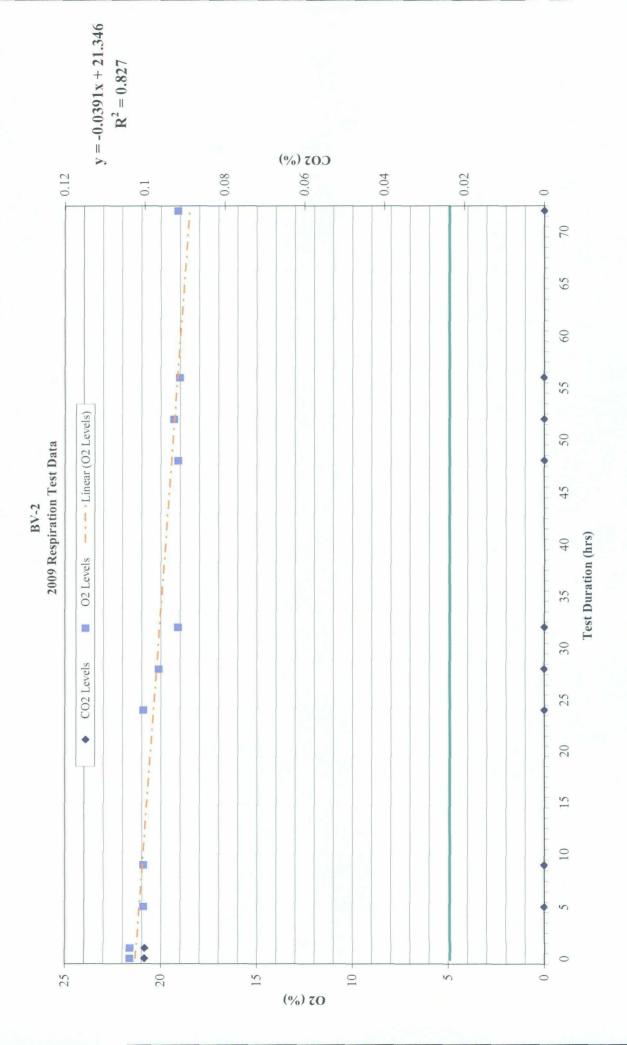
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TP-9 2009 Respiration Test Data

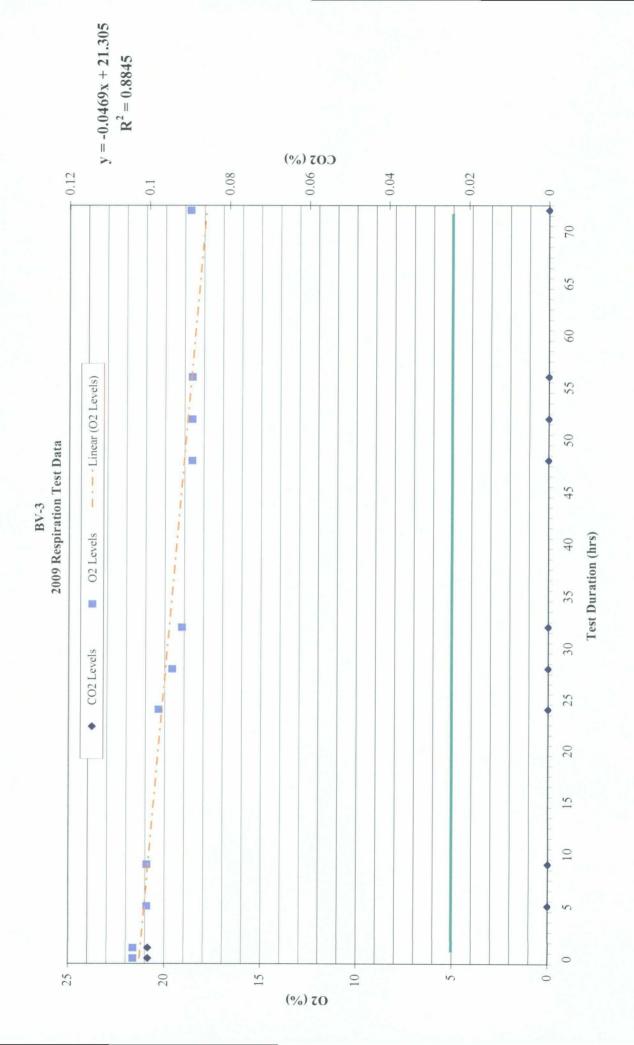




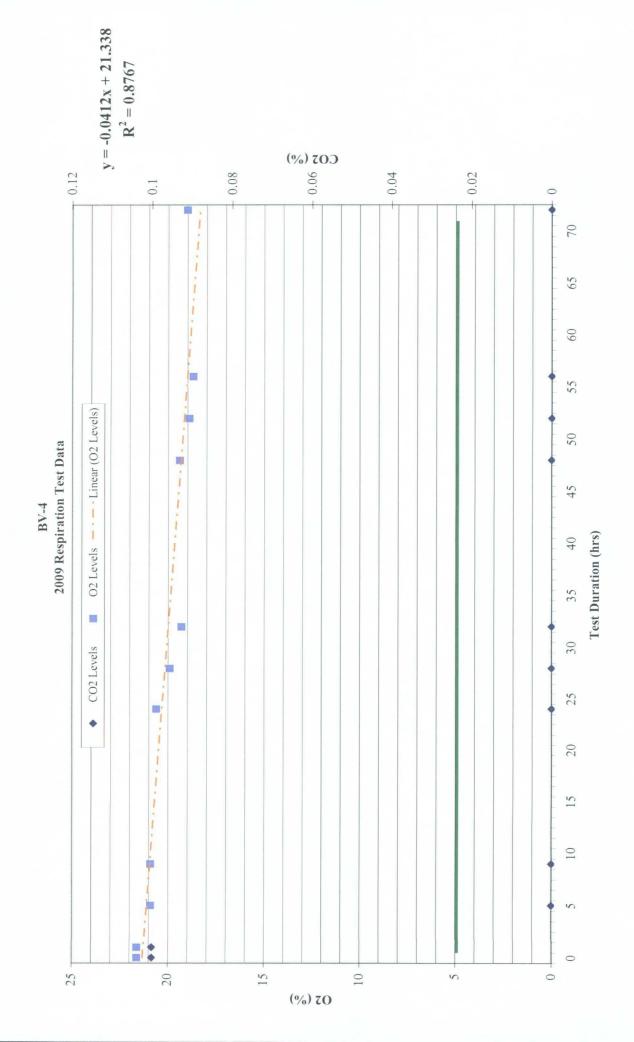
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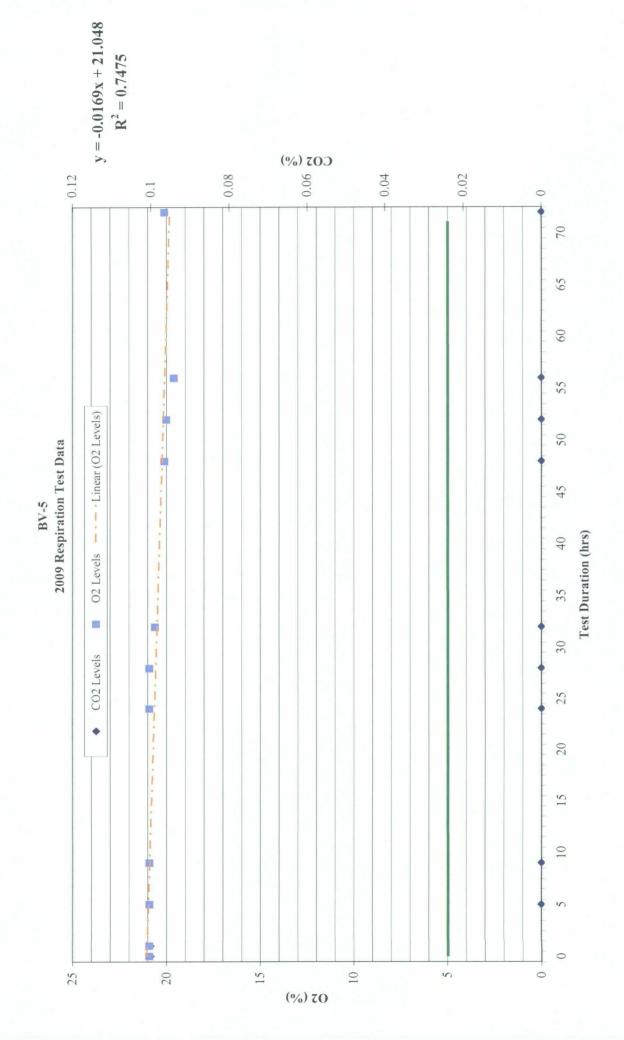
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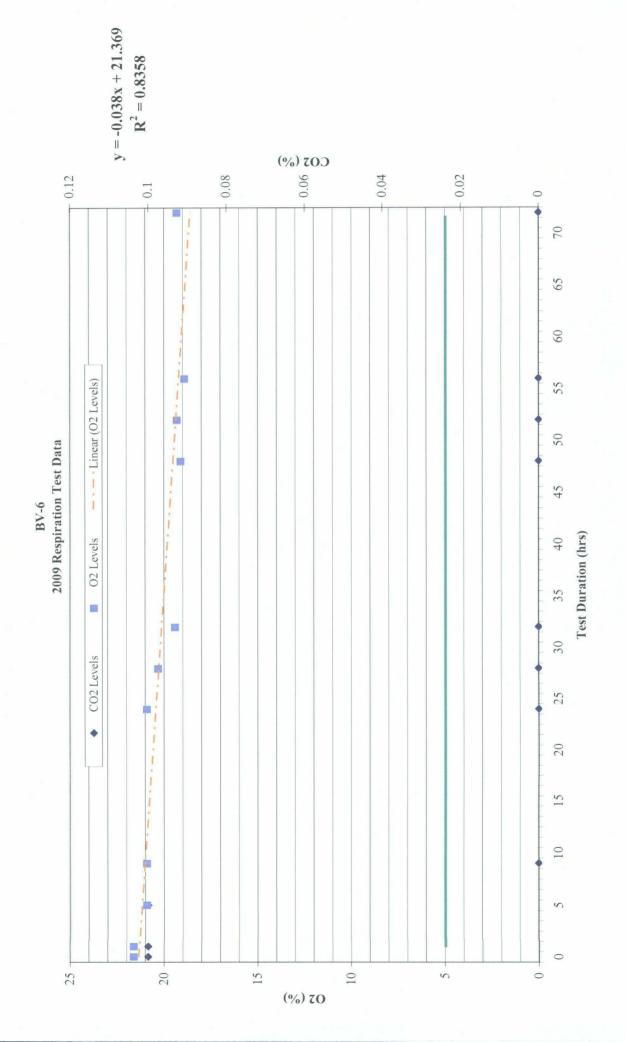
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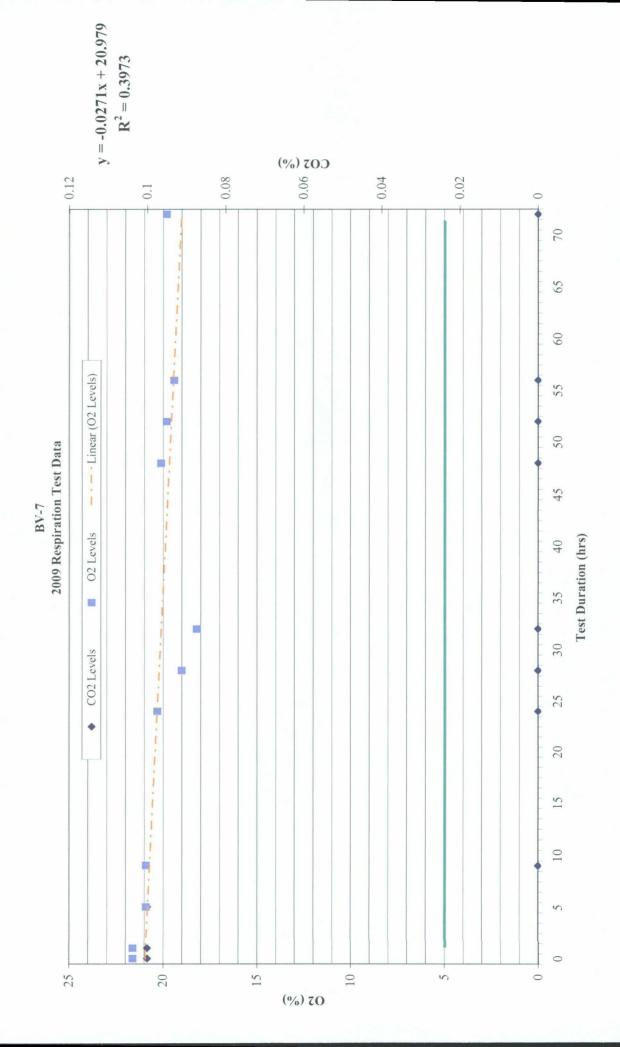
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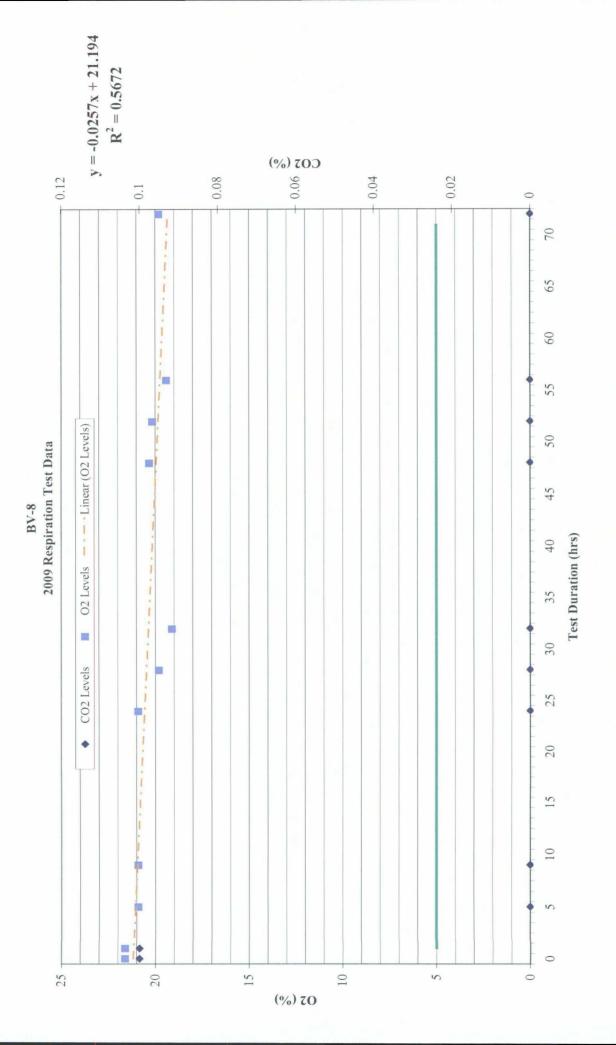
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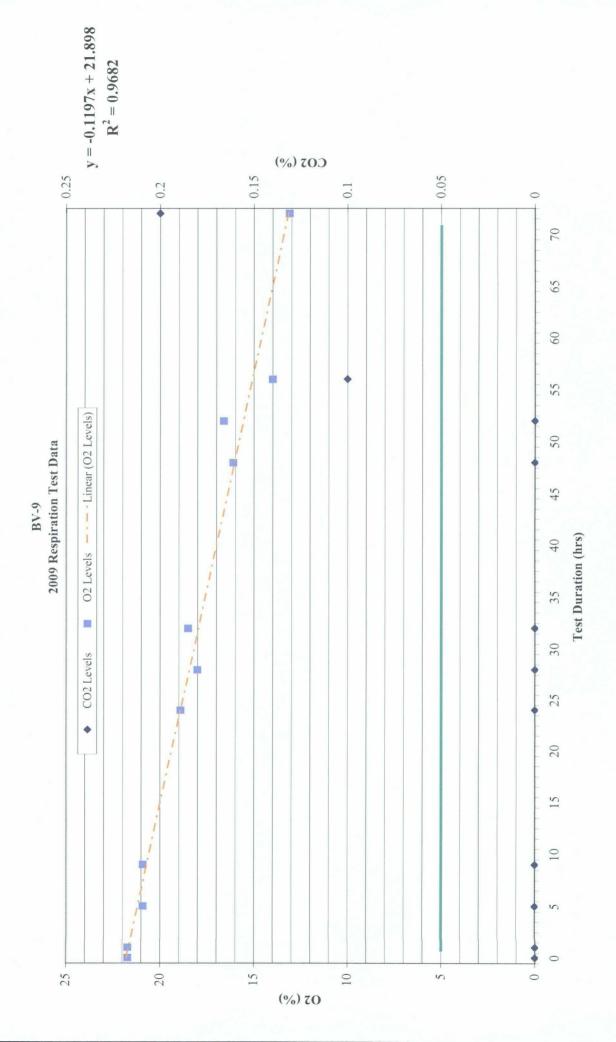
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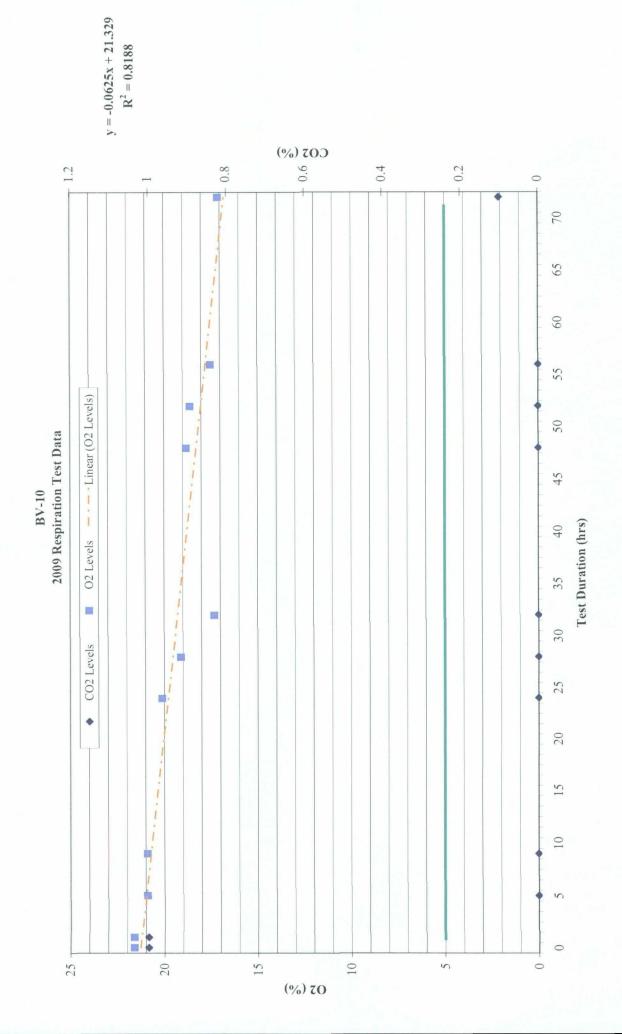
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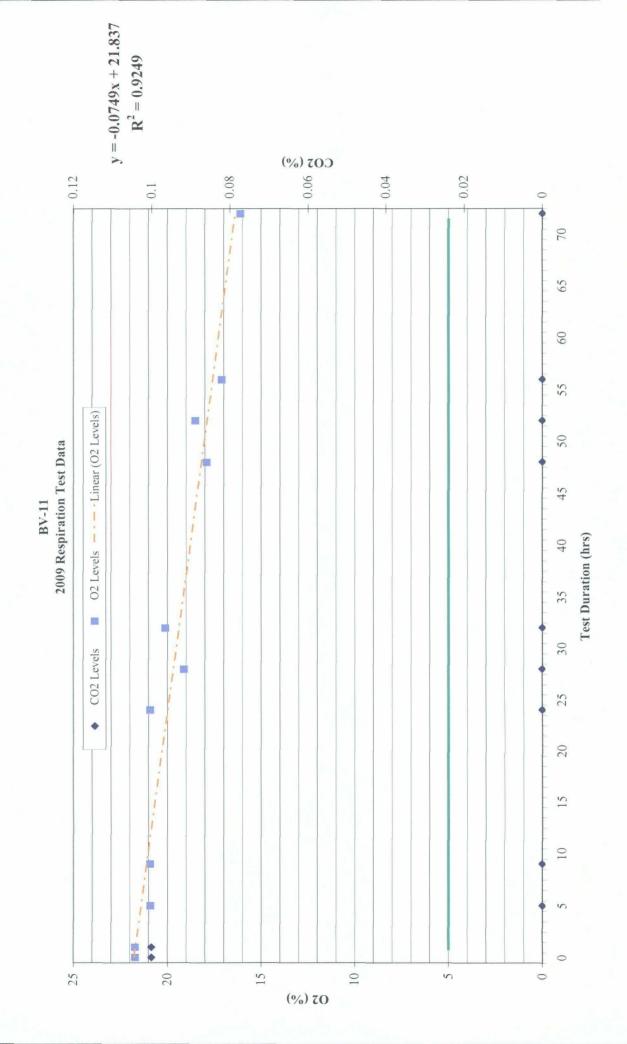
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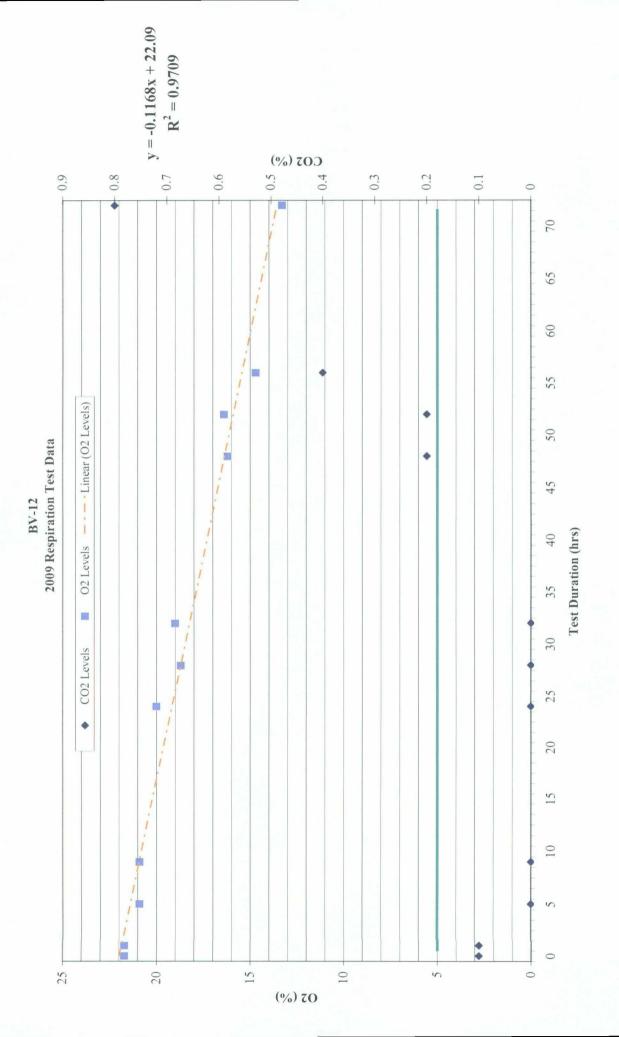
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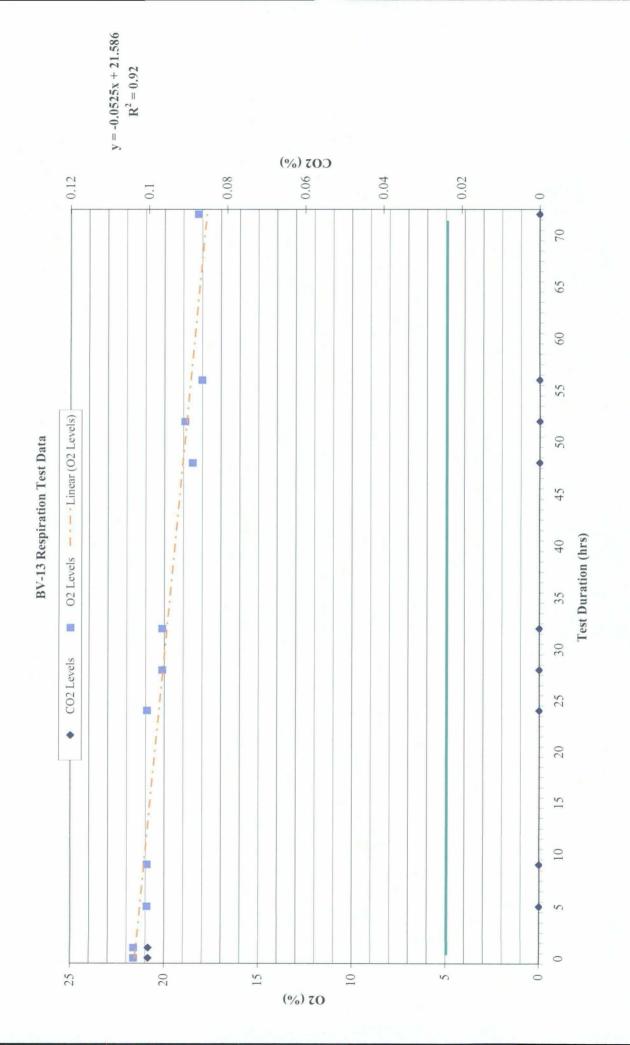
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TAB 11 In-Situ Respiration Tests 2006-2009 Depth-to-Groundwater Data Summary

Difference in Groundwater Elevation (between 2006 and	2009)	88.0-	O	2.22	9	760-	-1.24
Difference in Difference in Groundwater Elevation (between 2007 and (between 2006 an	2009) (#)	-1.68	-1.00	-0.18	-0.35	-1.44	-0.5
Difference in Groundwatr Elevation (between 2006 and	2007) (#)	0.8	6.0	2.4	1.5	0.5	-0.7
Depth-to- Groundwater	(2009) (#)	7.58	8.6	5.38	6.25	7.74	5.5
Depth-to- Groundwater	(2007) (#)	5.9	9.7	5.2	5.9	6.3	5.0
Depth-to- Groundwater	(2006) (#)	6.7	8.5	7.6	7.4	8.9	4.3
	Well ID	TP-1	TP-2	TP-5	TP-6	TP-8	TP-9

*AB 12

In-Situ Respiration Tests 2006-2009 Soil Gas Monitoring Data Summary

O, Concentration Data*

* All concentration are reported in % by volume.

NA = not available; Data collection from TP-7 was not required.

CO. Concentration Data*

			22	2	202 collectination Data	ימום			Г
5(2006 T	Test	5(.007 Test	est	2(2009 Test	st	
0 hr		72 hr	0 hr		72 hr	0 hr		72 hr	1
0.3	ţ	5.5	1.0	\$	4.2	0.5	t	3.2	
0.0	ಧ	3.3	0.1	\$	2.1	0.0	t	0.2	
<u>6</u>	\$	9.9	8.0	유		8.0	ţ	0.1	
1.0	t	0.5	0.5	٥	6.0	9.0	Q	0.5	
na	ᅌ	па	1.3	ᅌ	1.2	na	ţ	na	
0.2	ᅌ	3.1	0.1	ᅌ	-	0.1	t c	0.3	
0.0	٥	0.2	0.1	ᅌ	0.1	3.2	ф	9.0	
									-

NA = not available; Data collection from TP-7 was not required. * All concentration are reported in % by volume.

72 hr

2009 Test

0.0

0.1 0.1

0.0

222

0.0 0.0

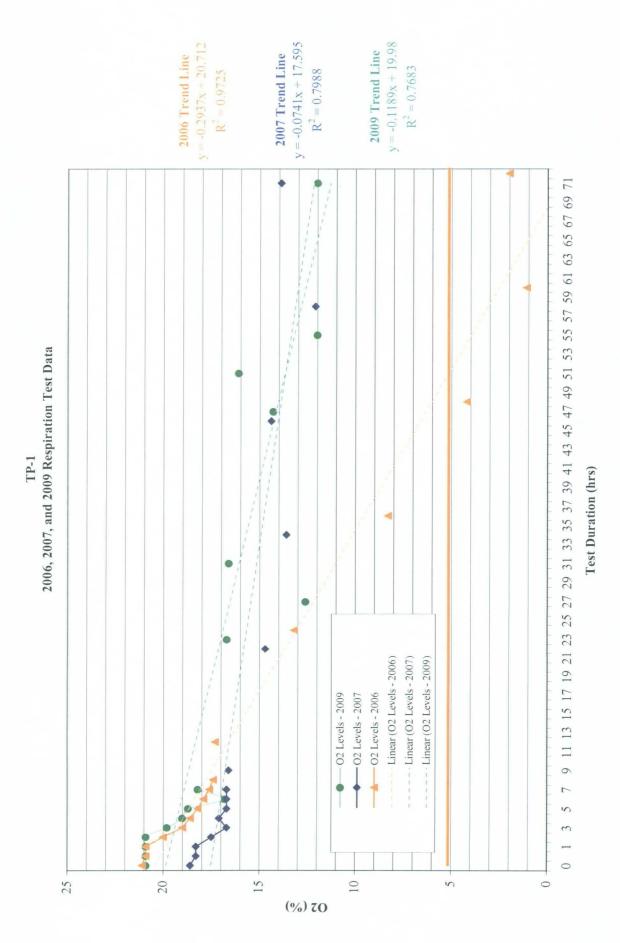
9 ₽ 2 2 2

0.1 0.1 0.0 0.0

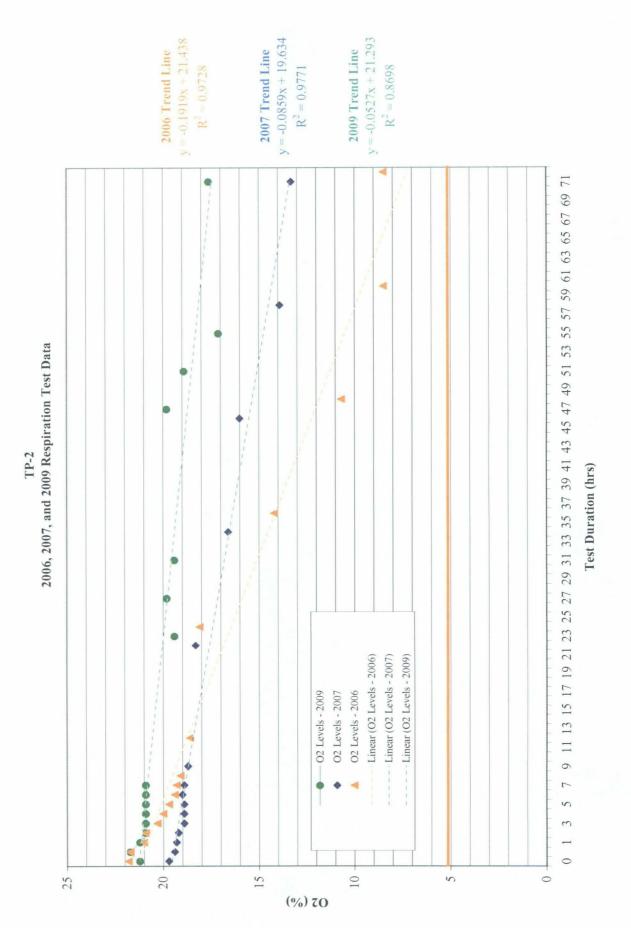
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O. Concentration Data*

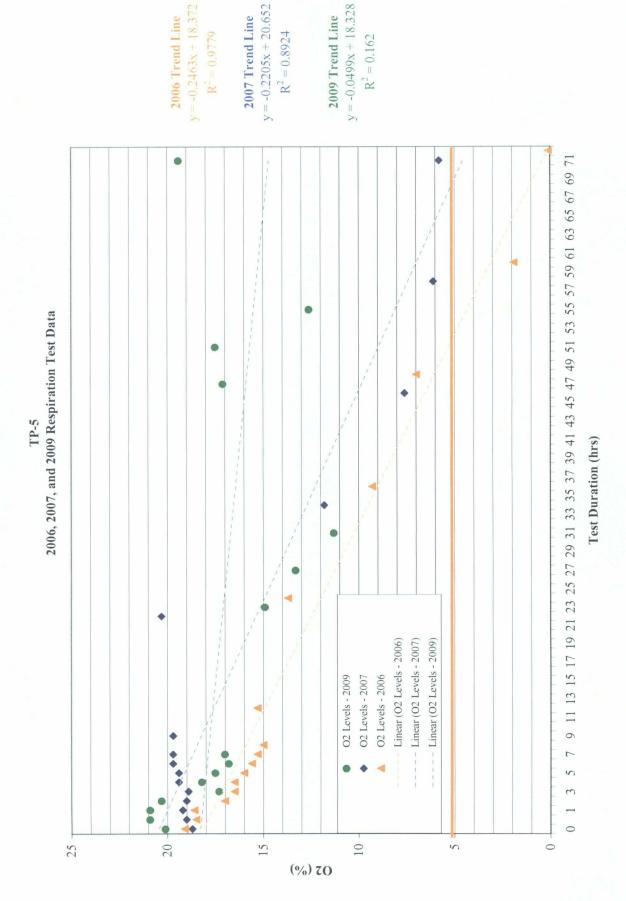
ata*		0	õ	Ö	Ö	Ö	o.	Ö	o.	o.	Ö	- -	Ö	o.	0	ıme.
CO ₂ Concentration Data*	sst	72 hr	0.2	0.3	0.1	0.3	0.2	8.0	6.0	4.0	0.3	0.7	9.6	0.4	0.1	All concentration are reported in % by volume
ncent	2007 Test		\$	£	£	£	5	\$	\$	£	ţ	ಧ	\$	\$	Q	ed in
CO2 CO	20	12 hr	0.1	0.1	0.1	0.1	0.1	0.0	1.0	0.1	0.2	0.2	0.1	0.1	0.1	e report
	st	72 hr	0.0	3.2	0.4	8.0	0.3	1.6	0.3	6.0	6.0	8.0	1.5	1.2	0.4	ation an
	2006 Test		2	\$	2	£	ಧ	\$	\$	ಧ	£	2	£	£	<u>و</u>	ncentr
	20	12 hr	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	* All cor
	01110		BV-1	BV-2	BV-3	BV-4	BV-5	BV-6	BV-7	BV-8	BV-9	BV-10	BV-11	BV-12	BV-13	
	_	_	Γ_						_						_	
	est	72 hr	19.3	19.1	18.7	19.0	20.1	19.3	19.8	19.8	13.1	17.1	16.1	13.3	18.2	
	2009 Test		₽	₽	\$	₽	<u>و</u>	2	\$	ţ.	£	\$	₽	\$	9	
*	20	0 hr	20.9	21.6	21.6	21.6	20.9	21.6	21.6	21.6	21.7	21.6	21.7	21.7	21.6	ne.
n Data*	st	72 hr	18.7	16.7	18.2	15.0	18.0	12.3	18.7	17.3	18.9	17.1	15.8	18.4	17.3	by volur
tratio	2007 Test		ಧ	5	\$	9	Q	\$	Q	t	\$	\$	\$	\$	5	% ui
Concentration Data*	20(12 hr	19.7	18.9	19.7	18.9	19.7	18.7	18.2	19.7	19.2	19.0	18.7	19.2	19.2	reported in % by volume
02	2006 Test	72 hr	20.0	13.3	20.7	13.8	16.3	11.6	16.0	15.5	15.8	15.6	17.7	17.0	18.9	-
			ᅌ	Q	ᅌ	£	£	ಧ	to	ಧ	ಧ	ಧ	9	₽	ţ	entra
	200	12 hr	20.9	20.9	20.9	20.9					20.9	20.9	20.9	20.9	20.9	* All concentration are
	מו ווס/או] = =	BV-1	BV-2	BV-3	BV-4	BV-5	BV-6	BV-7	BV-8	BV-9	BV-10	BV-11	BV-12	BV-13	



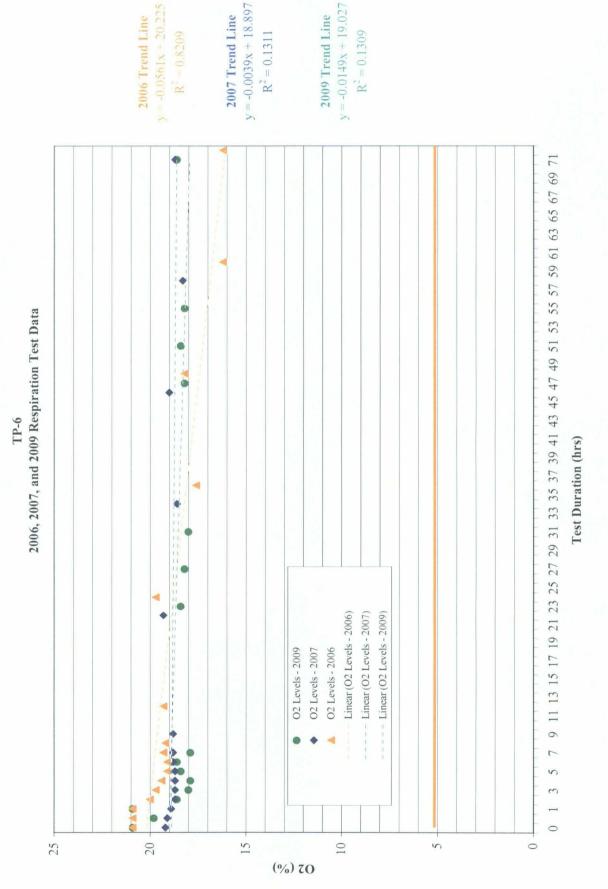
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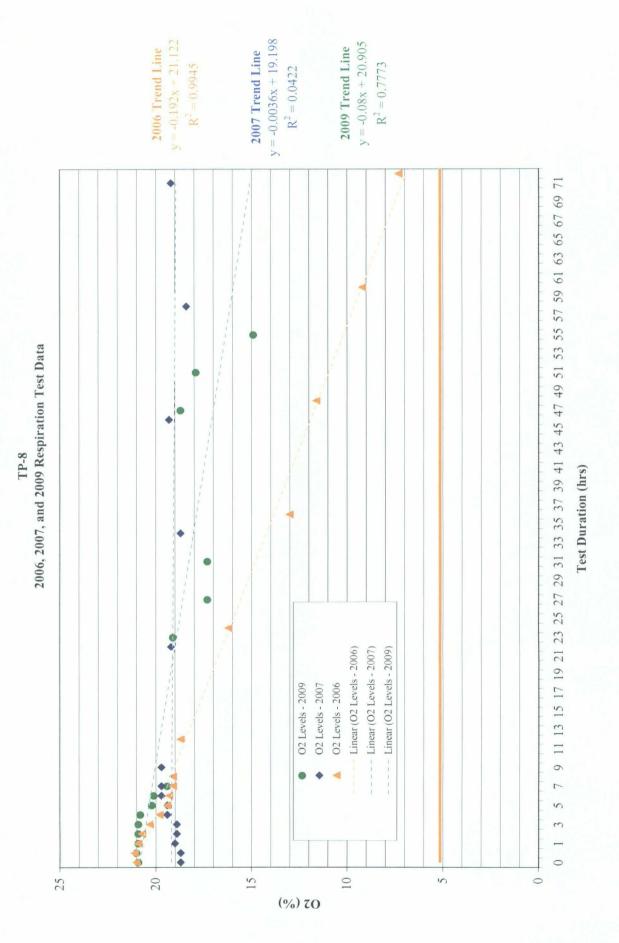
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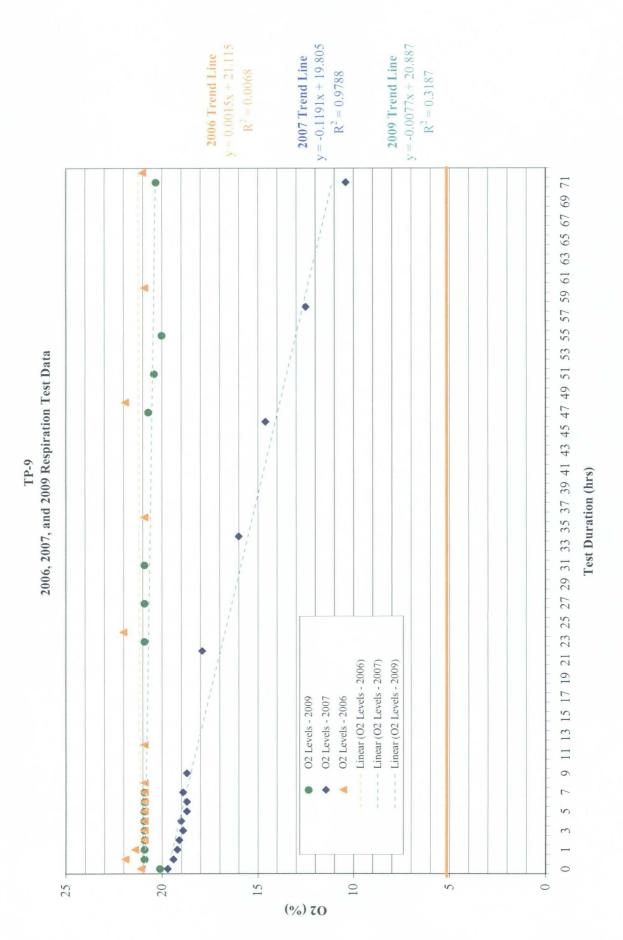
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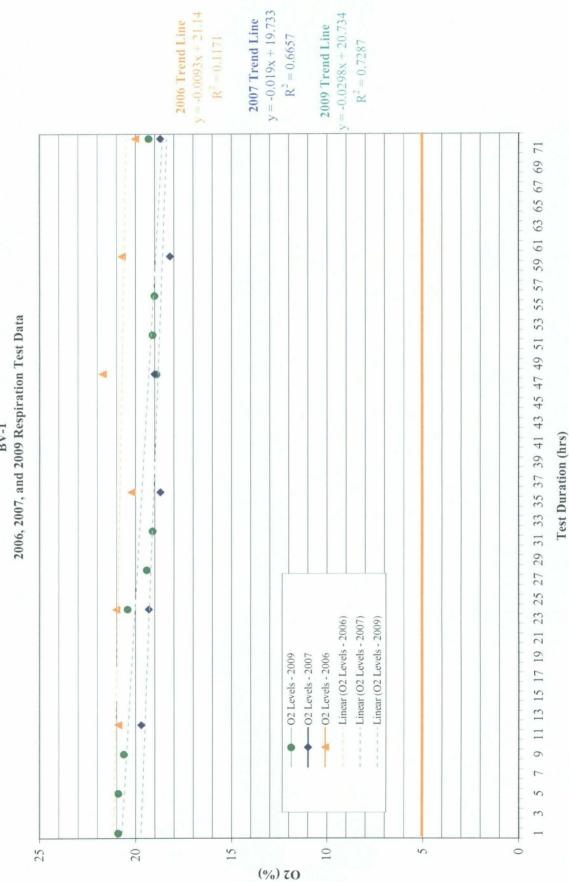


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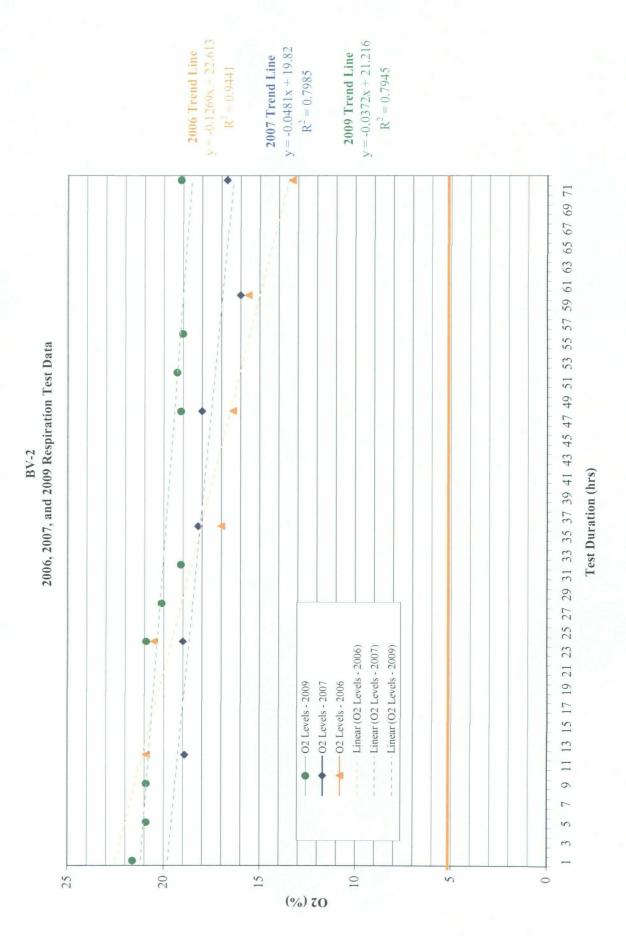


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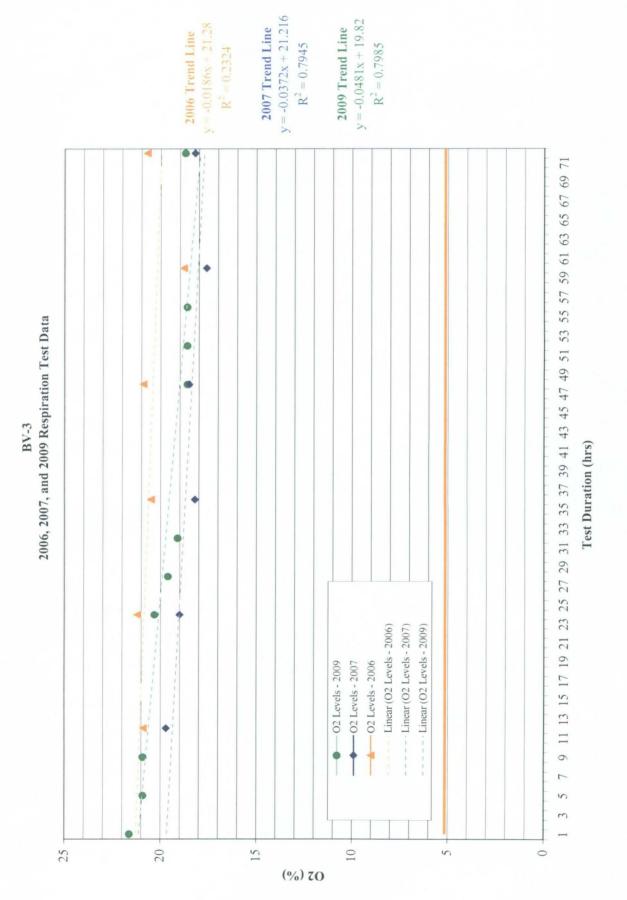


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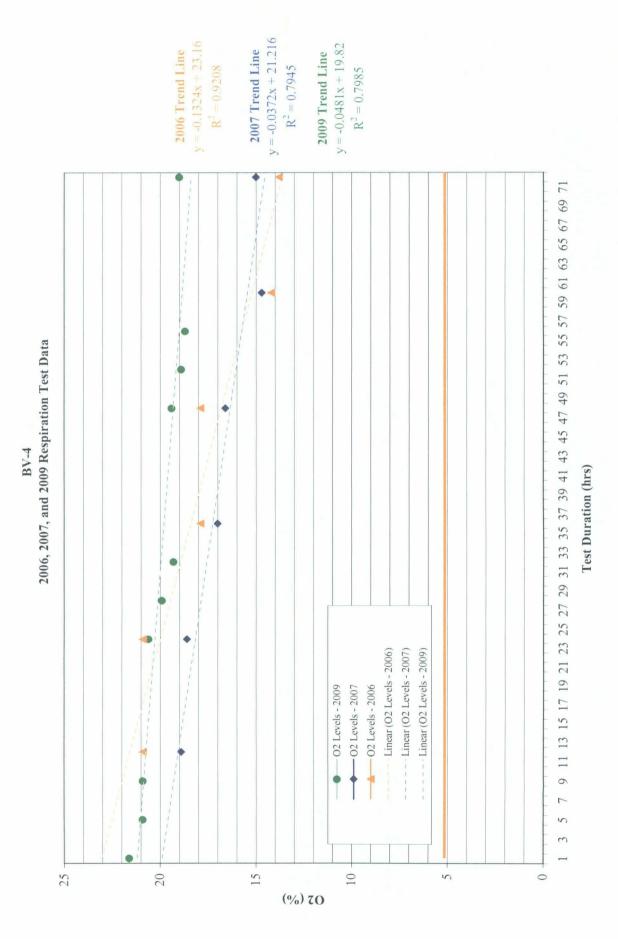


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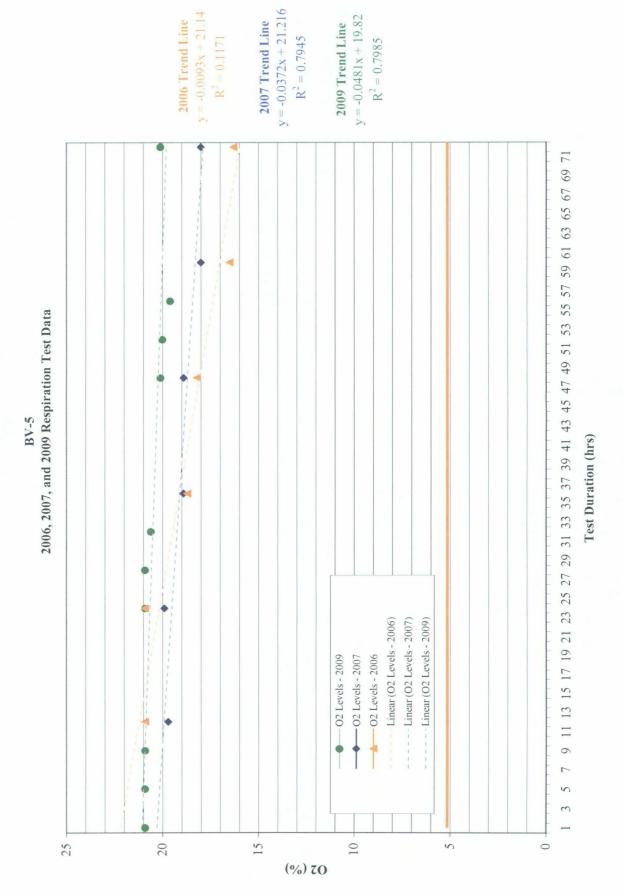
TAB 13



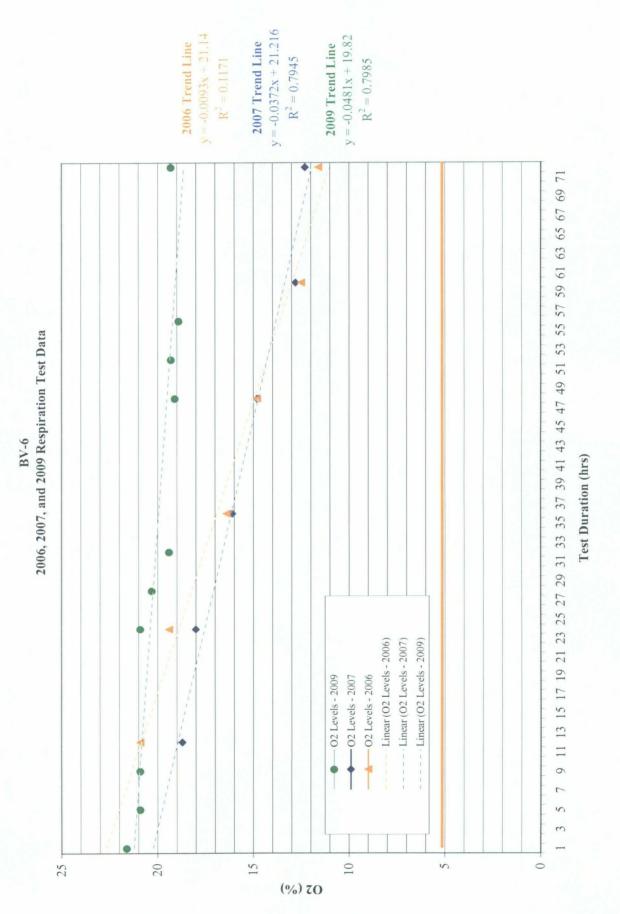
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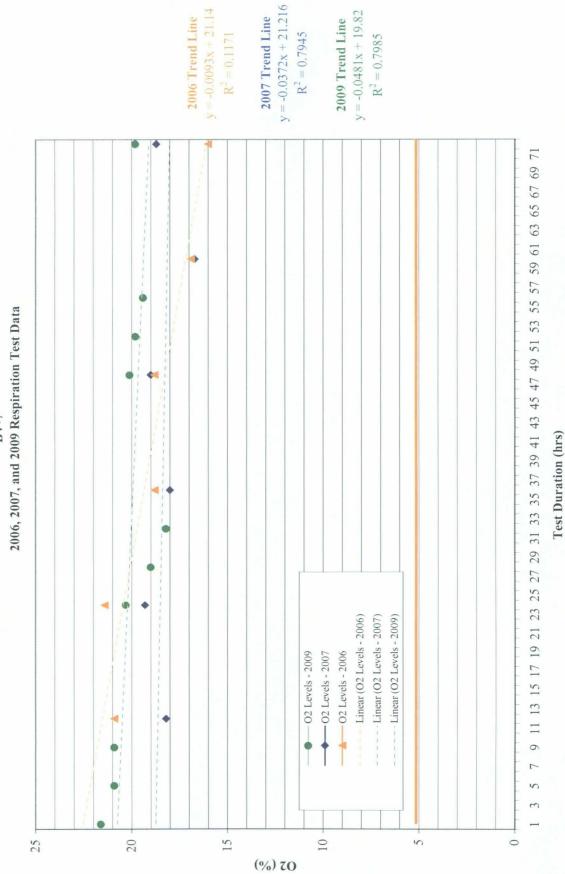


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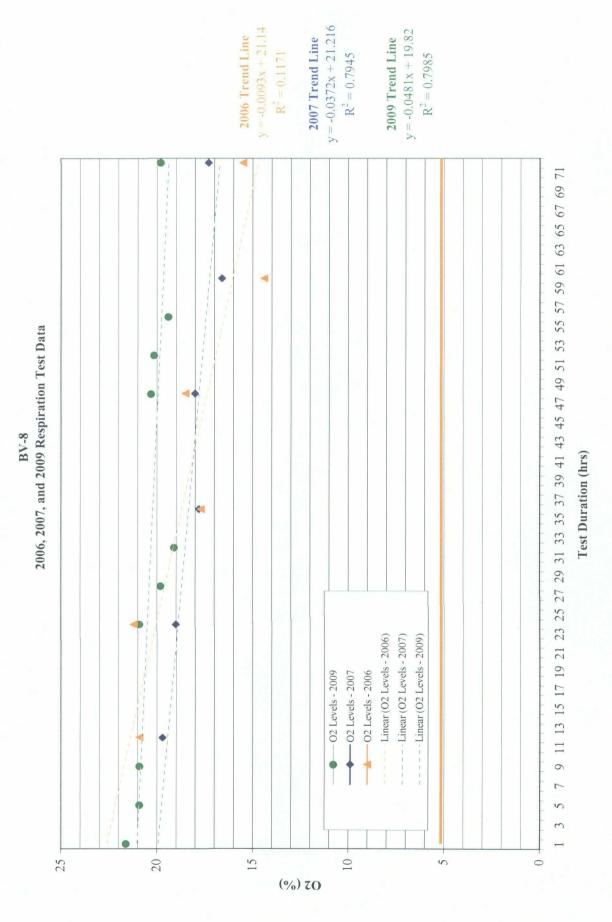


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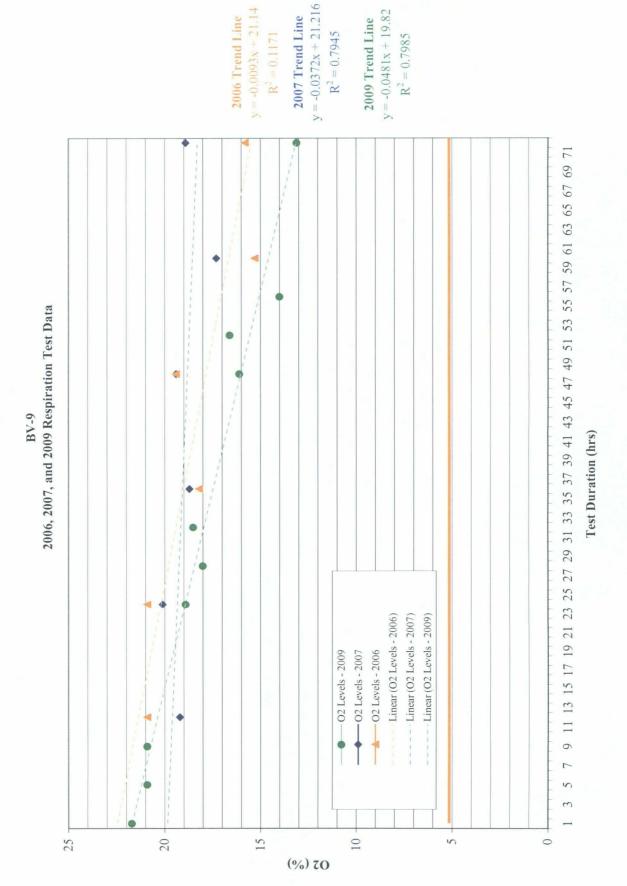




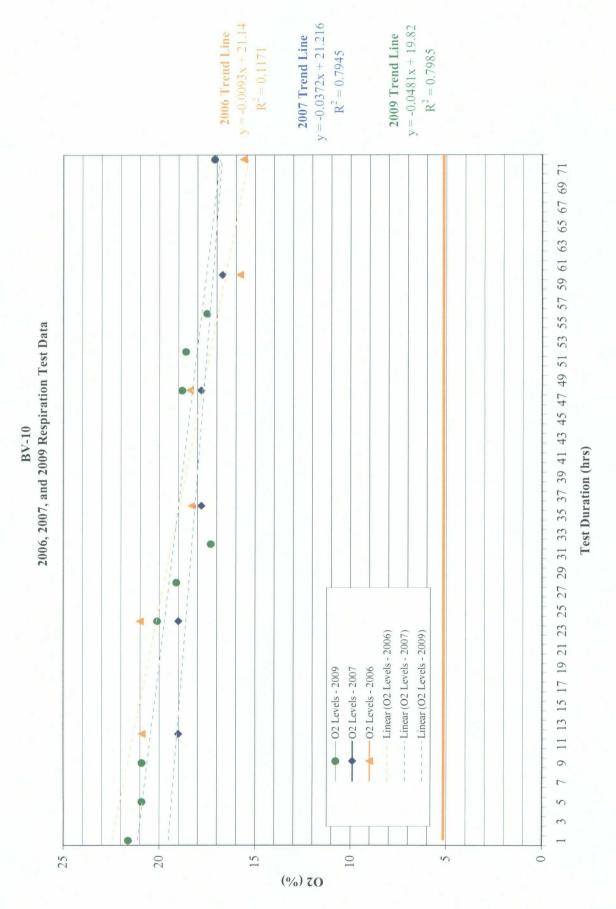
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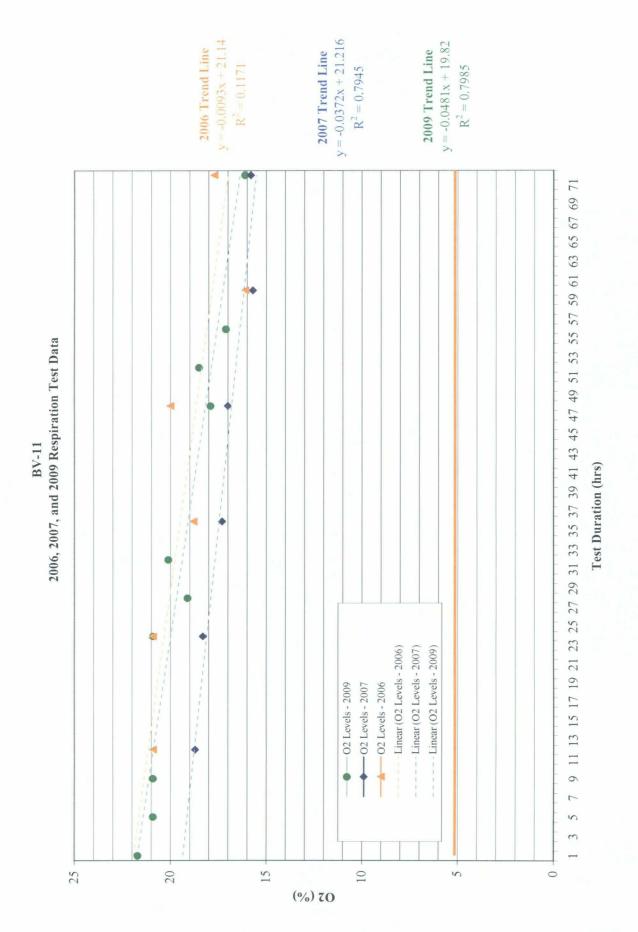
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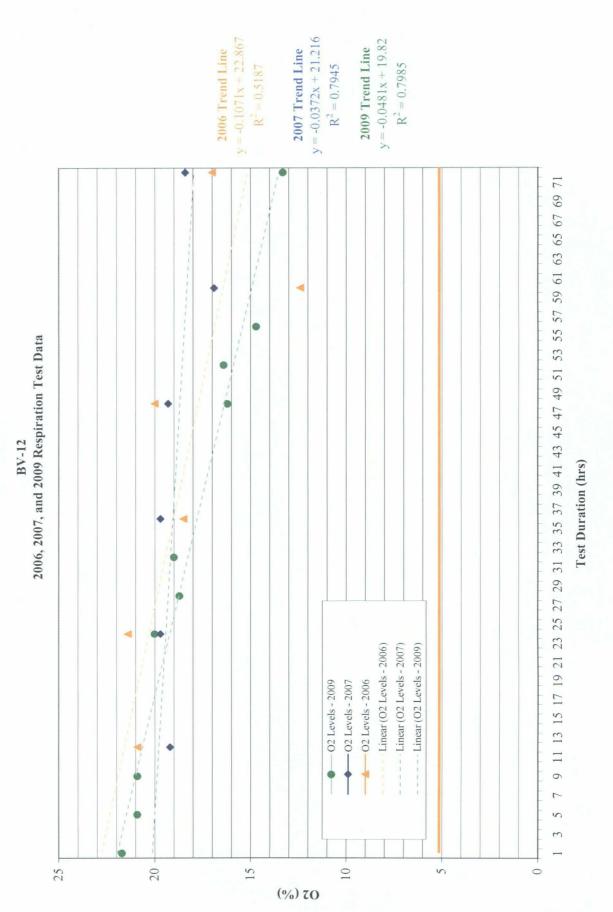
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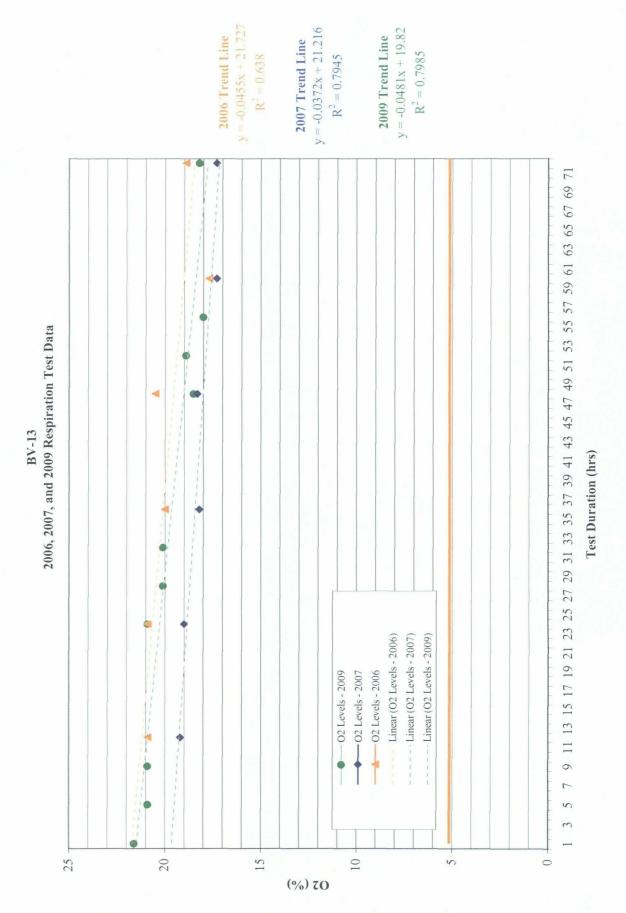
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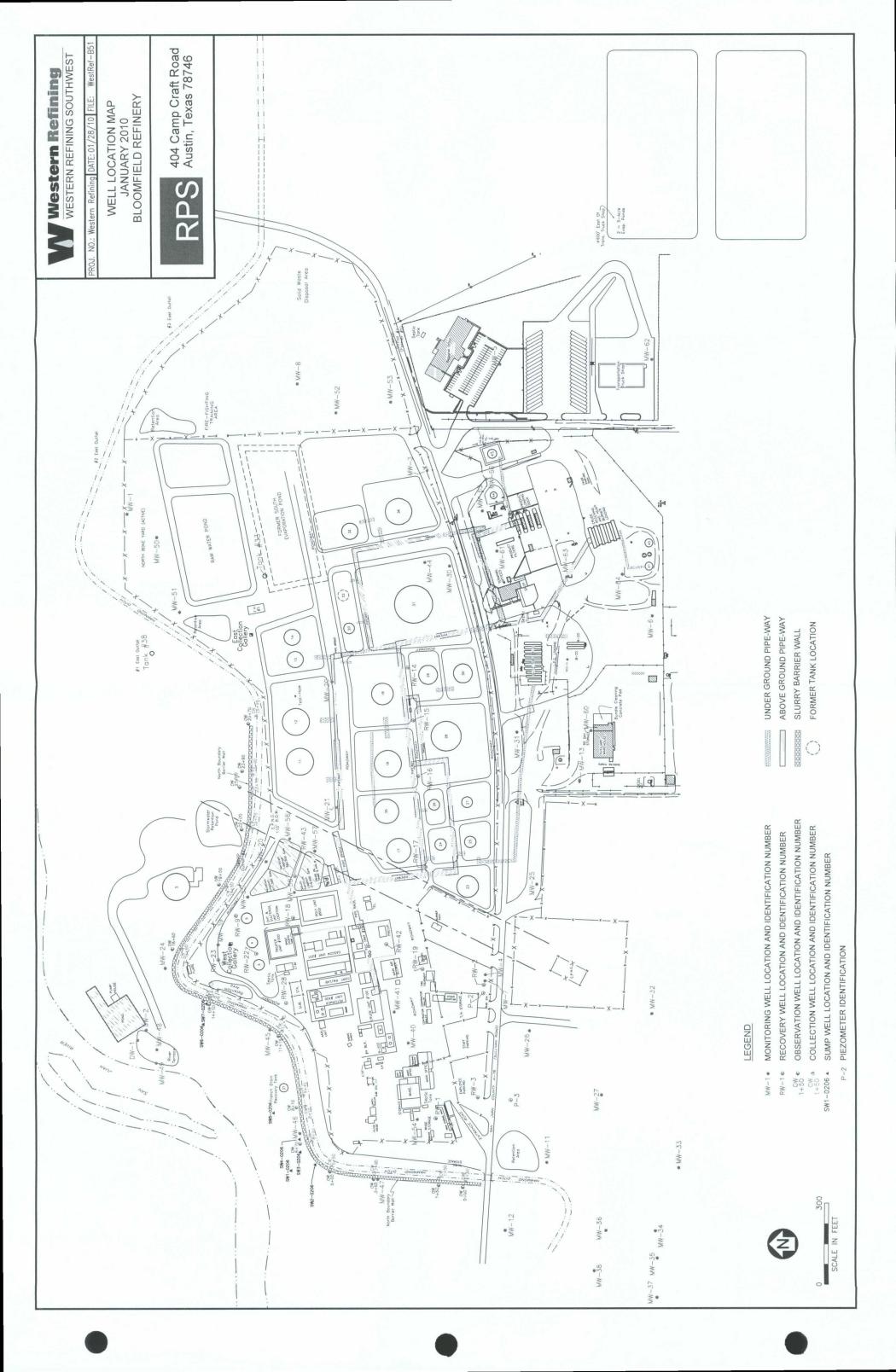


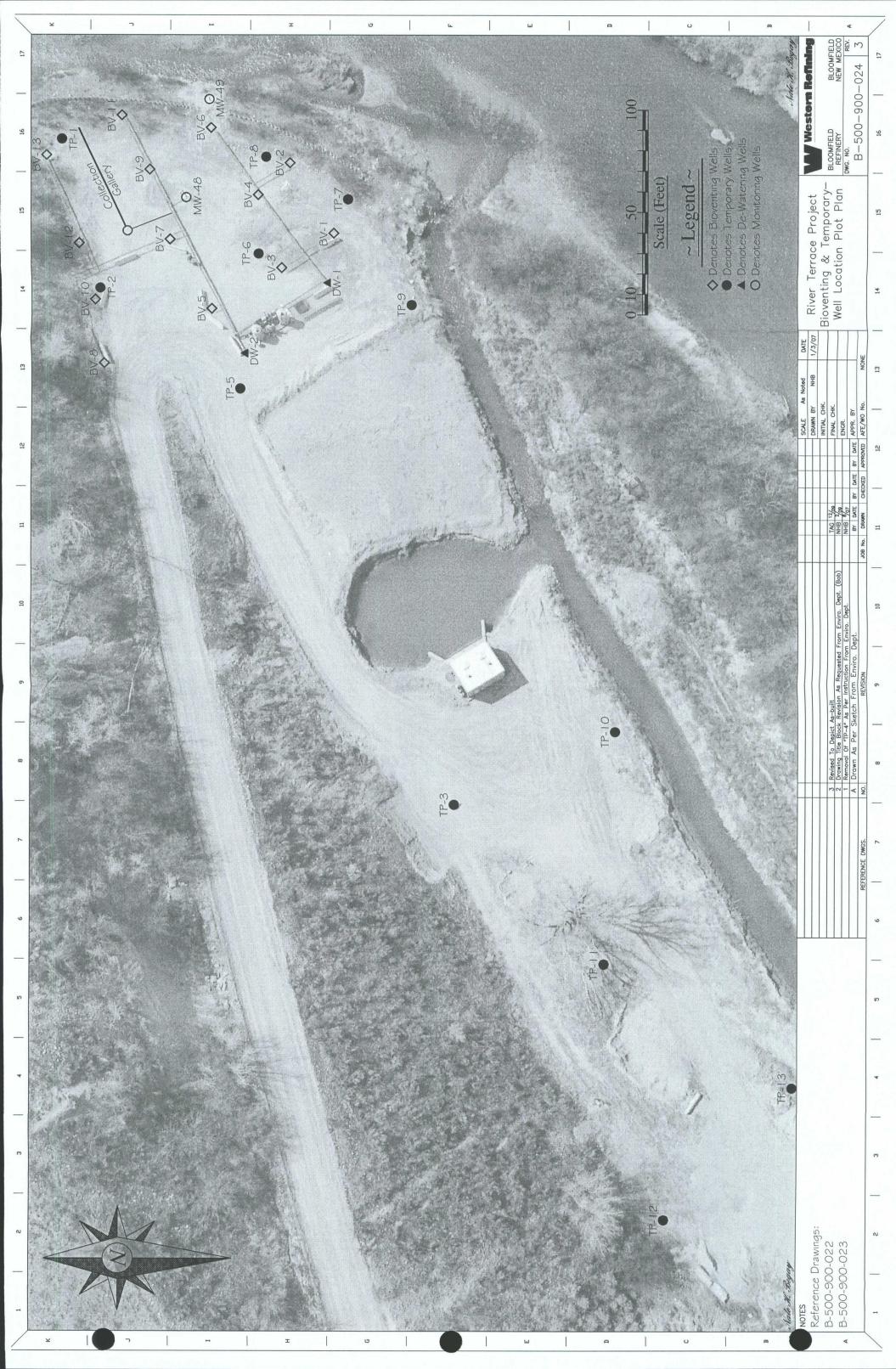
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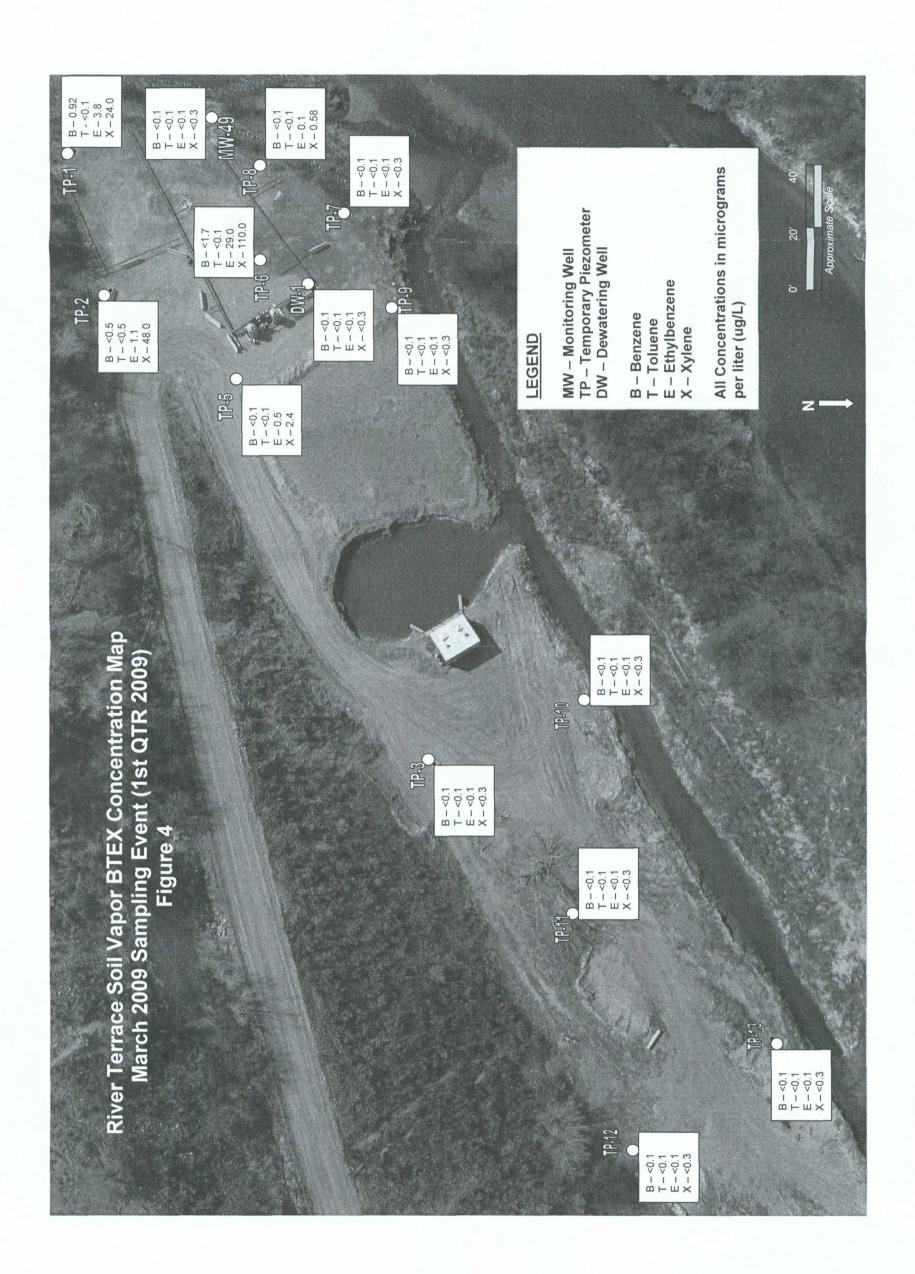
Section 7.0 Maps

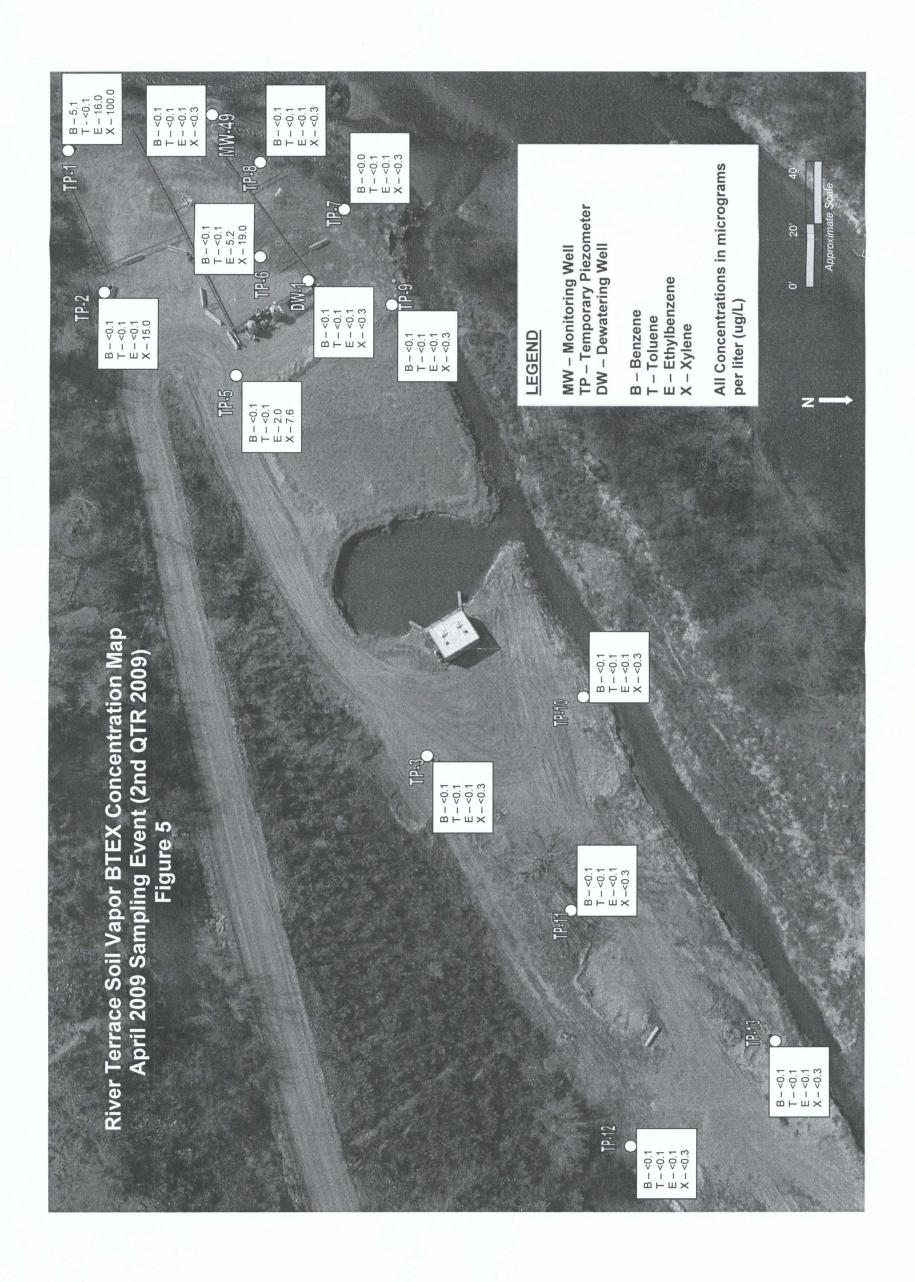
<u>Title</u>	Figure
Vicinity Map	Figure 1
Facility Site Plan	Figure 2
River Terrace Bioventing Project Plot Plan	Figure 3
Soil Vapor 1st QTR BTEX Concentration Map	Figure 4
Soil Vapor 2nd QTR BTEX Concentration Map	Figure 5
Soil Vapor 3rd QTR BTEX Concentration Map	Figure 6
Soil Vapor 4th QTR BTEX Concentration Map	Figure 7
Groundwater 1st QTR BTEX Concentration Map	Figure 8
Groundwater 2nd QTR BTEX Concentration Map	Figure 9
Groundwater 3 rd QTR BTEX Concentration Map	Figure 10
Groundwater 4 th QTR BTEX Concentration Map.	Figure 11

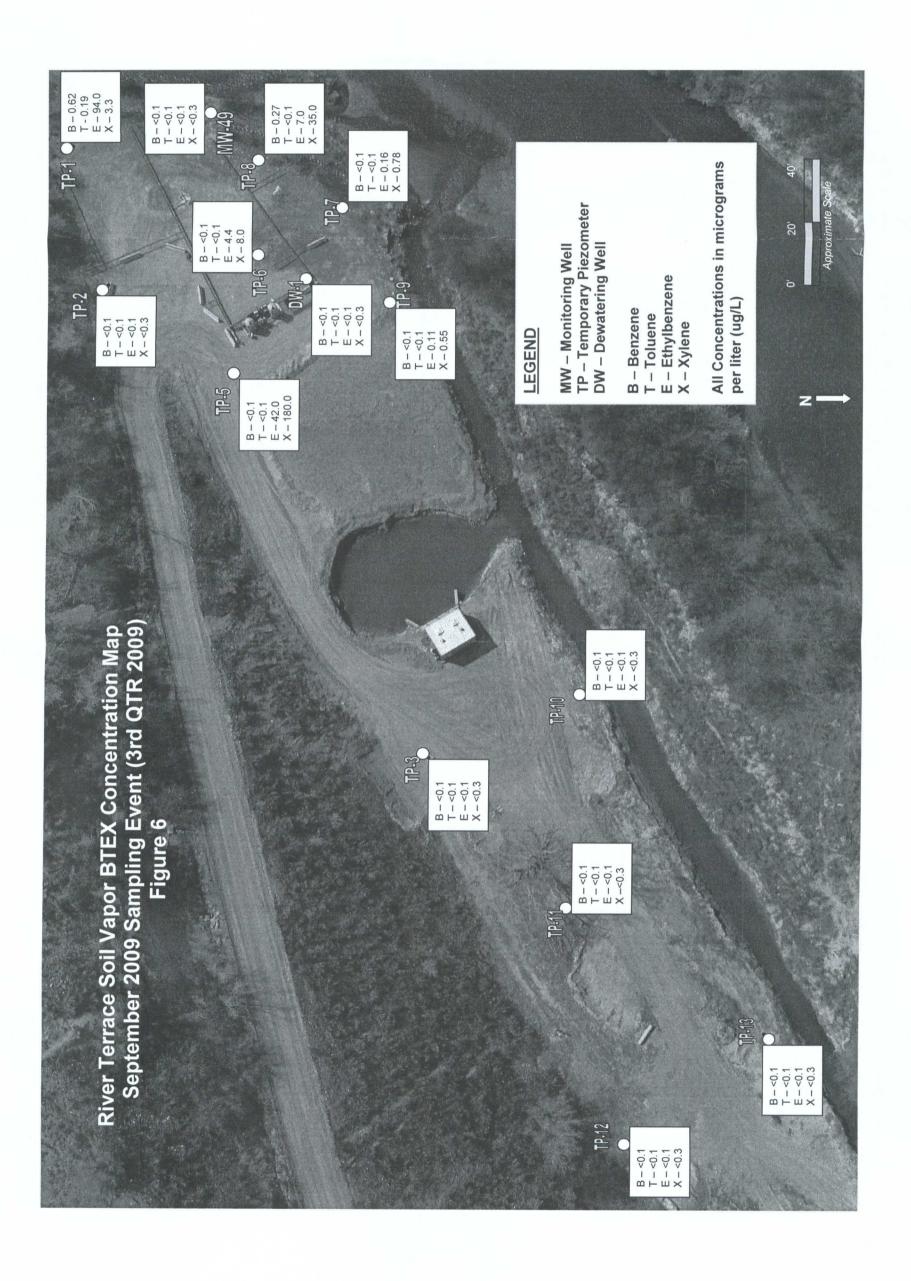


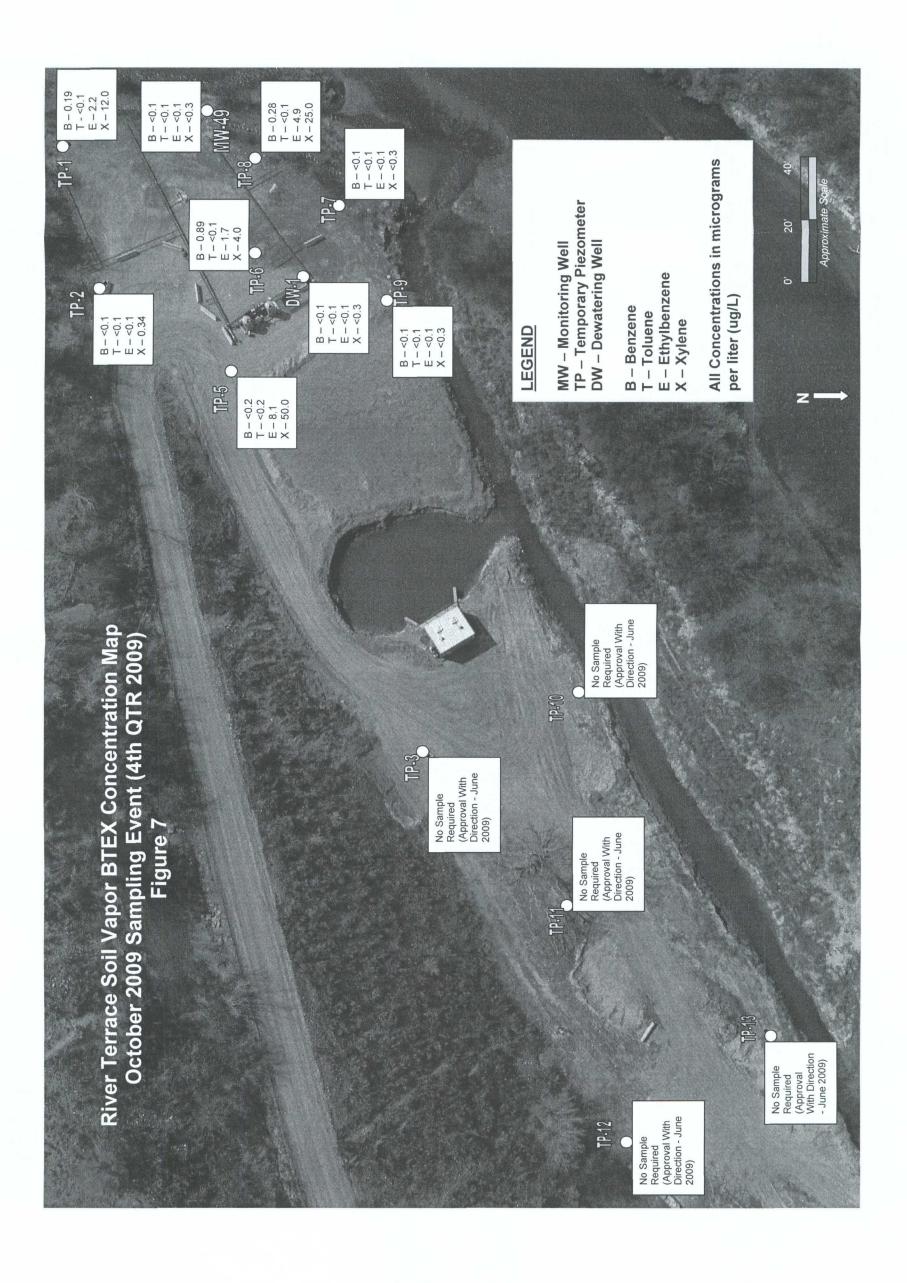


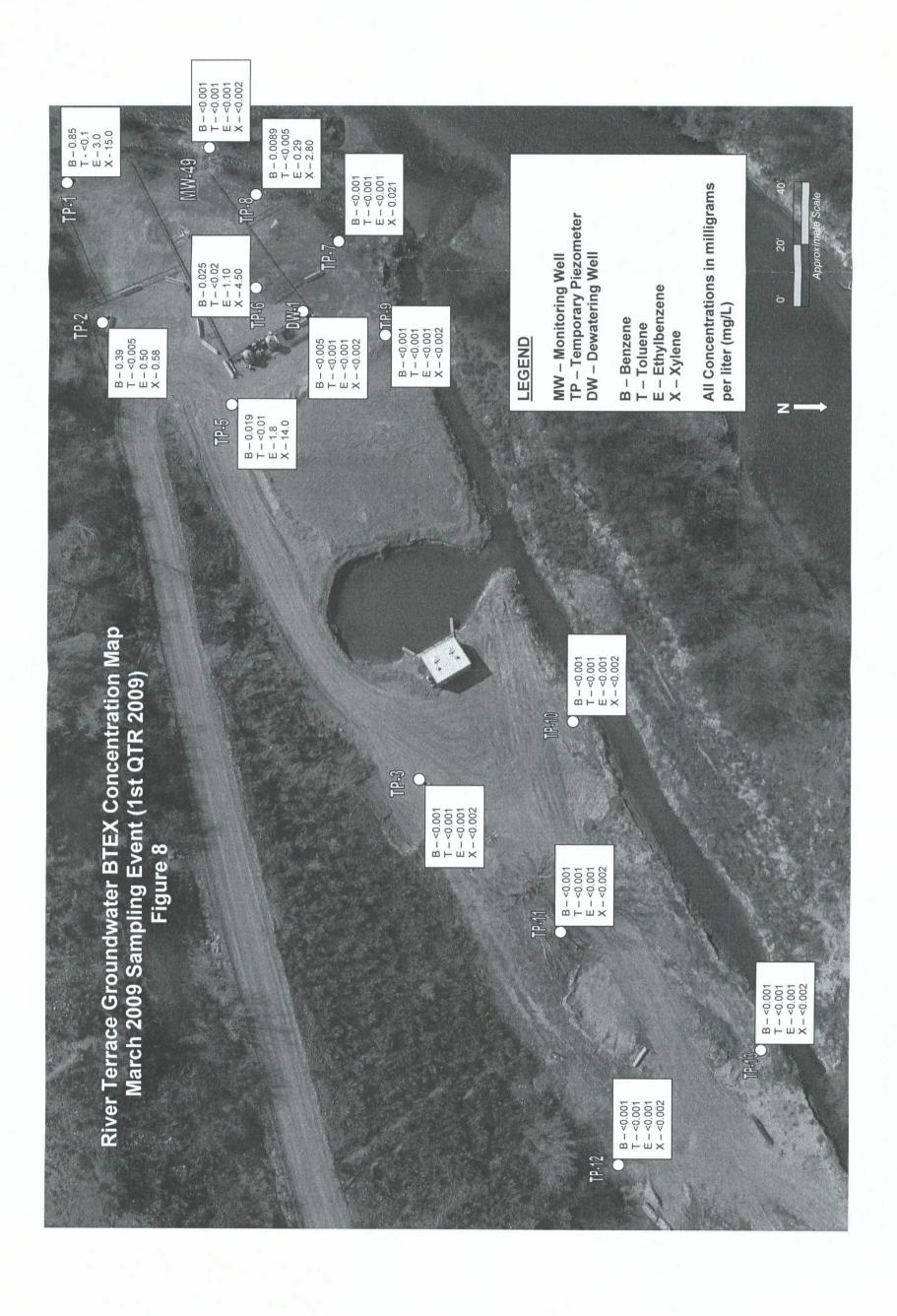


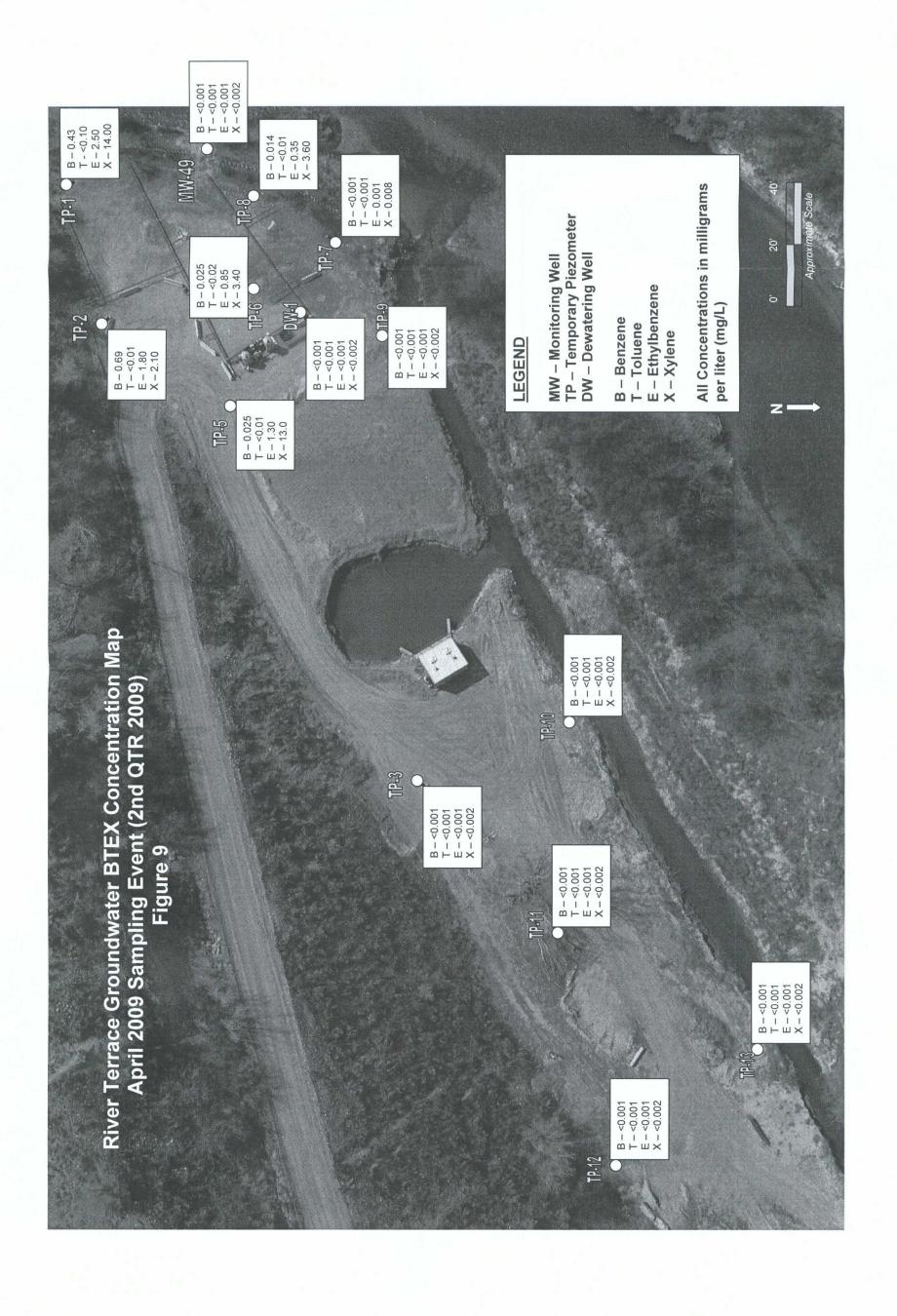


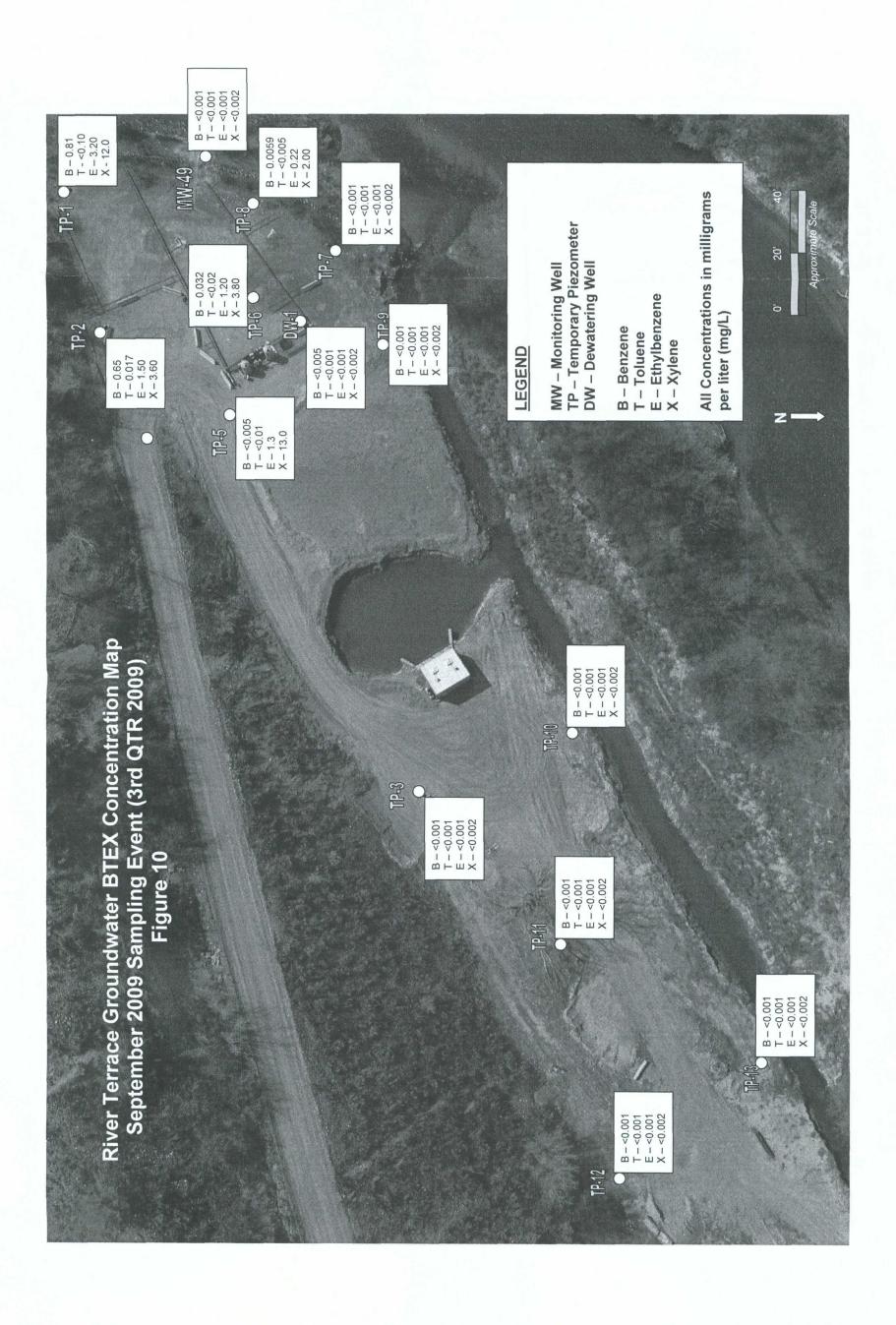


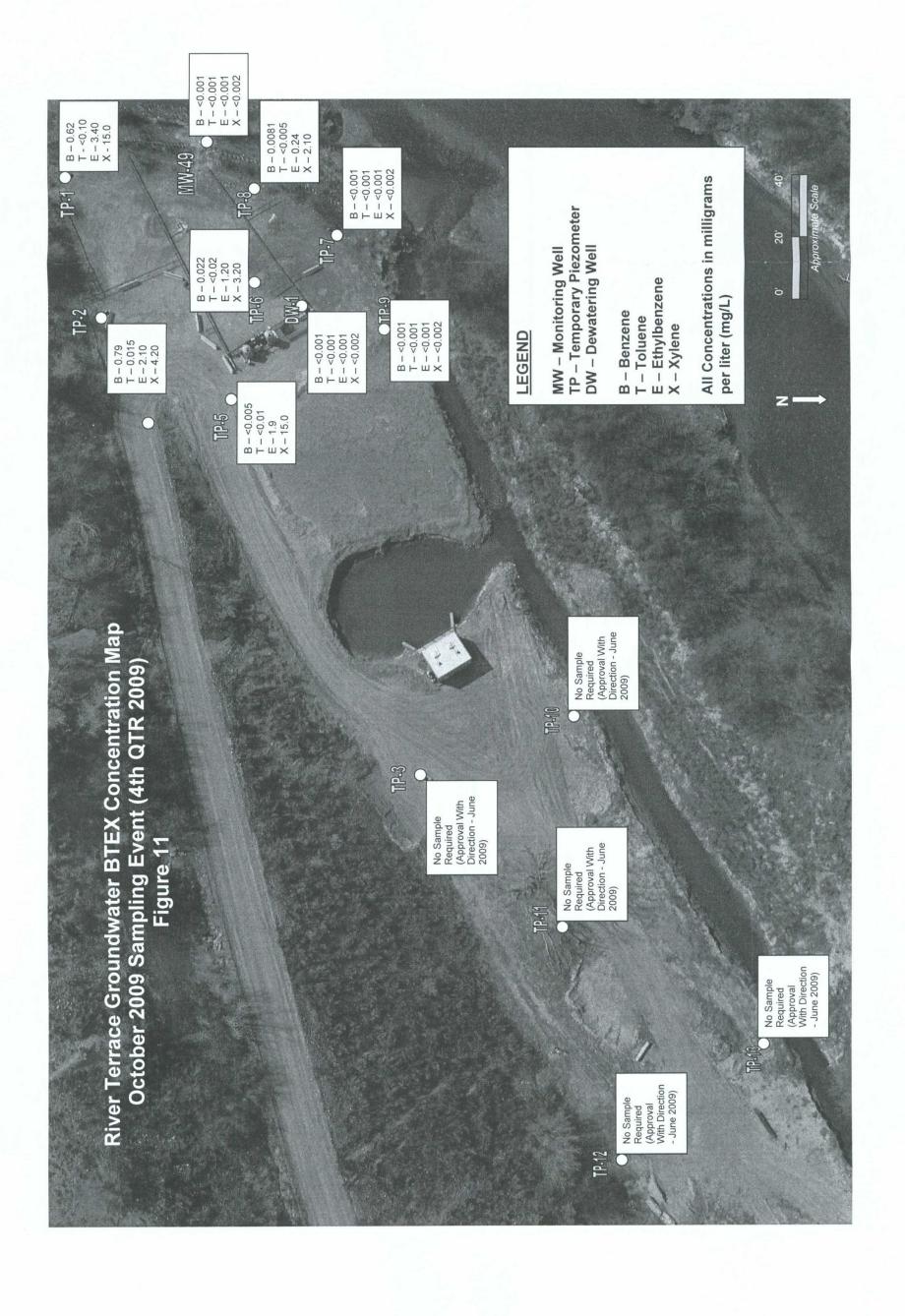












Section 8.0 Summary

1

Summary

Construction of the River Terrace Bioventing Project was initiated in August 2005. The system was put on-line in January 2006. On-going sampling at the River Terrace is conducted in accordance with the approved Bioventing System Monitoring Plan, dated October 28, 2006, and in accordance with an NMED comment letter (Direction to Modify Future Monitoring as reported in the River Terrace Voluntary Corrective Measures Bioventing System Annual Report January 2006 through December 2006) dated June 13, 2007. These revisions were implemented during the second quarter sampling event of 2007 and continue to be utilized. Additional revisions to the monitoring plan were stated in the NMED letter dated June 16, 2009 (Approval with Direction River Terrace Voluntary Corrective Measures Bioventing System Annual Report January 2008 through December 2008). NMED agreed to modify the sampling at the eastern portion of the River Terrace (TP #3, TP #10, TP #11, TP #12, and TP #13) to semi-annual sampling during the high and low water flows of the San Juan River. These modifications were employed during the fourth quarter sampling event of 2009 and will continue in future sampling events.

Western Refining indefinitely suspended refining operations at the Bloomfield Refinery on November 23, 2009. The crude unloading and product loading racks, storage tanks and other supporting equipment remain in operation. The River Terrace Bioventing System will continue to operate.

Data Collection

First quarter groundwater elevation measurements and groundwater samples were collected from each of the TP wells, DW #1, and MW #49 during the week of March 2, 2009. TP-7 was sampled after a 24 hour recharge time. Groundwater samples were analyzed for BTEX and MTBE (EPA Method 8021B), GRO and DRO (EPA Method 8015B), and Total Lead (EPA Method 6010). DW #1 was also analyzed for Mercury (EPA Method 7470). Field measurements included temperature, pH, conductivity, DO, and ORP. The second quarter monitoring event (the week of April 20, 2009) included the same collection sites and the same methods and parameters with the addition of annual analysis of chromium and barium (EPA Method 6010). Third quarter monitoring was conducted during the week of September 10, 2009 which included the same collection sites, and the same methods and parameters as the first quarter event.

Revisions to the monitoring plan were implemented during the fourth quarter monitoring event which was conducted during the week of October 5, 2009. Depth to groundwater elevation measurements were collected from each of the TP wells, DW #1, and MW #49. Groundwater samples were not collected from the TPs on the eastern portion of the River Terrace (TP #3, TP #10, TP #11, TP #12, and TP #13). The wells on the western portion of the River Terrace (TP #1, TP #2, TP #5, TP #6, TP, #7, TP #8, TP #9, DW #1, and MW #49) were sampled and analyzed for BTEX and MTBE (EPA Method 8021B), GRO and

DRO (EPA Method 8015B), and lead analysis (EPA Method 6010B). Field measurements included temperature, pH, conductivity, DO, and ORP. TP-7 was sampled after a 24 hour recharge time.

First quarter soil gas samples were collected from each of the TP wells, DW #1, and MW #49 during the week of March 2, 2009. Soil gas analysis included BTEX (8021B) and GRO (8015B). Field measurements of vapor-phase organics (using a PID) and oxygen and carbon dioxide concentrations (using a multi-gas meter) were taken. The second and third quarter monitoring events utilized the same collection sites, and the same methods and parameters. Second quarter samples were collected the week of April 20, 2009. Third quarter monitoring was conducted during the week of September 10, 2009.

Fourth quarter monitoring was accomplished during the week of October 5, 2009. Soil gas samples were not collected from the TPs on the eastern portion of the River Terrace (TP #3, TP #10, TP #11, TP #12, and TP #13) due to approved changes in the monitoring plan. Soil gas samples were collected from the wells on the western portion of the River Terrace (TP #1, TP #2, TP #5, TP #6, TP, #7, TP #8, TP #9, DW #1, and MW #48) and analyzed for BTEX (8021B) and GRO (8015B). Field measurements of vapor-phase organics (using a PID) and oxygen and carbon dioxide concentrations (using a multi-gas meter) were taken.

GAC filter influent samples (GAC Inf) and effluent samples collected downstream of the lag GAC filter (GAC 1 Eff – V-612) were collected quarterly. Effluent samples from the lead GAC filter (GAC 2 Eff – V-611) were obtained every month. Samples were analyzed for BTEX by EPA Method 8021B, GRO and DRO by EPA Method 8015B.

An in-situ respiration test was performed October 26, 2009 through October 29, 2009. Soil gas samples from TP #1, #2, #5, #6, and #9 were collected and assessed using portable field instruments for vapor-phase organics (using a PID meter), and oxygen and carbon dioxide concentrations (using a multi-gas meter). Field measurements of oxygen concentrations (using a multi-gas meter) were collected from all the BV wells.

Dewatering

In order to improve and optimize the dewatering system, a collection gallery, pump, and piping system were installed in the southwest portion of the River Terrace. This system came online on October 13, 2009. The pumps at MW #48 and DW #1 continue to operate.

Comparison of the depth-to-groundwater measurements during the three In-situ respiration testing periods show that the groundwater surface elevation during the 2009 test period was approximately one foot lower than it was during the 2007 test period. The most significant groundwater elevation change was detected at TP-1, located within the vicinity of the collection gallery. This data

supports the notion that the collection gallery has enhanced the dewatering effects within the biovent area.

GAC Analysis

Break through in the GAC did not occur in 2009. Installation of the collection gallery should optimize the dewatering system and enhance remediation in the southwest portion of the River Terrace.

Refinery personnel will continue to analyze GAC 2 EFF (V-611) for BTEX, GRO, and DRO on a monthly basis. GAC INF and GAC 1 EFF (V-612) will be analyzed quarterly for BTEX, GRO, and DRO.

Analysis and Conclusions

Since August 2005, BTEX concentrations in groundwater show a decreasing trend over time at wells within the western portion of the River Terrace (TP-#1, #2, #5, #6 and #8). BTEX concentration vs time graphs located in Section 6.0 demonstrate this decreasing trend over the last four years. Analytical results of the groundwater monitoring continue to indicate that the contaminants of concern are primarily benzene, ethylbenzene, xylene, and total lead for these wells.

Per NMED letter Approval with Direction 2008 Groundwater Remediation and Monitoring Annual Report (Comment 9) dated September 1, 2009 all future DRO analysis will be analyzed at a lower detection level of 0.2mg/L by EPA Method 8015B

Analytical results of samples collected from the wells on the eastern portion of the River Terrace (TP-3, 10, 11, 12, and 13) continue to be below method detection limits. BTEX concentration vs time graphs in Section 5.0 illustrate that non-detect results have consistently occurred in the eastern portion of the River Terrace since 2006. BTEX results are still below WQCC Standards at wells located on the eastern most side of the bioventing area (TP #7, TP #9, DW #1).

Annual analysis of barium and chromium total metals has occurred since second quarter 2007 for all River Terrace wells. The detected concentrations of barium and chromium have repeatedly been below WQCC Standards of 1.00 mg/L and 0.05 mg/L, respectively.

Mercury was detected at DW-1 during the February 2007 sampling event (0.002 mg/L) and again during the April 2009 sampling event (0.0008 mg/L). Due to laboratory error, mercury was not analyzed during the 4th quarter of 2008 and again during the 3rd quarter of 2009. Mercury results have been below detection levels for the other eight sampling events.

Since June of 2007, quarterly monitoring of total lead at the River Terrace shows concentrations ranging between 0.3 mg/L to <0.005 mg/L. The highest concentration was detected at TP-8 during the October 2007 sampling event.

TP-8 is located on the refinery-side of the river terrace slurry wall, and therefore is unlikely to impact the San Juan River.

Initial oxygen readings for all three in-situ tests show that the bioventing system continues to be successful in providing sufficient oxygen to sustain bioremedial activity. The average biodegradation rate calculated at each designated TP well remains above 1 mg/kg-day which reflects positive indications of bioremedial activity. A review of the field data collected during the 2006, 2007, and 2009 insitu respiration tests indicate that the biodegradation rate has declined since the initial respiration test was conducted in 2006. The lower degradation rates could indicate remedial progress within the River Terrace area due to decreased food source (petroleum impacted soil) causing lower respiration rates.

Quarterly monitoring of the River Terrace will continue though out 2010. An insitu respiration test is tentatively scheduled for June 2010.

Section 9.0 Field Methods

Field Methods

Soil Gas Sampling

Sampling Procedure

All water/product levels are determined to an accuracy of 0.01 foot using a Geotech Interface Meter. Injection pressure and injection flow rates are collected from all bioventing wells in which air is being injected. Soil gas samples are taken before groundwater purging and sampling.

Each well is equipped with an air-tight well cap for sample extraction through a sample port at the top of the well casing. Each well has dedicated flexible Teflon Food Grade tubing which extends through both sides of the sample port with one side continuing down into the well casing to approximately 1 foot above the water table. The other end (topside) protrudes from the cap and is available as a connector.

Before purging, pressure is measured by attaching a hand-held Magnahelic Pressure Gauge to the topside tubing.

A portable vacuum pump is used for purging and sample collection. The topside tubing is connected to the suction of the vacuum pump and three purge volumes are withdrawn from the well prior to sample collection. After sufficient purging, a Tedlar bag is attached to the tubing at the discharge end of the pump for sample collection. All samples are properly labeled and placed in a cooler for delivery to the off-site laboratory or for field measurements of vapor-phase organics

Well Purging Technique

A vacuum pump is used to remove stagnant air from the soil gas sampling assembly. Approximately three well volumes are purged from the well before sampling. Purged volumes are determined by using the following equation: Conversion Factor X Depth to Water X 28L/ft3 X Three

The conversion factor is determined by the diameter of the well casing.

Casing	Conversion Factor
6"	0.196L/ft
4"	0.0873L/ft
2"	0.0.0218L/ft
1"	0.0.005545L/ft

Soil Gas Sampling and Sample Handling Procedure

Equipment and supplies needed for collecting representative soil gas samples include:

- Interface Probe
- Vacuum Pump
- 1 Liter Tedlar Bags
- PID Meter
- RKI Eagle Meter
- Cooler to store Tedlar Bags

- Sharpie Permanent Marker
- Field Paperwork/Logsheet
- Trash container (plastic garbage bag)

Tedlar bags and tubing dedicated for each well are used for field measurements. New Tedlar bags are used for BTEX and GRO collection and analysis. After sufficient purging, samples are collected using the vacuum pump. Field measurements of vapor-phase organics, oxygen, and carbon dioxide concentrations are recorded using portable field instruments. BTEX and GRO samples are labeled immediately with location, date, time, analysis, and sampler and then put in a trash bag and placed in a cooler. The field logsheet is reviewed to verify all entries. Samples are then shipped to the laboratory. To prevent cross-contamination, procedures include dedicated tubing for each of the wells sampled as well as a five minute purge time of the vacuum pump in ambient air.

Instrument Calibration

The RKI Eagle is a portable gas detection system with sensors for oxygen, carbon dioxide, and methane. Calibration of the instrument is conducted at the beginning of each day of sampling.

The meter is turned on and allowed to warm up. Fill the dedicated Tedlar bags with known calibration gas. One bag is used for the carbon dioxide calibration and the other bag contains the oxygen and methane calibration gasses. Press and hold the AIR/▲ button until a tone sounds. The Eagle automatically sets the toxics circuits to zero and the oxygen circuit to 20.9%.

Press and hold the SHIFT /▼ button, then press the DISP/ADJ button. The calibration menu is displayed. Use the AIR / ▲ and SHIFT /▼ buttons to place the prompt next to the SINGLE CALIBRATION menu option. Press the POWER/ENTER button to display the Single Calibration menu. Use the AIR / ▲ or SHIFT /▼ button to place the prompt next to the channel to calibrate. Press the POWER/ENTER button. Connect the tubing from the Tedlar bag to the Eagle's probe. If necessary, use the AIR / ▲ (increase) and SHIFT /▼ (decrease) buttons to adjust the reading to match the concentration listed on the calibration cylinder. Press the POWER/ENTER button to set the span value. Repeat the steps for any other channels you want to calibrate.

The MiniRae 2000 Portable VOC Monitor (PID) is calibrated at the beginning of each day of sampling. Turn on the monitor and wait for the **Ready** message display. Press and hold both (N/-) and (MODE) keys for three seconds to enter programming mode. The first menu item "Calibrate/select Gas?" will be displayed. Press (N/-) to scroll to Fresh Air Cal? And press (Y/-) to select that menu item. Clean ambient air can be used for the "fresh air" calibration. Press (Y/-) to begin the zeroing process.

After zeroing is complete, press (N/-) to scroll to the next menu item. When **Span Cal?** is displayed press (Y/-) to select that menu item. Connect the monitor to a known calibration gas cylinder (isobutylene) after the display shows **Apply gas**

now! The monitor will then perform the calibration. When calibration is completed, turn off the flow of gas, disconnect the cylinder, and exit the programming mode by pressing the **(MODE)** key once.

Groundwater Sampling

Groundwater Elevation

All water/product levels are determined to an accuracy of 0.01 foot using a Geotech Interface Meter. The technician records separate phase hydrocarbon, depth to water, and total well depth using this probe.

Water Quality/Groundwater Sampling

Prior to purging, a YSI 550A Dissolved Oxygen Probe is used to determine dissolved oxygen (DO) levels. Water quality parameters are measured using an Ultrameter 6P by the Myron L Company. Electrical conductance, oxidation-reduction potential (ORP), pH, and temperature are monitored during purging.

Well Purging Technique

At least three well volumes are purged from the well. Purge volumes are determined using the following equation:

Well Depth – Casing Height – Depth to Liquid X Conversion Factor X Three.

The conversion factor is determined by the diameter of the well casing.

Casing	Conversion Factor
6"	1.50 gal/ft
5"	1.02 gal/ft
4"	0.74 gal/ft
3"	0.367 gal/ft
2"	0.163 gal/ft

Well Sampling and Sample Handling Procedure

Equipment and supplies needed for collecting representative groundwater samples include:

- Interface Probe
- Ultrameter 6P
- YSI 550A Dissolved Oxygen Instrument
- Distilled Water
- Disposable Latex Gloves
- Disposable Bailers
- String/Twine
- Cooler with Ice
- Bottle kits with Preservatives (provided by the contract laboratory)
- Glass Filters and Syringes Jar (usually 4 oz.)
- Sharpie Permanent Marker
- Field Paperwork/Log sheet
- Two 5-gallon buckets

- Trash container (plastic garbage bag)
- Ziploc Bags
- Paper towels

Typically disposable bailers are used for purging and sampling. Each bailer holds one liter of liquid. Three well volumes can be calculated by counting the number of times a well is bailed.

All purged water is poured into a 55-gallon drum designated for sampling events.

After sufficient purging, samples are collected with the bailer and poured into the appropriate sample containers. Two people are usually utilized for sampling. Sampling takes place over a bucket to insure that spills are contained

Samples are labeled immediately with location, date, time, analysis, preservative, and sampler. Then they are put in a Ziploc bag and placed in a cooler holding sufficient ice to keep them cool. The field log sheet is reviewed to verify all entries.

Purge and Decontamination Water Disposal

The Ultrameter 6P, YSI 550A DO Probe, and the interface probe are rinsed with distilled water after every well. The rinse procedure takes place over a bucket to insure that spills are contained.

All rinse and purge water is contained and then disposed of through the refinery wastewater system.

Instrument Calibration

Calibration of the YSI 550A Dissolved Oxygen Instrument occurs at the beginning of each day of sampling. The probe is powered on and allowed to stabilize, which usually takes 15 minutes. Enter the calibration menu. The LCD will prompt you to enter the local altitude in hundreds of feet. When the proper altitude appears on the LCD, press the **ENTER** key.

The LCD will then prompt you to enter the salinity of the water you are about to analyze. After entering the correct salinity, the instrument will return to normal operation.

The Ultrameter 6P instrument calibration occurs at the beginning of each day of sampling. For Conductivity and TDS calibration, the cell is rinsed three times with a 3000 umhos/cm NaCl Standard. The cell cup is refilled with the standard. Either the COND or the TDS button is pressed and then the CAL button is pushed. Press the up or down arrow until the display agrees with the standard. The CAL button is pressed to accept the value.

The Ultrameter 6P has an electronic ORP calibration which is automatically calibrated with the 7 pH. The pH sensor well is rinsed three times with 7.0 buffer solution and then refilled again with that buffer. The **pH** button is pressed then the **CAL** button. The up or down arrow is adjusted until the display agrees with

the buffer value. The **CAL** button is pushed to accept that value. Repeat the calibration steps using an acid buffer solution and then again with a base buffer solution.

Section 10.0 Chemical Analytical Program

Hall Environmental Analysis Laboratory

QUALITY ASSURANCE PLAN

Effective Date: January 31st 2009

Revision 9.0

www.hallenvironmental.com

Control Number: 0000082

Approved By:

Nancy McDuffie

Laboratory Manager

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Full list of approved analytes, methods, analytical techniques and fields of testing

Reserved, available upon request

Appendix D ADHS Accreditation

Full list of approved analytes, methods, analytical techniques and fields of testing

Reserved, available upon request

Appendix E NMED-DWB Certification

Reserved, available upon request

Appendix F Terms and Definitions

Reserved, available upon request

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Reserved, available upon request

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Analyst Ethics and Data Integrity Agreement

IDOC Certificate **ADOCP Certificate** Training Forms

Reserved, available upon request

3.0 Introduction

Purpose of Document

The purpose of this Quality Assurance Plan is to formally document the quality assurance policies and procedures of Hall Environmental Analysis Laboratory, Inc. (HEAL), for the benefit of its employees, clients, and accrediting organizations. HEAL continually implements all aspects of this plan as an essential and integral part of laboratory operations in order to ensure that high quality data is produced in an efficient and effective manner.

Objectives

The objective of HEAL is to achieve and maintain excellence in environmental testing. This is accomplished by developing, incorporating and documenting the procedures and policies specified by each of our accrediting authorities and outlined in this plan. A laboratory staff that is analytically competent, well qualified, and highly trained carries out these activities. An experienced management team, knowledgeable in their area of expertise, monitors them. Finally, a comprehensive quality assurance program governs laboratory practices and ensures that the analytical results are valid, defensible, reproducible, reconstructable and of the highest quality.

HEAL establishes and thoroughly documents its activities to ensure that all data generated and processed will be scientifically valid and of known and documented quality. Routine laboratory activities are detailed in method specific standard operating procedures (SOP). All data reported meets the applicable requirements for the specific method that is referenced, ORELAP, TCEQ, EPA, client specific requirements and/or State Bureaus. In the event that these requirements are ever in contention with each other, it is HEAL's policy to always follow the most prudent requirement available. For specific method requirements refer to HEAL's Standard Operating Procedures (SOP's), EPA methods, Standard Methods 20th edition, ASTM methods or state specific methods.

HEAL management ensures that this document is correct in terms of required accuracy, data reproducibility, and that the procedures contain proper quality control measures. HEAL management additionally ensures that all equipment is reliable, well maintained and appropriately calibrated. The procedures and practices of the laboratory are geared towards not only strictly following our regulatory requirements but also allowing the flexibility to conform to client specific specifications. Meticulous records are maintained for all samples and their respective analyses so that results are well documented and defensible in a court of law.

The HEAL Quality Assurance/Quality Control Officer (QA/QCO) and upper management are responsible for supervising and administering this quality assurance program, and ensuring each individual is responsible for its proper implementation. All HEAL management remains committed to the encouragement of excellence in analytical testing and will continue to provide the necessary resources and environment conducive to its achievement.

Policies

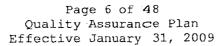
Understanding that quality cannot be mandated, it is the policy of this laboratory to provide an environment that encourages all staff members to take pride in the quality of their work. In addition to furnishing proper equipment and supplies, HEAL stresses the importance of continued training and professional development. Further, HEAL recognizes the time required for data interpretation. Therefore, no analyst should feel pressure to sacrifice data quality for data quantity. Each staff member must perform with the highest level of integrity and professional competence, always being alert to problems that could compromise the quality of their technical work.

Management and senior personnel supervise analysts closely in all operations. Under no circumstance is the willful act or fraudulent manipulation of analytical data condoned. Such acts must be reported immediately to HEAL management. Reported acts will be assessed on an individual basis and resulting actions could result in dismissal. The laboratory staff is encouraged to speak with lab managers or senior management if they feel that there are any undo commercial, financial, or other pressures, which might adversely affect the quality of their work; or in the event that they suspect that data quality has been compromised in any way. HEALs Quality Assurance/Quality Control Officer is available if any analyst and/or manager wishes to anonymously report any suspected or known breaches in data integrity.

All proprietary rights and client information at HEAL (including national security concerns) are considered confidential. No information will be given out without the express verbal or written permission of the client. All reports generated will be held in the strictest of confidence.

This is a controlled document. Each copy is assigned a unique tracking number and when released to a client or accrediting agency the QA/QCO keeps the tracking number on file. This document is reviewed on an annual basis to ensure that it is valid and representative of current practices at HEAL.





4.0 Organization and Responsibility

Company

HEAL is accredited in accordance with the 2003 NELAC standard (see NELAC accredited analysis list in the appendix), through ORELAP and TCEQ and by the Arizona Department of Health Services. Additionally, HEAL is qualified as defined under the State of New Mexico Water Quality Control Commission regulations and the New Mexico State Drinking Water Bureau. HEAL is a locally owned small business that was established in 1991. HEAL is a full service environmental analysis laboratory with analytical capabilities that include both organic and inorganic methodologies and has performed analyses of soil, water, air as well as various other matrices for many sites in the region. HEAL's client base includes local, state and federal agencies, private consultants, commercial industries as well as individual homeowners. HEAL has performed as a subcontractor to the state of New Mexico and to the New Mexico Department of Transportation. HEAL has been acclaimed by its customers as producing quality results and as being adaptive to client-specific needs.

The laboratory is divided into an organic section, and an inorganic section. Each section has a designated manager/technical director. The technical directors report directly to the laboratory manager, who oversees all operations.

Certifications

ORELAP - NELAC Oregon Primary accrediting authority.

TCEQ - NELAC Texas Secondary accrediting authority.

The Arizona Department of Health Services

The New Mexico Drinking Water Bureau

See appendix B-E for copies of current licenses and licensed parameters, or refer to our current list of certifications online at www.hallenvironmental.com.

Personnel

HEAL management ensures the competence of all who operate equipment, perform environmental tests, evaluate results, and sign test reports. Personnel performing specific tasks shall be qualified on the basis of appropriate education, training, experience and /or demonstrated skills.

All personnel shall be responsible for complying with HEALs quality assurance/quality control requirements that pertain to their technical function. Each technical staff member must have a combination of experience and education to adequately demonstrate specific knowledge of their

particular function and a general knowledge of laboratory operations, test methods, quality assurance/quality control procedures and records management.

All employees training certificates and diplomas are kept on file with demonstrations of capability for each method they perform. An Organizational Chart can be found in Appendix A.

Laboratory Director

The Laboratory Director is responsible for overall technical direction and business leadership of HEAL. The Laboratory Manager, the Project Manager and Quality Assurance/Quality Control Officer report directly to the Laboratory Director. Someone with a minimum of 7 years of directly related experience and a bachelor's degree in a scientific or engineering discipline should fill this position.

Laboratory Manager/Lead Technical Director

The Laboratory Manager shall exercise day—to-day supervision of laboratory operations for the appropriate fields of accreditation and reporting of results. The Laboratory Manager shall be experienced in the fields of accreditation for which the laboratory is approved or seeking accreditation. The Laboratory Manager shall certify that personnel with appropriate educational and/or technical background perform all tests for which HEAL is accredited. Such certification shall be documented.

The Laboratory Manager shall monitor standards of performance in quality control and quality assurance and monitor the validity of the analyses performed and data generated at HEAL to assure reliable data.

The Laboratory Manager is responsible for the daily operations of the laboratory. The Laboratory Manager is the lead technical director of the laboratory and in conjunction with the section technical directors is responsible for coordinating activities within the laboratory with the overall goal of efficiently producing high quality data with in a reasonable time frame.

In events where employee scheduling or current workload is such that new work cannot be incorporated, with out missing hold times, the Laboratory Manager has authority to modify employee scheduling, re-schedule projects or, when appropriate, allocate the work to approved subcontracting laboratories.

Additionally, the laboratory manager reviews and approves new analytical procedures and methods, and performs a final review of most analytical results. The Laboratory Manager provides technical support to both customers and HEAL staff.

The Laboratory Manager also observes the performance of supervisors to ensure good laboratory practices and proper techniques are being taught and utilized, assisting in overall quality control implementation, and strategic planning for the future of the company. Other duties include assisting in establishing laboratory policies which lead to the fulfillment of requirements for various certification programs, assuring that all Quality

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Quality Assurance Plan
Effective January 31, 2009

Assurance and Quality Control documents are reviewed and approved, and assisting in conducting Quality Assurance Audits.

The laboratory manager addresses questions or complaints that cannot be answered by the section managers.

The Laboratory Manager shall have a bachelor's degree in a chemical, environmental, biological sciences, physical sciences or engineering field, and at least five years of experience in the environmental analysis of representative inorganic and organic analytes for which the laboratory seeks or maintains accreditation.

Quality Assurance Quality Control Officer

The Quality Assurance/Quality Control Officer (QA/QCO) serves as the focal point for QA/QC and shall be responsible for the oversight and/or review of quality control data. The QA/QCO functions independently from laboratory operations and shall be empowered to halt unsatisfactory work and/or prevent the reporting of results generated from an out-of-control measurement system. The QA/QCO shall objectively evaluate data and perform assessments without any outside/managerial influence. The QA/QCO shall have direct access to the highest level of management at which decisions are made on laboratory policy and/or resources. The QA/QCO shall notify laboratory management of deficiencies in the quality system in periodic, independent reports.

The QA/QCO shall have general knowledge of the analytical test methods, for which data review is performed, have documented training and/or experience in QA/QC procedures and in the laboratory's quality system. The QA/QCO will have a minimum of a BS in a scientific or related field and a minimum of three years of related experience.

The QA/QCO shall schedule and conduct internal audits as per the Internal Audit SOP at least annually, monitor and trend Corrective Action Reports as per the Data Validation SOP, periodically review control charts for out of control conditions and initiate any appropriate corrective actions.

The QA/QCO shall oversee the analysis of proficiency testing in accordance with our standards and monitor any corrective actions issued as a result of this testing.

The QA/QCO reviews all standard operating procedures and statements of work in order to assure their accuracy and compliance to method and regulatory requirements.

The QA/QCO shall be responsible for maintaining and updating this quality manual.

Business/Project Manager

The role of the business/project manager is to act as a liaison between HEAL and our clients. The project manager reviews reports, updates clients on the status of projects inhouse, prepares quotations for new work, and is responsible for HEALs marketing effort.

All new work is assessed by the project manager and reviewed with the other managers so as to not exceed the laboratories capacity. In events where employee scheduling or current workload is such that new work cannot be incorporated with out missing hold times, the Project Manager has authority to re-schedule projects.

It is also the duty of the project manager to work with the Laboratory Manager and QA/QCO to insure that before new work is undertaken the resources required and accreditations requested are available to meet the client's specific needs.

Additionally, the Project Manager can initiate the review of the need for new analytical procedures and methods, and performs a final review of some analytical results. The Project Manager provides technical support to customers. Someone with a minimum of 2 years of directly related experience and a bachelor's degree in a scientific or engineering discipline should fill this position.

Section Manager/Technical Directors

The Section Manager/Technical Directors are full-time members of the staff at HEAL who exercise day-to-day supervision of laboratory operations for the appropriate fields of accreditation and reporting of results for their department within HEAL. A Technical Director's duties shall include, but not be limited to, monitoring standards of performance in quality control and quality assurance; monitoring the validity of the analyses performed and the data generated in their sections to ensure reliable data, overseeing training and supervising departmental staff, schedule incoming work for their sections and monitor laboratory personnel to ensure that proper procedures and techniques are being utilized. They supervise and implement new Quality Control procedures as directed by the QA/QCO, update and maintain quality control records including, but not limited to, training forms, IDOCs, ADOCPs, MDLs and evaluate laboratory personnel in their Quality Control activities. In addition technical directors are responsible for upholding the spirit and intent of HEAL's data integrity procedures.

They are the technical director of the associated section and review analytical data to acknowledge that data meets all criteria set forth for good Quality Assurance practices. Someone with a minimum of 2 years of experience in the environmental analysis of representative analytes for which HEAL seeks or maintains accreditation and a bachelor's degree in a scientific or related discipline should fill this position.

Health and Safety / Chemical Hygiene Officer

Refer to the most recent version of the Health and Safety and Chemical Hygiene Plans for the rolls, responsibilities and basic requirements of the Health and Safety Officer (H&SO) and the Chemical Hygiene Officer (CHO). These jobs can be executed by the same employee.

Chemist I, II and III

Chemists are responsible for the analysis of various sample matrices including, but not limited to, solid, aqueous, and air as well as the generation of high quality data in accordance with the HEAL SOPs and QA/QC guidelines in a reasonable time as prescribed by standard turnaround schedules or as directed by the Section Manager or Laboratory Manager.

Chemists are responsible for making sure all data generated is entered in the database in the correct manner and the raw data is reviewed, signed and delivered to the appropriate peer for review. A Chemist reports daily to the section manager and will inform them as to material needs of the section specifically pertaining to the analyses performed by the chemist. Additional duties may include preparation of samples for analysis, maintenance of lab instruments or equipment, cleaning and providing technical assistance to lower level laboratory staff.

The senior chemist in the section may be asked to perform supervisory duties as related to operational aspects of the section. The chemist may perform all duties of a lab technician.

The position of Chemist is a full or part time hourly position and is divided into three levels. Chemist I, II, and III. All employees hired into a Chemist position at HEAL must begin as a Chemist I and remain there at a minimum of three months regardless of their education and experience. Chemist I must have a minimum of an AA in a related field or equivalent experience (equivalent experience means years of related experience can be substituted for the education requirement). A Chemist I is responsible for analysis, instrument operation and data reduction. Chemist II must have a minimum of an AA in a related field or equivalent experience and must have documented and demonstrated aptitude to perform all functions of a Chemist II. A Chemist II is responsible for the full analysis of their test methods, routine instrument maintenance, purchase of consumables as dictated by their Technical Director, advanced data reduction and basic data review. Chemist II may also assist Chemist III in method development and as dictated by their Technical Director may be responsible for the review and/or revision of their method specific SOPs. Chemist III must have Bachelors degree or equivalent experience and must have documented and demonstrated aptitude to perform all functions of a Chemist III. Chemist III are responsible for all tasks completed by a Chemist I and II as well as advanced data review, non-routine instrument maintenance, assisting their technical director in basic supervisory duties and method development.

Laboratory Technician

A laboratory technician is responsible for providing support in the form of sample preparation, basic analysis, general laboratory maintenance, glassware washing, chemical inventories and sample kit preparation. This position can be filled by someone without the education and experience necessary to obtain a position as a chemist.

Sample Control Manager

The sample control manager is responsible for receiving samples and reviewing the sample login information after it has been entered into the computer. The sample control manager also checks the samples against the chain-of-custody for any sample and/or labeling discrepancies prior to distribution.

The sample control manager is responsible for sending out samples to the sub-contractors along with the review and shipping of field sampling bottle kits. The sample control manager acts as a liaison between the laboratory and field sampling crew to ensure that the appropriate analytical test is assigned. If a discrepancy is noted the sample control manager or sample custodian will contact the customer to resolve any questions or problems. The sample control manager is an integral part the customer service team.

This position should be filled by someone with a high school diploma and a minimum of 2 years of related experience and can also be filled by a senior manager.

Sample Custodians

Sample Custodians work directly under the Sample Control Manager. They are responsible for sample intake into the laboratory and into the LIMS. Sample Custodians take orders from our clients and prepare appropriate bottle kits to meet the client's needs. Sample Custodians work directly with the clients in properly labeling and identifying samples as well as properly filling out legal COCs. When necessary, Sample Custodians contact clients to resolve any questions or problems associated with their samples. Sample Custodians are responsible for distributing samples throughout the laboratory and are responsible for notifying analysts of special circumstances such as short holding times or improper sample preservation upon receipt.

Delegations in the Absence of Key Personnel

Planned absences shall be preceded by notification to the Laboratory Manager. The appropriate staff members shall be informed of the absence. In the case of unplanned absences, the organizational superior shall either assume the responsibilities and duties or delegate the responsibilities and duties to another appropriately qualified employee.

In the event that the Laboratory Manager is absent for a period of time exceeding fifteen consecutive calendar days, another full-time staff member meeting the basic qualifications and competent to temporarily perform this function will be designated. If this absence exceeds thirty-five consecutive calendar days, HEAL will notify ORELAP in writing of the absence and the pertinent qualifications of the temporary laboratory manager.

Laboratory Personnel Qualification and Training

All personnel joining HEAL shall undergo orientation and training. During this period the new personnel shall be introduced to the organization and their responsibilities, as well as

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the policies and procedures of the company. They shall also undergo on the job training and shall work with trained staff. They will be shown required tasks and be observed while performing them.

When utilizing staff undergoing training, appropriate supervision shall be dictated and overseen by the appropriate section technical director. Prior to analyzing client samples, a new employee, or an employee new to a procedure, must meet the following basic requirements. The SOP and Method for the analysis must be read and signed by the employee indicating that they read, understood and intend to comply with the requirements The employee must undergo documented training. of the documents. conducted by a senior analyst familiar with the procedure and overseen by the section Technical Director. This training is documented by any means deemed appropriate by the trainer and section Technical Director, and kept on file in the employees file located in the QA/QCO's office. The employee must perform a successful Initial Demonstration of Proficiency (IDOC). See Appendix H for the training documents and checklists utilized at HEAL to ensure that all of these requirements are met. Once all of the above requirements are met it is incumbent upon the section Technical Director to determine at which point the employee can begin to perform the test unsupervised. A Certification to Complete Work Unsupervised (see Appendix H) is them filled out by the employee and technical director.

All IDOCs shall be documented through the use of the certification form which can be found in Appendix H. IDOCs are performed by analyzing four Laboratory Control Spikes (LCSs). Using the results of the LCSs the mean recovery is calculated in the appropriate reporting units and the standard deviations of the population sample (n-1) (in the same units) as well as the relative percent difference for each parameter of interest. When it is not possible or pertinent to determine mean and standard deviations HEAL assesses performance against establish and documented criteria dictated in the method SOP. The mean and standard deviation are compared to the corresponding acceptance criteria for precision and accuracy in the test method (if applicable) or in laboratory-generated acceptance criteria. In the event that the HEAL SOP or test method fail to establish the pass/fail criteria the default limits of +/- 20% for calculated recovery and <20% relative percent difference based on the standard deviation will be utilized. If all parameters meet the acceptance criteria, the IDOC is successfully completed. If any one of the parameters do not meet the acceptance criteria, the performance is unacceptable for that parameter and the analyst must either locate and correct the source of the problem and repeat the test for all parameters of interest or repeat the test for all parameters that failed to meet criteria. Repeat failure, however, confirms a general problem with the measurement system. If this occurs the source of the problem must be identified and the test repeated for all parameters of interest.

New employees that do not have prior analysis experience will not be allowed to perform analysis until they have demonstrated attention to detail with minimal errors in the assigned tasks. To ensure a sustained level of quality performance among staff members, continuing demonstration of capability shall be performed at least once a year. These are as an Annual Documentation of Continued Proficiency (ADOCP).

At least once per year an ADOCP must be completed by: the acceptable performance of a blind sample (this is typically done using a PT sample but can be a single blind sample to the analyst), by performing another IDOC, or by summarizing the data of four consecutive

laboratory control samples with acceptable levels of precision and accuracy (these limits are those currently listed in the LIMS for an LCS using the indicated test method.) ADOCPs are documented using a standard form and are kept on file in each analysts employee folder.

Each new employee shall be provided with data integrity training as a formal part of their new employee orientation. Each new employee will sign an ethics and data integrity agreement to ensure that they understand that data quality is our main objective. Every HEAL employee recognizes that although turn around time is important, quality is put above any pressure to complete the task expediently. Analysts are not compensated for passing QC parameters nor are incentives given for the quantity of work produced. Data Integrity and Ethics training are performed on an annual basis in order to remind all employees of HEAL's policy on data quality. Employes are required to understand that any infractions of the laboratory data integrity procedures will result in a detailed investigation that could lead to very serious consequences including immediate termination, debarment or civil/criminal prosecution.

Training for each member of HEALs technical staff is further established and maintained through documentation that each employee has read, understood, and is using the latest version of this Quality Assurance Manual. Training courses or workshops on specific equipment, analytical techniques or laboratory procedures are documented through attendance sheets, certificates of attendance, training forms, or quizzes. This training documentation is located in either analyst specific employee folders in the QA/QCO Office or in the current years group training folder, also located in the QA/QCO Office. On the front of all methods, SOPs and procedures for HEAL there is a signoff sheet that is signed by all pertinent employees, indicating that they have read, understood and agreed to perform the most recent version of the document.

5.0 Receipt and Handling of Samples

Sampling

Procedures

HEAL does not provide field sampling for any projects. Sample kits are prepared and provided for clients upon request. The sample kits contain the appropriate sampling containers (with a preservative when necessary), labels, blue ice, a cooler, chain-of-custody forms, plastic bags, bubble wrap, and any special sampling instructions. Sample kits are reviewed prior to shipment for accuracy and completeness.

Containers

Containers which are sent out for sampling are purchased by HEAL from a commercial source. Glass containers are certified "EPA Cleaned" QA level 1. Plastic containers are certified clean when required. These containers are received with a Certificate of Analysis verifying that the containers have been cleaned according to the EPA wash procedure. Containers are used once and discarded. If the samples are collected and stored in inappropriate containers the laboratory may not be able to accurately quantify the amount of the desired components. In this case re-sampling may be required.

Preservation

If sampling for an analyte(s) requires preservation, the sample custodians fortify the containers prior to shipment to the field, or provide the preservative for the sampler to add in the field. The required preservative is introduced into the vials in uniform amounts and done so rapidly to minimize the risk of contamination. Vials that contain a preservative are labeled appropriately. If the samples are stored with inappropriate preservatives the laboratory may not be able to accurately quantify the amount of the desired components. In this case re-sampling may be required.

Refer to the current Login SOP and/or the current price book for detailed sample receipt and handling procedures, appropriate preservation and holding time requirements.

Sample Custody

Chain-of-Custody Form

A Chain-of-Custody (CoC) form is used to provide a record of sample chronology from the field to receipt at the laboratory. HEALs CoC contains the client's name, address, phone and fax numbers, the project name and number, the project manager's name, and the field sampler's name. It also identifies the date and time of sample collection, sample matrix, field sample ID number, number/volume of sample containers, sample temperature upon receipt, and any sample preservative information.

There is also a space to record the HEAL ID number assigned to samples after they are received. Next to the sample information is a space for the client to indicate the desired analyses to be performed. There is a section for the client to indicate the data package level as well as any accreditation requirements. Finally, there is a section to track the actual custody of the samples. The custody section contains lines for signatures, dates and times when samples are relinquished and received. The CoC form also includes a space to record special sample related instructions, sampling anomalies, time constraints, and any sample disposal considerations.

It is paramount that all CoCs arrive at HEAL complete and accurate so that the samples can be processed and allocated for testing in a timely and efficient manor. A sample chain-of-custody form can be found in Appendix G or on line at www.hallenvironmental.com.

Receiving Samples

Samples are received by authorized HEAL personnel. Upon arrival, the CoC is compared to the respective samples. After the samples and CoC have been determined to be complete and accurate, the sampler signs over the CoC. The HEAL staff member in turn signs the chain-of-custody, also noting the current date, time and sample temperature. This relinquishes custody of the samples from the sampler and delegates sample custody to HEAL. The third (pink) copy of the CoC form is given to the person who has relinquished custody of the samples.

Logging in Samples and Storage

Standard Operating Procedures have been established for the receiving and tracking of all samples (refer to the current HEAL Login SOP). These procedures ensure that samples are received and properly logged into the laboratory, and that all associated documentation, including chain of custody forms, are complete and consistent with the samples received. Each sample set is given a unique HEAL tracking ID number. Individual sample locations within a defined sample set are given a unique sample ID suffix-number. Labels with the HEAL numbers, and tests requested, are generated and placed on their respective containers. The pH of preserved, non-volatile samples is checked and noted if out of compliance. Due to the nature of the samples, the pHs of volatiles samples are checked after analysis. Samples are reviewed prior to being distributed for analysis.

Samples are distributed for analysis based upon the requested tests. In the event that sample volume is limited and different departments at HEAL are required to share the

sample, volatile work takes precedence and will always be analyzed first before the sample is sent to any other department for analysis.

Each project (sample set) is entered into the Laboratory Information Management System (LIMS) with a unique ID that will be identified on every container. The ID tag includes the Lab ID, Client ID, date and time of collection, and the analysis/analyses to be performed. The LIMS continually updates throughout the lab. Therefore, at any time, an analyst or manager may inquire about a project and/or samples status. For more information about the login procedures, refer to the Sample Login SOP.

Disposal of Samples

Samples are held at HEAL for a minimum of thirty days and then transferred to the HEAL warehouse for disposal. Analytical results are used to characterize their respective sample contamination level(s) so that the proper disposal can be performed. These wastes will be disposed of according to their hazard as well as their type and level of contamination. Refer to the Hall Environmental Analysis Laboratory Chemical Hygiene Plan and current Sample Disposal SOP for details regarding waste disposal.

Waste drums are provided by an outside agency. These drums are removed by the outside agency and disposed of in a proper manner.

The wastes that are determined to be non-hazardous are disposed of as non-hazardous waste in accordance with the Chemical Hygiene Plan and Sample Disposal SOP.

6.0 Analytical Procedures

All analytical methods used at HEAL incorporate necessary and sufficient Quality Assurance and Quality Control practices. A Standard Operating Procedure (SOP) is used for each method to provide the necessary criteria to yield acceptable results. These procedures are reviewed at least annually and revised as necessary and are attached as a pdf file in the Laboratory Information Management System (LIMS) for easy access by each analyst. The sample is often consumed or altered during the analytical process. Therefore, it is important that each step in the analytical process be correctly followed in order to yield valid data.

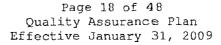
When unforeseen problems arise, the analyst, technical director, and, when necessary, laboratory manager meet to discuss the factors involved. The analytical requirements are evaluated and a suitable corrective action or resolution is established. The client is notified in the case narrative with the final report or before, if the validity of their result is in question.

List of Procedures Used

Typically, the procedures used by HEAL are EPA approved methodologies or 20th edition Standard Methods. However, proprietary methods for client specific samples, are sometimes used. The following tables list EPA and Standard Methods Method numbers with their corresponding analytes and/or instrument classification.

Methods Utilized at HEAL

Methodology:	Title of Method
120.1	"Conductance(Specific Conductance, uohms at 25 ° C)"
180.1	"Turbidity (Nephelometric)"
200.2	"Sample Preparation Procedure For Spectrochemical Determination of Total Recoverable Elements"
200.7	"Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma-Atomic Emission Spectrometry"
245.1	"Mercury (Manual Cold Vapor Technique)"
300.0	"Determination of Inorganic Anions by Ion Chromatography"
413.2	"Oil and Grease"
418.1	"Petroleum Hydrocarbons (Spectrophotometric, Infrared)"
420.3	"Phenolics (Spectrophotometric, MBTH With Distillation)"
504.1	"EDB, DBCP and 123TCP in Water by Microextraction and Gas Chromatography"



"Analysis of Organohalide Pesticides and Commercial Polychlorinated Biphenyl (PCB) Products in Water by Microextraction and Gas Chromatography"						
"Determination of Chlornated Acids in Water by Gas Chromatography with an Electron Capture Detector"						
"Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography/Mass Spectrometry"						
"Measurement of N-Methylcarbomoyloximes and N-Methylcarbamates in Water by Direct Aqueous Injection HPLC with Post Column Dervivatization"						
"Determination of Glyphosate in Drinking Water by Direct-Aqueous Injection HPLC, Post-Column Derivatization, and Fluorescence Detection"						
"Determination of Haloacetic Acids and Dalapon in Drinking Water by Ion- Exchange Liquid-Solid Extraction and Gas Chromatography with an Electron Capture Detector"						
"Toxicity Characteristic Leaching Procedure"						
"Toxicity Characteristic Leaching Procedure"						
"Acid Digestion of Waters for Total Recoverable or Dissolved Metals for Analysis by FLAA or ICP Spectroscopy"						
"Acid Digestion of Aqueous Samples and Extracts for Total Metals for Analysis by FLAA or ICP Spectroscopy"						
"Acid Digestion of Sediment, Sludge, and Soils"						
"Separatory Funnel Liquid-Liquid Extraction"						
"Soxhlet Extraction"						
"Pressurized Fluid Extraction(PFE)"						
"Sulfuric Acid/Permanganate Cleanup"						
"Purge-and-Trap for Aqueous Samples"						
"Closed-System Purge-and-Trap and Extraction for Volatile Organics in Soil and Waste Samples"						
"Inductively Coupled Plasma-Atomic Emission Spectrometry"						
"Mercury in Liquid Waste (Manual Cold-Vapor Technique)"						
"Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)"						
"Aromatic and Halogenated Volatiles By Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors"						
"Nonhalogenated Volatile Organics by Gas Chromatography" (Gasoline Range and Diesel Range Organics)						

8015AZ	"C10-C32 Hydrocarbons in Soil-8015AZ"							
8081A	"Organochlorine Pesticides by Gas Chromatography"							
8082	"Polychlorinated Biphenyls (PCBs) by Gas Chromatography"							
8260B	"Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS)"							
8270C	"Semivolatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS)"							
8310	"Polynuclear Aromatic Hydrocarbons"							
9045C	"Soil and Waste pH"							
9056	"Determination of Inorganic Anions by Ion Chromatography"							
9060	"Total Organic Carbon"							
9067	"Phenolics (Spectrophotometric, MBTH With Distillation)"							
9095	Paint Filter							
Walkley/Black	FOC/TOC WB							
SM2320 B	"Alkalinity"							
SM2540 B	"Total Solids Dried at 103-105° C"							
SM2540 C	"Total Dissolved Solids Dried at 180° C"							
SM2540 D	"Total Suspended Solids Dried at 103-105° C"							
SM 3500 Fe+2	Ferrous Iron							
SM4500-H+B	"pH Value"							
SM4500-NH3 C	"4500-NH3" Ammonia							
SM4500-Norg C	"4500-Norg" Total Kjeldahl Nitrogen (TKN)							
SM4500-P B	"4500-P" Total Phosphorous							
SM4500-S2 F	"4500-S2" Sulfide							
SM5310 B	"5310" Total Organic Carbon (TOC)							

Criteria for Standard Operating Procedures

HEAL has Standard Operating Procedures (SOPs) for each of the test methods listed above. These SOPs are based upon the listed methods and detail the specific procedure and equipment utilized as well as the quality requirements necessary to prove the integrity of the data. SOPs are reviewed or revised every twelve months or sconer if necessary. The review/revision is documented in the Master SOP Logbook filed in the QA/QC Office. All SOPs are available in the LIMS linked under the specific test method. Administrative SOPs, which are not linked in the LIMS are available on desktops throughout the laboratory in the link to administrative SOPs folder.

Each HEAL test method SOP shall include or reference the following topics where applicable:

Identification of the test method:

Applicable matrix or matrices;

Limits of detection and quantitation:

Scope and application, including parameters to be analyzed;

Summary of the test method;

Definitions;

Interferences;

Safety;

Equipment and supplies;

Reagents and standards.

Sample collection, preservation, shipment and storage;

Quality control parameters;

Calibration and standardization:

Procedure:

Data analysis and calculations;

Method performance;

Pollution prevention:

Data assessment and acceptance criteria for quality control measures;

Corrective actions for out-of-control data;

Contingencies for handling out-of-control or unacceptable data;

Waste management;

References; and

Any tables, diagrams, flowcharts and validation data.

7.0 Calibration

All equipment and instrumentation used at HEAL are operated, maintained and calibrated according to manufacturers guidelines, as well as criteria set forth in applicable analytical methodology. Personnel who have been properly trained in their procedures perform operation and calibration. Brief descriptions of the calibration processes for our major laboratory equipment and instruments are found below.

Thermometers

The thermometers in the laboratory are used to measure the temperatures of the refrigerators/freezers, ovens, water baths, hot blocks, ambient laboratory conditions, TCLP Extractions, digestion blocks and samples at the time of log-in. All NIST traceable thermometers are either removed from use upon their documented expiration date or they are checked annually with a NIST certified thermometer and a correction factor is noted on each thermometer log. See the most current Login SOP for detailed procedures on this calibration procedure.

Dickson Data Loggers are used to record sample and standard storage refrigerators over the weekend when the appropriate staff is not available to record the temperatures. These data loggers are shipped back to the manufacturer once a year to be re calibrated.

Refrigerators/Freezers

Each laboratory refrigerator or freezer contains a thermometer capable of measuring to a minimum precision of 1°C. The thermometers are kept with the bulb immersed in liquid. Each workday, the temperatures of the refrigerators are recorded in a designated logbook to insure that the refrigerators are within the required designated range. Samples are stored separately from the standards to reduce the risk of contamination.

See the current catastrophic Failure SOP for the procedure regarding how to handle failed refrigerators or freezers.

Ovens

The ovens contain thermometers graduated by 1° C. The ovens are calibrated quarterly against NIST thermometers and checked daily as required and in which ever way is dictated by or appropriate for the method in use.

Analytical and Table Top Balances

The table top balances are capable of weighing to a minimum precision of 0.01 grams. The analytical balances are capable of weighing to a minimum precision of 0.0001 grams. Records are kept of daily calibration checks for the balances in use. Working weights are used in these checks. The balances are annually certified by an outside source and the certifications are on file with the QA/QCO.

Balances, unless otherwise indicated by method specific SOPs, will be checked daily with at least two weights that will bracket the working range of the balance for the day. Daily balance checks will be done using working weights that are calibrated annually against Class S weights. Class S weights are calibrated as required by an external provider. The Class S weights are used once a year or more frequently if required, to assign values to the Working Weights. During the daily balance checks the working weights are compared to their assigned values and must pass within 5% of their assigned value in order to validate the calibration of the balance. The assigned values for the working weights, as well as the daily checks, are recorded in the balance logbook for each balance.

Instrument Calibration

An instrument calibration is the relationship between the known concentrations of a set of calibration standards introduced into an analytical instrument and the measured response they produce. Calibration curve standards are a prepared series of aliquots at various known concentrations levels from a primary source reference standard. Specific mathematical types of calibration techniques are outlined in SW-846 8000B. The entire initial calibration must be performed prior to sample analyses.

The lowest standard in the calibration curve must be at or below the required reporting limit.

Refer to the current SOP to determine the minimum requirement for calibration points.

Most compounds tend to be linear and a linear approach should be favored when linearity is suggested by the calibration data. Non-linear calibration should be considered only when a linear approach cannot be applied. It is not acceptable to use an alternate calibration procedure when a compound fails to perform in the usual manner. When this occurs it is indicative of instrument issues or operator error.

If a non-linear calibration curve fit is employed, a minimum of six calibration levels must be used for second-order (quadratic) curves.

When more than 5 levels of standards are analyzed in anticipation of using second-order calibration curves, all calibration points MUST be used regardless of the calibration option employed. The highest or lowest calibration point may be excluded for the purpose of narrowing the calibration range, and meeting the requirements for a specific calibration option. Otherwise, unjustified exclusion of calibration data is expressly forbidden.

Analytical methods vary in QC acceptance criteria. HEAL follows the method specific guidelines for QC acceptance. The specific acceptance criteria are outlined in the analytical methods and its corresponding SOP.

pH Meter

The pH meter measures to a precision of 0.01 pH units. The pH calibration logbook contains the calibration before each use, or each day, if used more than once per day. It is calibrated using a minimum of 3 certified buffers. Also available with the pH meter is a magnetic stirrer with a temperature sensor. See the current pH SOP (SM4500 H+ B) for specific details regarding calibration of the pH probe.

Other Analytical Instrumentation and Equipment

The conductivity probe is calibrated as needed and checked daily when in use.

Eppendorf (or equivalent brands) pipettes are checked gravimetrically prior to use.

Standards

All of the source reference standards used are ordered from a reliable commercial vendor. A Certificate of Analysis (CoA), which verifies the quality of the standard, accompanies the standards from the vendor. The Certificates of Analysis are dated and stored on file by the Technical Directors or their designee. These standards are traceable to the National Institute of Standards (NIST). When salts are purchased and used as standards the certificate of purity must be obtained from the vendor and filed with the CoAs.

All standard solutions, calibration curve preparations, and all other quality control solutions are labeled in a manner that can be traced back to the original source reference standard. All source reference standards are entered into the LIMS with an appropriate description of the standard. Dilutions of the source reference standard (or any mixes of the source standards) are fully tracked in the LIMS. Standards are labeled with the date opened for use, and an expiration date.

As part of the quality assurance procedures at HEAL, analysts strictly adhere to manufacture recommendations for storage times/expiration dates and policies of analytical standards and quality control solutions.

Reagents

HEAL ensures that the reagents used are of acceptable quality for their intended purpose. This is accomplished by ordering high quality reagents and adhering to good laboratory

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practices so as to minimize contamination or chemical degradation. All reagents must meet any specifications noted in the analytical method. Refer to the current Purchase of Consumables SOP for details on how this is accomplished and documented.

Upon receipt, all reagents are assigned a separate ID number, and logged into the LIMS. All reagents shall be labeled with the date received into the laboratory and again with the date opened for use. Recommended shelf life shall be documented and controlled. Dilutions or solutions prepared shall be clearly labeled, dated, and initialed. These solutions are traceable back to their primary reagents.

All gases used with an instrument shall meet specifications of the manufacturer. All safety requirements that relate to maximum and/or minimum allowed pressure, fitting types, and leak test frequency, shall be followed. When a new tank of gas is placed in use, it shall be checked for leaks and the date put in use will be written in the instrument maintenance logbook.

HEAL continuously monitors the quality of the reagent water and provides the necessary indicators for maintenance of the purification systems in order to assure that the quality of laboratory reagent water meets established criteria for all analytical methods.

Reagent blank samples are also analyzed to ensure that no contamination is present at detectable levels. The frequency of reagent blank analysis is typically the same as calibration verification samples. Refrigerator storage blanks are stored in the volatiles refrigerator for a period of one week and analyzed and replaced once a week.

8.0 Maintenance

Maintenance logbooks are kept for each major instrument and all support equipment in order to document all repair and maintenance. In the front of the logbook, the following information is included:

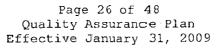
Unique name of the item or equipment
Manufacturer
Type of Instrument
Model Number
Serial Number
Date received and date placed into service
Location of Instrument
Condition of instrument upon receipt

For routine maintenance, the following information shall be included in the log:

Maintenance Date Maintenance Description Maintenance Performed by Initials

A manufacturer service agreement (or equivalent) covers most major instrumentation to assure prompt and reliable response to maintenance needs beyond HEAL instrument operator capabilities.

Refer to the current Maintenance and Troubleshooting SOP for each section in the laboratory for further information.



9.0 Data Integrity

For HEAL's policy on ethics and data integrity see section 3.0 of this document. Upon being hired and annually there after, all employees at HEAL undergo documented data integrity training. All new employees sign an Ethics and Data Integrity Agreement, documenting their understanding of the high standards of integrity required at HEAL and outlining their responsibilities in regards to ethics and data integrity. See Appendix H for a copy of this agreement.

In instances of ethical concern analysts are required to report the known or suspected concern to their Technical Director, the Laboratory Manager or the QA/QCO. This will be done in a confidential and receptive environment, allowing all employees to privately discuss ethical issues or report items of ethical concern.

Once reported and documented the ethical concern will be immediately elevated to the Laboratory Manager and the need for an investigation, analyst remediation or termination will be determined on a case by case basis.

All reported instances of ethical concern will be thoroughly documented and handled in a manner sufficient to rectify any breaches in data integrity with an emphasis on preventing similar incidences from happening in the future.

9.0 Quality Control

Internal Quality Control Checks

HEAL utilizes various internal quality control checks, including duplicates, matrix spikes, matrix spike duplicates, method blanks, laboratory control spikes, laboratory control spike duplicates, surrogates, internal standards, calibration standards, quality control charts, proficiency tests and calculated measurement uncertainty.

Refer to the current method SOP to determine the frequency and requirements of all quality controls. In the event that the frequency of analysis is not indicated in the method specific SOP, duplicate samples, laboratory control spikes (LCS), Method Blanks (MB) and matrix spikes and matrix spike duplicates (MS/MSD) are analyzed for every batch of twenty samples.

When sample volume is limited on a test that requires an MS/MSD an LCSD shall be analyzed to demonstrate precision and accuracy and when possible a sample duplicate will be analyzed.

Duplicates, are identical tests repeated for the same sample or matrix spike in order to determine the precision of the test method. A Relative Percent Difference (RPD) is calculated as a measure of this precision. Unless indicated in the SOP, the default acceptance limit is </=30%.

Matrix Spikes and Matrix Spike Duplicates are spiked samples (MS/MSD) that are evaluated with a known added quantity of a target compound. This is to help determine the accuracy of the analyses and to determine the matrix affects on analyte recovery. A percent recovery is calculated to assess the quality of the accuracy. In the event that the acceptance criteria is not outlined in the SOP a default limits of 70-130% will be utilized. When an MSD is employed an RPD is calculated and when not indicated in the SOP shall be acceptable at </= 30%.

When appropriate for the method, a Method Blank should be analyzed with each batch of samples processed to assess contamination levels in the laboratory. MBs consist of all the reagents measured and treated as they are with samples, except without the samples. This enables the laboratory to ensure clean reagents and procedures. Guidelines should be in place for accepting or rejecting data based on the level of contamination in the blank. In the event that these guidelines are not dictated by the SOP or in client specific work plans, the MB should be less than the MDL reported for the analyte being reported.

A Laboratory Control Spike and Laboratory Control Spike Duplicate (LCS/LCSD) are reagent blanks, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes. It is generally used to establish intra-laboratory or analyst-specific precision and bias or to assess the performance of all or a portion of the measurement system. Guidelines are outline in each

SOP for the frequency and pass fail requirements for LCS and LCSDs. These limits can be set utilizing control charts as discussed below.

Surrogates are utilized when dictated by method and are substances with properties that mimic the analytes of interest. The surrogate is an analyte that is unlikely to be found in environmental samples. Refer to the appropriate Method and SOP for guidelines on pass/fail requirements for surrogates.

Internal Standards are utilized when dictated by the method and are known amounts of standard added to a test portion of a sample as a reference for evaluating and controlling the precision and bias of the applied analytical method. Refer to the appropriate Method and SOP for guidelines on pass/fail requirements for Internal Standards.

Proficiency Test (PT) Samples are samples provided by an unbiased third party. They are typically analyzed twice a year, or at any other interval defined in the method SOP. They contain a pre-determined concentration of the target compound, which is unknown to HEAL. HEAL's management and all analyst shall ensure that all PT samples are handled in the same manner as real environmental samples utilizing the same staff, methods, procedures, equipment, facilities and frequency of analysis as used for routine analysis of that analyte. When analyzing a PT, HEAL shall employ the same calibration, laboratory quality control and acceptance criteria, sequence of analytical steps, number of replicates and other procedures as used when analyzing routine samples.

With regards to analyzing PT Samples HEAL shall not send any PT sample, or portion of a PT sample, to another laboratory for any analysis for which we seeks accreditation, or are accredited. HEAL shall not knowingly receive any PT sample or portion of a PT sample from another laboratory for any analysis for which the sending laboratory seeks accreditation, or is accredited. Laboratory management or staff will not communicate with any individual at another laboratory concerning the PT sample. Laboratory management or staff shall not attempt to obtain the assigned value of any PT sample from the PT Provider.

Calibration standards are standards run to calibrate. Once the calibration is established the same standards can be analyzed as Continuing Calibration Verifications (CCV), used to confirm the consistency of the instrumentation. Calibration standards can be utilized at the beginning and end of each batch, or more frequently as required. Typically Continuing Calibration Blanks (CCB) are run in conjunction with CCVs. Refer to the current method SOP for frequency and pass/fail requirements of CCVs and CCBs.

Control Limits are limits of acceptable ranges of the values of quality control checks. If a value falls outside the appropriate range, immediate evaluation and assessment of the procedure is required. Data generated with laboratory control samples that fall outside of the established control limits are judged to be generated during an "out-of-control" situation. These data are considered suspect and shall be repeated or reported with qualifiers.

Control limits should be established and updated according to the requirements of the method being utilized. When the method does not specify, and control limits are to be generated or updated for a test, the following guidelines shall be utilized.

Control Limits should be updated periodically and at least annually. The Limits should be generated utilizing the most recent 20-40 data values and Control Charts should be printed when these limits are updated in the LIMS. The data values used shall not reuse values that were included in the previous Control Limit update. The data values shall also be reviewed by the LIMS for any Grubbs Outliers, and if identified, the outliers must be removed prior to generating new limits. Once new Control Limits have been established and updated in the LIMS, the printed Control Chart shall be reviewed by the appropriate technical director and primary analyst performing the analysis for possible trends and compared to the previous Control Charts. The technical director initials the control charts, indicating that they have reviewed and determined the updated Limits to be accurate and appropriate. These initialed charts are then filed in the QA/QCO office.

Calculated Measurement Uncertainty is calculated annually using LCSs in order to determine the laboratory specific uncertainty associated with each test method. These uncertainty values are available to our clients upon request and are utilized as a trending tool internally to determine the effectiveness of new variables introduced into the procedure over time.

Precision, Accuracy, Detection Levels

Precision

The laboratory uses sample duplicates, laboratory control spike duplicates and matrix spike duplicates to assess precision in terms of relative percent difference (RPD). HEAL requires the RPD to fall within the 99% confidence interval of established control charts or an RPD of less than 30% if control charts are not available. RPD's greater than these limits are considered out-of-control and require an appropriate response.

RPD = 2 x (Sample Result – Duplicate Result) X 100 (Sample Result + Duplicate Result)

Accuracy

The accuracy of an analysis refers to the difference between the calculated value and the actual value of a measurement. The accuracy of a laboratory result is evaluated by comparing the measured amount of QC reference material recovered from a sample and the known amount added. Control limits can be established for each analytical method and sample matrix. Recoveries are assessed to determine the method efficiency and/or the matrix effect.

Analytical accuracy is expressed as the percent recovery (%R) of an analyte or parameter. A known amount of analyte is added to an environmental sample before

the sample is prepared and subsequently analyzed. The equation used to calculate percent recovery is:

%Recovery = {(concentration* recovered)/(concentration* added)} X 100

*or amount

HEAL requires that the Percent Recovery to fall within the 99 % confidence interval of established control limits. A value that falls outside of the confidence interval requires a warning and process evaluation. The confidence intervals are calculated by determining the mean and sample standard deviation. If control limits are not available, the range of 70 to 130% is used unless the specific method dictates otherwise. Percent Recoveries outside of this range mandate additional action such as analyses by Method of Standard Additions, additional sample preparation(s) where applicable, method changes, out-of-control action or data qualification.

Detection Limit

Current practices at HEAL define the Detection Limit (DL) as the smallest amount that can be detected above the baseline noise in a procedure within a stated confidence level.

HEAL presently utilizes an Instrument Detection Limit (IDL), a Method Detection Limit (MDL), and a Practical Quantitation Limit (PQL). The relationship between these levels is approximately

IDL: MDL: PQL = 1:5:5.

The IDL is a measure of the sensitivity of an analytical instrument. The IDL is the amount which, when injected, produces a detectable signal in 99% of the analyses at that concentration. An IDL can be considered the minimum level of analyte concentration that is detectable above random baseline noise.

The MDL is a measure of the sensitivity of an analytical method. An MDL determination (as required in 40CFR part 136 Appendix B) consists of replicate spiked samples carried through all necessary preparation steps. The spike concentration is three times the standard deviation of three replicates of spikes. At least seven replicates are spiked and analyzed and their standard deviation (s) calculated. Routine variability is critical in passing the 10 times rule and is best achieved by running the MDLs over different days and when possible over several calibration events. The method detection limit (MDL) can be calculated using the standard deviation according to the formula:

MDL = s * t (99%)

Where t (99%) is the student's t value for the 99% confidence interval. It depends on the number of trials used in calculating the sample standard deviation, so choose the appropriate value according to the number of trials.

Number of Trials	t(99%)		
6	3.36		
7	3.14		
8	3.00		
9	2.90		

The calculated MDL must not be less than 10 times the spiked amount or the study must be performed again with a lower concentration.

The PQL is significant because different laboratories can produce different MDLs although they may employ the same analytical procedures, instruments and sample matrices. The PQL is about two to five times the MDL and represents a practical, and routinely achievable, reporting level with a good certainty that the reported value is reliable. It is often determined by regulatory limits. The reported PQL for a sample is dependent on the dilution factor utilized during sample analysis.

Quality Control Parameter Calculations

Mean

The sample mean is also known as the arithmetic average. It can be calculated by adding all of the appropriate values together, and dividing this sum by the number of values.

Average =
$$(\Sigma x_l) / n$$

 x_l = the value x in the l^{th} trial n = the number of trials

Standard Deviation

The sample standard deviation, represented by s, is a measure of dispersion. The dispersion is considered to be the difference between the average and each of the values x_i . The variance, s^2 , can be calculated by summing the squares of the differences and dividing by the number of differences. The sample standard deviation, s, can be found by taking the square root of the variance.

Standard deviation = s = $\left[\sum (x_1 - average)^2 / (n-1)\right]^{\frac{1}{2}}$

Percent Recovery (MS, MSD, LCS and LCSD)

Percent Recovery = (Spike Sample Result – Sample Result) X100 (Spike Added)

Confidence Intervals

Confidence intervals are calculated by the LIMS using the average (x), the sample standard deviation (s), and the Student's t distribution (s-dist), which depends on the number of values used to calculate the average and sample standard deviation.

The formula is:

confidence interval = $x \pm s * s$ -dist

Student's t Distribution

# values *	10	15	20	25	31	41	61	121	> 121
95 %	2.262	2.145	2.093	2.064	2.042	2.021	2.000	1.980	1.960
99%	3.250	2.977	2.861	2.797	2.750	2.704	2.660	2.617	2.576

Unless there is insufficient data, at least 20 values will always be used in calculating the confidence intervals.

RPD (Relative Percent Difference)

Analytical precision is expressed as a percentage of the difference between the results of duplicate samples for a given analyst. Relative percent difference (RPD) is calculated as follows:

RPD = 2 x (Sample Result – Duplicate Result) X 100 (Sample Result + Duplicate Result)

Uncertainty Measurements

Uncertainty, as defined by ISO, is the parameter associated with the result of a measurement that characterizes the dispersion of the values that could reasonably be attributed to the measurement. Ultimately uncertainty measurements are used to state how good a test result is and to allow the end user of data to properly interpret their reported data. All procedures allow for some uncertainty. For most analyses the components and estimates of uncertainty are reduced by following well established test methods. To further reduce uncertainty, results are generally not reported below the lowest calibration point (PQL) or above the highest calibration point (UQL).

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Quality Assurance Plan
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$$RF_{AVE} = \Sigma RF_i / n$$

b. Standard Deviation

$$s = SQRT \{ [\Sigma (RF_i - RF_{AVE})^2] / (n-1) \}$$

c. Relative Standard Deviation

Where:

 A_x = Area of the compound

 C_x = Concentration of the compound

Ais = Area of the internal standard

C_{is} = Concentration of the internal standard

n = number of pairs of data

RF_i = Response Factor (or other determined value)

RF_{AVE} = Average of all the response factors

 Σ = the sum of all the individual values

2. Linear Regression

a. Slope (m)

$$\mathbf{m} = (\ \mathbf{n} \Sigma \mathbf{x_i} \mathbf{y_i} - (\mathbf{n} \Sigma \mathbf{x_i})^* (\mathbf{n} \Sigma \mathbf{y_i}) \) \ / \ (\mathbf{n} \Sigma \mathbf{x_i}^2 - (\Sigma \mathbf{x_i})^2)$$

b. Intercept (b)

$$b = y_{AVE} - m^*(x_{AVE})$$

c. Correlation Coefficient (cc)

CC (r) ={
$$\Sigma((x_i-x_{ave})^*(y_i-y_{ave}))$$
 } / { $SQRT((\Sigma(x_i-x_{ave})^2)^*(\Sigma(y_i-y_{ave})^2))$ } Or CC (r) =[($\Sigma w * \Sigma wxy$) - ($\Sigma wx * \Sigma wy$)] / ($sqrt(([($\Sigma w * \Sigma wx^2$) - ($\Sigma wx * \Sigma wx$)] * [($\Sigma w * \Sigma wy^2$) - ($\Sigma wx * \Sigma wy$)])))]$

d. Coefficient of Determination

$$COD(r^2) = CC*CC$$

$$RF_{AVE} = \Sigma RF_i / n$$

b. Standard Deviation

$$s = SQRT \{ [\Sigma (RF_i - RF_{AVE})^2] / (n-1) \}$$

c. Relative Standard Deviation

Where:

 A_x = Area of the compound

 C_x = Concentration of the compound

Ais = Area of the internal standard

C_{is} = Concentration of the internal standard

n = number of pairs of data

RF_i = Response Factor (or other determined value)

RF_{AVE} = Average of all the response factors

 Σ = the sum of all the individual values

2. Linear Regression

a. Slope (m)

$$m = (n\Sigma x_i y_i - (n\Sigma x_i)^* (n\Sigma y_i)) / (n\Sigma x_i^2 - (\Sigma x_i)^2)$$

b. Intercept (b)

$$b = y_{AVE} - m^*(x_{AVE})$$

c. Correlation Coefficient (cc)

$$\begin{array}{l} \text{CC (r) =} \{ \ \Sigma((x_i - x_{ave})^*(y_i - y_{ave})) \ \} \ / \ \{ \ \text{SQRT}((\Sigma(x_i - x_{ave})^2)^*(\Sigma(y_i - y_{ave})^2)) \ \} \\ \text{Or} \\ \text{CC (r) =} [(\Sigma w \ ^* \Sigma wxy) - (\Sigma wx \ ^* \Sigma wy)] \ / \ (\text{sqrt}(\ (\ [(\Sigma w \ ^* \Sigma wx^2) - (\Sigma wx \ ^* \Sigma wx)] \ ^* \ [(\Sigma w \ ^* \Sigma wy^2) - (\Sigma wy \ ^* \Sigma wy)])))] \\ \end{array}$$

d. Coefficient of Determination

$$COD(r^2) = CC*CC$$

Where:

y = Response (Area) Ratio A_x/A_{is}

 $x = Concentration Ratio C_x/C_{is}$

m = slope

b = intercept

n = number of replicate x,y pairs

 x_i = individual values for independent variable

 y_i = individual values for dependent variable

 Σ = the sum of all the individual values

 x_{ave} = average of the x values

 y_{ave} = average of the y values

w = weighting factor, for equal weighting w=1

3. Quadratic Regression

$$y = ax^2 + bx + c$$

a. Coefficient of Determination

COD (r²) =(
$$\Sigma(y_i-y_{ave})^2 - \{[(n-1)/(n-p)] * [\Sigma(y_i-Y_i)^2]\}$$
) / $\Sigma(y_i-y_{ave})^2$

Where:

y = Response (Area) Ratio A_x/A_{is}

 $x = Concentration Ratio C_x/C_{is}$

 $a = x^2$ coefficient

b = x coefficient

c = intercept

y_i = individual values for each dependent variable

 x_i = individual values for each independent variable

 y_{ave} = average of the y values

n = number of pairs of data

p = number of parameters in the polynomial equation (l.e., 3 for third order, 2 for second order)

 $Yi = ((2*a*(C_x/C_{is})^2)-b^2+b+(4*a*c))/(4a)$

b. Coefficients (a,b,c) of a Quadratic Regression

$$a = S_{(x2y)}S_{(xx)}-S_{(xy)}S_{(xx2)} / S_{(xx)}S_{(x2x2)}-[S_{(xx2)}]^{2}$$

$$b = S_{(xy)}S_{(x2x2)} - S_{(x2y)}S_{(xx2)} / S_{(xx)}S_{(x2x2)} - [S_{(xx2)}]^2$$

$$c = [(\Sigma yw)/n] - b^*[(\Sigma xw)/n] - a^*[\Sigma (x^2w)/n]$$

Where:

n = number of replicate x,y pairs x = x values y = y values w = $S^{-2} / (\Sigma S^{-2}/n)$ $S_{(xx)} = (\Sigma x^2 w) - [(\Sigma x w)^2 / n]$ $S_{(xx)} = (\Sigma x^2 w) - [(\Sigma x w)^* (\Sigma y w) / n]$ $S_{(xx2)} = (\Sigma x^3 w) - [(\Sigma x w)^* (\Sigma x^2 w) / n]$ $S_{(x2y)} = (\Sigma x^2 y w) - [(\Sigma x^2 w)^* (\Sigma y w) / n]$ $S_{(x2x2)} = (\Sigma x^4 w) - [(\Sigma x^2 w)^2 / n]$ Or If unweighted calibration, w=1 S(xx) = (Sx2) - [(Sx)2 / n] $S(xy) = (Sxy) - [(Sx)^* (Sy) / n]$ $S(x2y) = (Sx3) - [(Sx)^* (Sy2) / n]$ $S(x2y) = (Sx2y) - [(Sx2)^* (Sy) / n]$ $S(x2x2) = (Sx4) - [(Sx2)^2 / n]$

11.0 Data Reduction, Validation, Reporting, and Record Keeping

All data reported must be of the highest possible accuracy and quality. During the processes of data reduction, validation, and report generation, all work is thoroughly checked to insure that error is minimized.

Data Reduction

The analyst who generated the data usually performs the data reduction. The calculations include evaluation of surrogate recoveries (where applicable), and other miscellaneous calculations related to the sample quantitation.

If the results are computer generated, then the formulas must be confirmed by hand calculations, at minimum, one per batch.

See the current Data Validation SOP for details regarding data reduction.

Validation

A senior analyst, most often the section supervisor, validates the data. All data undergoes peer review. If an error is detected it is brought to the analyst attention to rectify and further checks ensure that all data for that batch is sound. Previous and/or common mistakes are stringently monitored throughout the validation process. Data is reported using appropriate significant figure criteria. In most cases, two significant digits are utilized, but three significant digits can be used in QC calculations. Significant digits are not rounded until after the last step of a sample calculation. All final reports undergo a review by the laboratory manager, or the project manager or their designee, to provide a logical review of all results before they are released to the client.

If data is to be manually transferred from one medium to another, the transcribed data is checked by a peer. This includes data typing, computer data entry, chromatographic data transfer, data table inclusion to a cover letter, or when data results are combined with other data fields.

All hand written data from run logs, analytical standard logbooks, hand entered data logbooks, or on instrument generated chromatograms, are systematically archived should the need for future retrieval arise.

See the current Data Validation SOP for detail regarding data validation.

Reports and Records

All records at HEAL are retained and maintained through the procedures outlined in the most recent version of the Records Control SOP.

The reports are compiled by the Laboratory Information Management System (LIMS). Most data is transferred directly from the instruments to the LIMS. After being processed by the analyst and reviewed by a data reviewer, final reports are approved and signed by the senior laboratory management. A comparative analysis of the data is performed at this point. For example, if TKN and NH3 are analyzed on the same sample the NH3 result should never be greater than the TKN result. Lab results and reports are released only to appropriately designated individuals. Release of the data can be by fax, email, electronic deliverables, or mailed hard copy.

When a project is completed, the project file folder is stored with a hard copy of the report, relevant supporting data, and the quality assurance/control worksheets. These folders are kept on file and are arranged by project number. Additionally, all electronic data is backed up daily on the HEAL main server. The backup includes raw data, chromatograms and report documents. Hard copies of chromatograms are stored separately according to the instrument and the analysis date. All records and analytical data reports are retained in a secure location as permanent records for a minimum period of five years (unless specified otherwise in a client contract). Access to archived information shall be documented with an access log. Access to archived electronic reports and data will be protected by a project manager password. In the event that HEAL transfers ownership or terminates business practices, complete records will be maintained or transferred according to the client's instructions.

After issuance, the original report shall remain unchanged. If a correction to the report is necessary, then an additional document shall be issued. This document shall have a title of "Addendum to Test Report or Correction to Original Report", or equivalent. Demonstration of original report integrity comes in two forms. First, the report date is included on each page of the final report. Second, each page is numbered in sequential order, making the addition or omission of any data page(s) readily detectable.

12.0 Corrective Action

Refer to the most recent version of the Data Validation SOP for the procedure utilized in filling out a Corrective Action Report.

The limits that have been defined for data acceptability also form the basis for corrective action initiation. Initiation of corrective action occurs when the data generated from continuing calibration standard, sample surrogate recovery, laboratory control spike, matrix spike or sample duplicates exceed acceptance criteria. If corrective action is necessary, the analyst or the section supervisor will coordinate to take the following steps to determine and correct the measurement system deficiency:

Check all calculations and data measurements systems (Calibrations, reagents, instrument performance checks etc.).

Assure that proper procedures were followed.

Unforeseen problems that arise during sample preparation and/or sample analysis that lead to treating a sample differently from documented procedures shall be documented with a corrective action report. The section supervisor and laboratory manager shall be made aware of the problem at the time of the occurrence. See the appropriate SOP regarding departures from documented procedures.

Continuing calibration standards below acceptance criteria can not be used for reporting analytical data unless method specific criteria states otherwise.

Continuing calibration standards above acceptance criteria can be used to report data so long as the failure is isolated to a single standard and the corresponding samples are non-detect for the failing analyte.

Samples with non-compliant surrogate recoveries should be reanalyzed unless deemed unnecessary by the supervisor for matrix, historical data, or other analysis related anomalies.

Laboratory and Matrix Spike acceptance criteria vary significantly depending on method and matrix. Analysts and supervisors meet and discuss appropriate corrective action measures as spike failures occur.

Sample duplicates with RPD values outside control limits require supervisor evaluation and possible reanalysis.

A second mechanism for initiation of corrective action is that resulting from Quality Assurance performance audits, system audits, inter and intra-laboratory comparison studies. Corrective Actions initiated through this mechanism will be monitored and coordinated by the laboratory QA/QCO.

All corrective action forms are entered in the LIMS and included with the raw data for peer review, signed by the technical director of the section and included in the case narrative to

the client whose samples were affected. All Corrective action forms in the LIMS are reviewed by the QA/QCO.

13.0 Quality Assurance Audits, Reports and Complaints

Internal/External Systems' Audits, Performance Evaluations, and Complaints

Several procedures are used to assess the effectiveness of the quality control system. One of these methods includes internal performance evaluations, which are conducted by the use of control samples, replicate measurements and control charts. Another method is external performance audits, which are conducted by the use of inter-laboratory checks, such as participation in laboratory evaluation programs and performance evaluation samples available from a NELAC accredited Proficiency Standard Vendor.

Proficiency samples will be obtained twice per year from an appropriate vendor for all tests and matrices for which we are accredited and for which there are PTs available. HEAL participates in soil, waste water, drinking water and underground storage tank PT studies. Copies of results are available upon request. HEAL's management and all analyst shall ensure that all PT samples are handled in the same manner as real environmental samples utilizing the same staff, methods, procedures, equipment, facilities and frequency of analysis as used for routine analysis of that analyte. When analyzing a PT, HEAL shall employ the same calibration, laboratory quality control and acceptance criteria, sequence of analytical steps, number of replicates and other procedures as used when analyzing routine samples.

With regards to analyzing PT Samples HEAL shall not send any PT sample, or portion of a PT sample, to another laboratory for any analysis for which we seeks accreditation, or are accredited. HEAL shall not knowingly receive any PT sample or portion of a PT sample from another laboratory for any analysis for which the sending laboratory seeks accreditation, or is accredited. Laboratory management or staff will not communicate with any individual at another laboratory concerning the PT sample. Laboratory management or staff shall no attempt to obtain the assigned value of any PT sample from the PT Provider.

Internal Audits are performed annually by the QA/QCO in accordance with the current Internal Audit SOP. They are performed using the guidelines outlined below:

The system audit consists of a qualitative inspection of the QA system in the laboratory and an assessment of the adequacy of the physical facilities for sampling, calibration, and measurement. This audit includes a careful evaluation and review of laboratory quality control procedures. Including but not limited to:

- 1. Review of staff qualifications, demonstration of capability, and personnel training programs
- 2. Storage and handling of reagents, standards and samples
- 3. Standard preparation logbook and LIMS procedures
- 4. Extraction logbooks
- 5. Raw data logbooks
- 6. Analytical logbooks or batch printouts and instrument maintenance logbooks
- 7. Data review procedures

- 8. Corrective action procedures
- 9. Review of data packages is performed regularly by the lab manager/QA Officer.

The QA/QCO will conduct these audits on an annual basis.

Management Reviews

HEAL management shall periodically, and at least annually conduct a review of the laboratory's quality system and environmental testing activities to ensure their continuing suitability and effectiveness, and to introduce necessary changes or improvements. The review shall take account of:

- 1. the suitability and implementation of policies and procedures
- 2. reports from managerial and supervisory personnel
- 3. the outcome of recent internal audits
- 4. corrective and preventive actions
- 5. assessments by external bodies
- 6. the results of interlaboratory comparisons or proficiency tests
- 7. changes in volume and type of work
- 8. client feed back
- 9. complaints
- 10 other relevant factors, such as laboratory health and safety, QC activities, resources and staff training.

Findings from management reviews and the actions that arise from them shall be recorded and any corrective actions that arise shall be completed in an appropriate and agreed upon timescale.

Complaints

Complaints from clients are documented and given to the laboratory manager. The lab manager shall review the information and contact the client. If doubt is raised concerning the laboratories policies or procedures, then an audit of the section or sections may be performed. All records of complaints and subsequent actions shall be maintained in the client compliant logbook for 5 years unless otherwise stated.

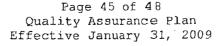
Internal and External Reports

The QA/QCO is responsible for preparation and submission of quality assurance reports to the appropriate management personnel as problems and issues arise. These reports include the assessment of measurement systems, data precision and accuracy, and the results of performance and system audits. Additionally, they also include significant QA problems, corrective actions, and recommended resolution measures. Reports of these Quality Assurance Audits describe the particular activities audited, procedures utilized in

the examination and evaluation of laboratory records, and data validation procedures. Finally, there are procedures for evaluating the performance of Quality Control and Quality Assurance activities, and laboratory deficiencies and the implementation of corrective actions with the review requirements.

14.0 Analytical Protocols Utilized at Hall Environmental Analysis Laboratory, Inc.

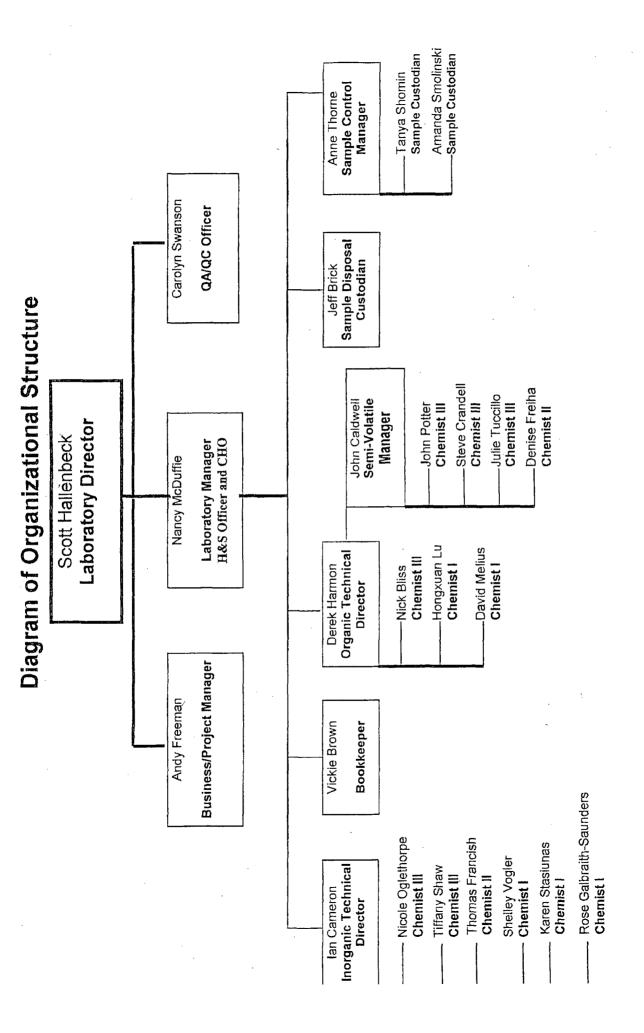
- 1. <u>Standard Methods for the Examination of Water and Wastewater:</u> AOHA, AWWA, and WPCG; 20th Edition, 1999.
- 2. <u>Methods for Chemical Analysis of Water and Wastes</u>, USEPA, EPA-600/4-79-020, March 1979 and as amended December, 1982 (EPA-600/4-82-055)
- 3. <u>Test Methods for Evaluating Solid Waste: Physical/Chemical Methods</u>, USEPA SW-846, 3rd Edition, Updates I, II, IIA, IIB, III, December, 1996.
- 4. <u>Methods of Soil Analysis</u>: Parts 1 & 2, 2nd Edition, Agronomy Society of America, Monograph 9
- 5. <u>Diagnosis & Improvement of Saline & Alkali Soils</u>, Agriculture Handbook No. 60, USDA, 1954
- 6. <u>Handbook on Reference Methods for Soil Testing.</u> The Council on Soil Testing & Plant Analysis, 1980 and 1992
- 7. <u>Field and Laboratory Methods Applicable to Overburdens and Mine Soils, USEPA, EPA-600/2-78-054, March 1978</u>
- 8. <u>Laboratory Procedures for Analyses of Oilfield Waste.</u> Department of Natural Resources, Office of Conservation, Injection and Mining Division, Louisiana, August 1988
- 9. <u>Soil Testing Methods Used at Colorado State University for the Evaluation of Fertility.</u> Salinity and Trace Element Toxicity, Technical Bulletin LT B88-2 January, 1988
- 10. <u>Manual of Operating Procedures for the Analysis of Selected Soil, Water, Plant Tissue and Wastes Chemical and physical Parameter.</u> Soil, Water, and Plant Analysis Laboratory, Dept. of Soil and Water Science, The University of Arizona, August 1989
- 11. Sampling Procedures and Chemical Methods in Use at the U.S. Salinity Laboratory for Characterizing Salt-Affected Soils and Water. USDA Salinity Laboratory.
- 12. <u>Procedures for Collecting Soil Samples and Methods of Analysis for Soil Survey.</u> USDA Soil Conservation Service, SSIR No. 1.
- 13. <u>Soil Survey Laboratory Methods Manual.</u> Soil Survey Laboratory Staff. Soil Survey Investigations Report No. 42, version 2.0, August 1992.
- 14. <u>Methods for the Determination of Metals in Environmental Samples</u>, USEPA, EPA-600/4-91-010, June 1991
- 15. The Merck Index, Eleventh Edition, Merck & Co., Inc. 1989.





- 16. Handbook of Chemistry and Physics, 62nd Edition, CRC Press, Inc. 1981-1982.
- 17. Analytical Chemistry of PCB's. Erickson, Mitchell D., CRC Press, Inc. 1992.
- 18. <u>Environmental Perspective on the Emerging Oil Shale Industry,</u> EPA Oil & Shale Research Group.
- 19. Polycyclic Aromatic Hydrocarbons in Water Systems, CRC Press, Inc.
- 20. Quality Systems for Analytical Services, Revision 2.2, U.S. Department of Energy, October 2006.

Appendix A Personnel Chart / Organizational Structure



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OREGON

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM



NELAP Recognized

Hall Environmental Analysis Laboratory, Inc.

NM100001

4901 Hawkins Rd. NE, Suite D Albuquerque, NM 87109

IS GRANTED APPROVAL BY ORELAP UNDER THE 2003 NELAC STANDARDS, TO PERFORM ANALYSES ON ENVIRONMENTAL SAMPLES IN MATRICES AS LISTED BELOW:

	Drinking	Non Potable	Solids and	·	
Air	Water	Water	Chem. Waste	Tissue	
	Chemistry	Chemistry	Chemistry		

AND AS RECORDED IN THE LIST OF APPROVED ANALYTES, METHODS, ANALYTIC TECHNIQUES, AND FIELDS OF TESTING ISSUED CONCURRENTLY WITH THIS CERTIFICATE AND REVISED AS NECESSARY.

ACCREDITED STATUS DEPENDS ON SUCCESSFUL ONGOING PARTICIPATION IN THE PROGRAM AND CONTINUED COMPLIANCE WITH THE STANDARDS.

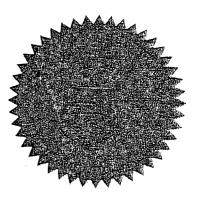
CUSTOMERS ARE URGED TO VERIFY THE LABORATORY'S CURRENT ACCREDITATION STATUS IN OREGON.

Irene E. Ronning, Ph.D. ORELAP Administrator 3150 NW 229th Ave, Suite 100 Hillsboro, OR 97124

> ISSUE DATE: 3/1/2008 EXPIRATION DATE: 2/28/2009

Certificate No:

NM100001-009





Oregon

Environmental Laboratory Accreditation Program

Public Health Laboratory 3150 NW 229th Ave, Suite 100 Hillsboro, OR, OR 97124 NELAP Recognized (503) 693-4122 FAX (503) 693-5602

Department of Agriculture, Laboratory Division Department of Environmental Quality, Laboratory Division Department of Human Services, Public Health Laboratory

> ORELAPID: NM100001 EPACode:

NM00035

Certificate:

NM100001-009

ORELAP Fields of Accreditation

Hall Environmental Analysis Laboratory, Inc.

4901 Hawkins Rd. NE, Suite D Albuquerque, NM, 87109

Issue Date: 3/1/2008

Expiration Date: 2/28/2009

ference		Code	Description	
A 200.7 5		10014003	ICP - metals	_
Analyte Code	<u>Analyte</u>			
1000	Aluminum			
1015	Barium			
1020	Beryllium			
1025	Boron			
1030	Cadmium	•	·	
1035	Calcium			
1040	Chromium	a.		
1055	Copper			
1070	Iron			
1075	Lead			
1085	Magnesium			
1090	Manganese	. ,		
1100	Molybdenum		•	
1105	Nickel			
1125	Potassium			
1150	Silver			
11 <i>5</i> 5	Sodium			
1175	Tin			
1180	Titanium			
1185	· Vanadium			
1190	Zinc		•	
PA 245.1 3		10036609	Mercury by Cold Vapor Atomic Absorption	
Analyte Code	<u>Analyte</u>			
1095	Мегсигу			
PA 300.0		10053006	ion chroma tography - anions.	
Analyte Code	<u>Analyte</u>			
1575	Chioride			
1730	Fluoride			
1810	Nitrate as N			
1835	Nitrite			
2000	Sulfate		·	
PA 300.0 2.1		10053200	Inorganic Anions in water by Ion Chromatography	_
Analyte Code	<u>Analyte</u>			
1870	Orthophosphate	as P		

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EPA 5030B 2	10153409	Purge and trap for aqueous samples
Analyte Code	<u>Analyte</u>	
125	Extraction/Preparation	
EPA 504.1	10083008	EDB/DBCP/TCP micro-extraction, GC/ECD
Analyte Code	<u>Analyte</u>	
4570	1,2-Dibromo-3-chloropropane (DBCF	
4585	1,2-Dibromoethane (EDB, Ethylene c	•
EPA 524.2 4.1	10088809	Volatile Organic Compounds GC/MS Capillary Column
Analyte Code	<u> Analyte</u>	
5105	1,1,1,2-Tetrachloroethane	
5160	1,1,1-Trichloroethane	
5110	1,1,2,2-Tetrachloroethane	
5165	1,1,2-Trichloroethane	
4630	1,1-Dichloroethane	
4640	1,1-Dichloroethylene	
4670	1,1-Dichloropropene	
5150	1,2,3-Trichlorobenzene	
5180	1,2,3-Trichloropropane	•
5155	1,2,4-Trichlorobenzene	
5210	1,2,4-Trimethylbenzene	
4610	1.2-Dichlorobenzene	
4635	1,2-Dichloroethane	
4655	1,2-Dichloropropane	
5215	1,3,5-Trimethylbenzene	
4615	1,3-Dichlorobenzene	
4660	1,3-Dichloropropane	\
4620	1,4-Dichlorobenzene	
4535	2-Chlorotoluene	
4540	4-Chlorotoluene	
4375	Benzene	·
4385	Bromobenzene	
4390	Bromochloromethane	
4395	Bromodichloromethane	
4400	Bromoform	
4950	Bromomethane (Methyl bromide)	
4455	Carbon tetrachloride	
4475	Chlorobenzene	
4485	Chloroethane	
4505	Chloroform	
105	Chloromethane	
4645	cis-1,2-Dichloroethylene	
4680	cis-1,3-Dichloropropene	
4575	Dibromochloromethane	
4595	Dibromomethane	·
4650	Dichloromethane (DCM, Methylene o	chloride)
4765	Ethylbenzene	
4835	Hexachlorobutadiene	
4900	Isopropylbenzene	
5000	Methyl tert-butyl ether (MTBE)	
4435	n-Butylbenzene	
5090	n-Propylbenzene	

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4440	sec-Butylbenzene		
5100	Styrene		
4445	tert-Butylbenzene		
5115	Tetrachioroethylene (Perchi	loroethylene	a)
5140	Toluene		
4700	trans-1,2-Dicloroethylene		
4685	trans-1,3-Dichloropropylene	•	
5170	Trichloroethene (Trichloroet	thylene)	
51.75	Trichlorofluoromethane		
5235	Vinyl chloride		
5260	Xylene (total)		<u> </u>
SM 2540 C 20th ED	200500	004	Total Dissolved Solids
Analyte Code	<u>Analyte</u>		
1955	Residue-filterable (TDS)		
SM 4500-H+ B 20th E	201048	B07	pH by Probe
Analyte Code	<u>Analyte</u>		
1900	pH .		
SM 5310 B 20th ED	201374	400	Total Organic Carbon by Combustion Infra-red Method
Analyte Code	<u>Analyte</u>		
2040	Total Organic Carbon		

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Reference	otable Water	Code	Description
EPA 300.0		10053006	Ion chromatography - anions.
Analyte Code	Analyte ·		• • • • • • • • • • • • • • • • • • • •
1540	Bromide		
1575	Chloride		
1730	Fluoride		
1810	Nitrate as N		
1840	Nitrite as N		
1870	Orthophosphate	as P	
2000	Sulfate	45 (
PA 3005A 1	Cunato	10133207	Acid Digestion of waters for Total Recoverable or Dissolved Metals
Analyte Code	<u> Analyte</u>	10100207	And Digodolf of Name to Four Caparage of Disserted Models
125	Extraction/Prepa	ration	
EPA 3510C 3	L.XII aCIIOTI/FTEDA	10138202	Separatory Funnel Liquid-liquid extraction
Analyte Code	<u>Analyte</u>	10130202	Separatory Turner Educationic extraction
125	Extraction/Prepa	ration	
EPA 5030B 2	Extraction/Prepa	10153409	Purge and trap for aqueous samples
Analyte Code	Amaluta	10103409	ruige and trap tot adresons samples
	<u>Analyte</u> Extraction/Prepa	ration	
125 EPA 6010B 2	Extraction/Prepa	10155609	ICP - AES
	A forto	10100009	ICP - AES
Analyte Code	<u>Analyte</u>		
1000	Aluminum		
1005	Antimony		
1010	Arsenic		
1015	Barium		
1020	Beryllium		
1025	Boron		
1030	Cadmium		
1035	Calcium		
1040	Chromium	,	
1050	Cobalt		
1070	iron		
107 5	Lead		
1085	Magnesium		
1090	Manganese		
1100	Molybdenum		
1105	Nickel		
1125	Potassium		
1140	Selenium		
1150	Silver		
115 5	Sodium		
1165	Thallium		
1175	Tin		
1180	Titanium		
3035	Uranium		
1 18 5	Vanadium		
11 90	Zinc		
PA 7470A 1	,	10165807	Mercury in Liquid Waste by by Cold Vapor Atomic Absorption
Analyte Code	<u>Analyte</u>		

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PA 8015B 2	10173601	Non-halogenated organics using GC/FID
Analyte Code	<u>Analyte</u>	
9369	Diesel range organics (DRO)	•
9408	Gasoline range organics (GRO)	
102	Motor Oil	
PA 8021B 2	10174808	Aromatic and Halogenated Volatiles by GC with PID and/or ECD Purge
Analyte Code	<u>Analyte</u>	
5210	1,2,4-Trimethylbenzene	
5215	1,3,5-Trimethylbenzene	
4375	Benzene	
4765	Ethylbenzene	
5240	m+p-xylene	
5000	Methyl tert-butyl ether (MTBE)	
5250	o-Xylene	
5140	Toluene	
5260	Xylene (total)	
PA 8081A 1	10178606	Organochlorine Pesticides by GC/ECD
Analyte Code	Analyte	
7355	4,4'-DDD	
7360	4,4'-DDE	
7365	4,4'-DDT	
7025	Aldrin	·
7110	alpha-BHC (alpha-Hexachiorocycle	phexane)
7115	beta-BHC (beta-Hexachlorocyclohe	·
7105	delta-BHC	
7470	Dieldrin	
7510	Endosulfan I	
7515	Endosulfan II	,
7520	Endosulfan sulfate	\cdot
7540	Endrin	
7530	Endrin aldehyde	
7120	gamma-BHC (Lindane, gamma-He	exachiorocyclohexanE)
7685	Heptachlor	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
7690	Heptachlor epoxide	
7810	Methoxychior	
PA 8082	10179007	Polychlorinated Biphenyls (PCBs) by GC/ECD
Analyte Code	Analyte	and the second s
8880	Arocior-1016 (PCB-1016)	
8885	Arocior-1221 (PCB-1221)	·
8890	Aroclor-1232 (PCB-1232)	•
8895	Aroclor-1242 (PCB-1242)	
8900	Aroclor-1248 (PCB-1248)	
8905	Aroclor-1254 (PCB-1254)	
8910	Arocior-1260 (PCB-1260)	
PA 8260B 2	10184802	Volatile Organic Compounds by purge and trap GC/MS
PA 6260B 2 Analyte Code	Analyte	Toldale Organie Compounds by Palys and day Comic
5105	1,1,1,2-Tetrachloroethane	
5160	1,1,1-Trichioroethane	
amu	• •	
	. 1 1 7 7 Tatrophiaracthana	
5110 5165	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane	

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4640	1,1-Dichloroethylene
4670	1,1-Dichloropropene
5150	1,2,3-Trichlorobenzene
5180	1,2,3-Trichloropropane
5155	1,2,4-Trichlorobenzene
5210	1,2,4-Trimethylbenzene
4570	1,2-Dibromo-3-chloropropane (DBCP)
458 5	1,2-Dibromoethane (EDB, Ethylene dibromide)
4610	1,2-Dichlorobenzene
4635	1,2-Dichloroethane
4655	1,2-Dichloropropane
521 5	1,3,5-Trimethylbenzene
4615	1,3-Dichlorobenzene
4660	1,3-Dichloropropane
4620	1,4-Dichlorobenzene
6380	1-Methylnaphthalene
466 5	2,2-Dichioropropane
4410	2-Butanone (Methyl ethyl ketone, MEK)
453 5	2-Chlorotoluene
4860	2-Hexanone
6385	2-Methỳinaphthalene
4540	4-Chlorotoluene
4995	4-Methyl-2-pentanone (MIBK)
4315	Acetone
4375	Benzene
4385	Bromobenzene
4390	Bromochloromethane
4395	Bromodichloromethane
4400	Bromoform
4950	Bromomethane (Methyl bromide)
4450	Carbon disulfide
4455	Carbon tetrachloride
4475	Chlorobenzene
4485	Chloroethane
4505	Chloroform
105	Chloromethane
4645	cis-1,2-Dichloroethylene
4680	cis-1,3-Dichloropropene
4575	Dibromochloromethane
4595	Dibromomethane
4625	Dichlorodifluoromethane
4650	Dichloromethane (DCM, Methylene chloride)
4765	Ethylbenzene
4835	Hexachlorobutadiene
4900	Isopropylbenzene
5240	m+p-xylene
5000	Methyl tert-butyl ether (MTBE)
5005	Naphthalene
4435	n-Butylbenzene
5090	n-Propylbenzene
5250	o-Xylene

ORELAPID: NM100001 EPACode: NM00035

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Hall Environmental Analysis Laboratory, Inc.

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As of 03/01/2008 this list supercedes all previous lists for this certificate number.

Customers:	Please	verity the	current	accreditation	standing	with ORELAP	

EPA 8270C 3		10185805	SemiVolitile C
5260	Xylene (total)		
5235	Vinyi chloride		
5175	Trichlorofluorom	nethane	
5170	Trichloroethene	(Trichloroethylene)	
4685	trans-1,3-Dichlo	ropropylene	
4700	trans-1,2-Dictore	oethylene	
5140	Toluene		
5115	Tetrachioroethy	lene (Perchloroethyl	ene)
4445	tert-Butylbenzer	10	
510 0	Styrene		
4440	sec-Butylbenzer	ne	
4910	p-isopropyitolue	ne	

	5235	Vinyl chloride	
	5260	Xylene (total)	
A	8270C 3	10185805	SemiVolitile Organic compounds by GC/MS
	Analyte Code	<u>Analyte</u>	
	5155	1,2,4-Trichlorobenzene	
	4610	1,2-Dichlorobenzene	
	4615	1,3-Dichlorobenzene	
	4620	1,4-Dichlorobenzene	
	6835	2,4,5-Trichiorophenol	
	6840	2,4,6-Trichlorophenol	•
	6000	2,4-Dichlorophenol	
	6130	2,4-Dimethylphenol	•
	6175	2,4-Dinitrophenol	
	6185	2,4-Dinitrotoluene (2,4-DNT)	•
	6190	2,6-Dinitrotoluene (2,6-DNT)	
	5795	2-Chloronaphthalene	
	5800	2-Chlorophenol	
	6385	2-Methylnaphthalene	
	6400	2-Methylphenol (o-Cresol)	
	6460	2-Nitroanlline	
	6490	2-Nitrophenol	
	6412	3 & 4 Methylphenol	
	5945	3,3'-Dichlorobenzidine	
	6465	3-Nitroaniline	
	6140	4,6-Dinitro-2-methylphenol	
	5660	4-Bromophenyl phenyl ether	
	5700	4-Chloro-3-methylphenol	
	5745	4-Chloroaniline	•
	5825	4-Chlorophenyl phenylether	
	6470	4-Nitroaniline	
	6500	4-Nitrophenol	
	5500	Acenaphthene	
	5505	Acenaphthylene	
	5545	Aniline	
	5555	Anthracene	•
	123	Azobenzene	,
	5575	Benzo[a]anthracene	·
	5580	Benzo[a]pyrene	
	5585	Benzo[b]fluoranthene	
	5590	Benzo[g,h,i]perylene	
	5600	Benzo[k]fluoranthene	

ORELAPID: NM100001 EPACode: NM00035

Certificate:

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Hall Environmental Analysis Laboratory, Inc.

4901 Hawkins Rd. NE, Suite D Albuquerque, NM, 87109

Issue Date: 3/1/2008

482

Expiration Date: 2/28/2009

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Customers. Flease verify the current accreditation standing with ORELAF.

Benzofluoranthene

402	Denzondoranthene	
5610	Benzoic acid	
5630	Benzyl alcohol	
5765	bis(2-Chloroethyl)ether	
5770	bis(2-Chloroethyloxymethane)	
5780	bis(2-Chloroisopropyl)ether	
6255	bis(2-Ethylhexyl)phthalate (DEHP)	
5670	Butyl benzyl phthalate	
5680	Carbazole	
5855	Chrysene	
5895	Dibenz[a,h]anthracene	
5905	Dibenzofuran	
6070	Diethyl phthalate	
6135	Dimethyl phthalate	
5925	Di-n-butyl phthalate	
6200	Di-n-octyl phthalate	
6265	Fluoranthene	
6270	Fluorene	
627 5	Hexachlorobenzene	
	Hexachlorobutadiene	
483 5 628 5		
	Hexachlorocyclopentadiene	
4840	Hexachloroethane	
631 5	indeno[1,2,3-cd]pyrene	
6320	Isophorone	
5005	Naphthalene	
5015	Nitrobenzene	
6535	n-Nitrosodiphenylamine	
6540	n-Nitrosodipropylamine	
6605	Pentachlorophenol	
6615	Phenanthrene	
6625	Phenol	
6665	Pyrene	
5095	Pyridine	D 100 10
EPA 8310	10187607	Polynuclear Aromatic Hydrocarbons by HPLC/UV-VIS
Analyte Code	<u>Analyte</u>	
6380	1-Methylnaphthalene	
5500	Acenaphthene	
5505	Acenaphthylene	
5555	Anthracene	
5575	Eenzo[a]anthracene	
5580	Benzo[a]pyrene	
5585	Eenzo[b]fluoranthene	
5590	Elenzo[g,h,i]perylene	
5600	Eienzo[k]fluoranthene	
5855	Chrysene	
5895	Dibenz[a,h]anthracene	
6265	Fluoranthene	•
6270	Fluorene	•
6270 6315	Fluorene Indeno[1,2,3-cd]pyrene	• •
6270	Fluorene	

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Expiration Date: 2/28/2009

20104807

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6665 Pyrene

SM 2540 C 20th ED 20050004 Total Dissolved Solids

Analyte Code Analyte

1955 Res SM 4500-H+ B 20th ED

Residue-filterable (TDS)

pH by Probe

Analyte Code 1900 Analyte pH

ORELAPID: NM100001 EPACode: NM00035

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MATIRIXSolids Reference	CONTRACTOR	Code	Description	CONT. CANADA DAGA CANADA
EPA 3050A		10135407	Acid Digestion of Sediments, Sludges, and soils	
Analyte Code	Analyte			
125	Extraction/Preparati	on		
PA 3540C 3		10140202	Soxhlet Extraction	
Analyte Code	<u>Analyte</u>			
125	Extraction/Preparati	On		
PA 3545	Extraction: Toparati	10140804	Pressurized Fluid Extraction (PFE)	
Analyte Code	<u>Analyte</u>	10110001	() () () () () () () () () ()	
125	Extraction/Preparati	on		
PA 5035	Extraction// Teparati	10154004	Closed-System Purge-and-Trap and Extraction for Volatile (Omanics in S
Analyte Code	<u>Analyte</u>	10104004	Olosad-Dystolin Faligo-and-Trap and Extraction for Volume C	organics in c
125	Extraction/Preparati	on		
PA 6010B 2	Extraction/Freparati	10155609	ICP - AES	
Analyte Code	Analida	10155505	IOF - ALS	
1000	<i>Analyte</i> Aluminum			
1005	Antimony			
	-			
1010	Arsenic			
1015	Barium			
1020	Beryllium			
1025	Boron			
1030	Cadmium			
1035	Calcium			
1040	Chromium			
1050	Cobalt			
1055	Copper			
1070	Iron			
1075	Lead			
1085	Magnesium			
1090	Manganese			
1100	Molybdenum			
1105	Nickel			
1125	Potassium		•	
1140	Selenium			
1150	Silver			
1155	Sodium			
1165	Thallium			
1175	Tin			
1180	Titanium			
3035	Uranium			
1185	Vanadium			
1190	Zinc			
PA 7471A 1		10166208	Mercury in Solid Waste by Cold Vapor Atomic Absorption	
<u>Analyte Code</u> 1095	<u>Analyte</u> Mercury			<u>.</u>
PA 8015B 2		10173601	Non-haloge nated organics using GC/FID	
Analyte Code	<u>Analyte</u>			
9369	Diesel range organi	cs (DRO)		
9408	Gasoline range orga	anics (GRO)		
102	Motor Oil			

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10174808	Aromatic and Halogenated Volatiles by GC with PID and/or ECD Purge
<u>Analyte</u>	
Benzene	·
Ethylbenzene	
m+p-xylene	
Methyl tert-butyl ether (MTBE)	
o-Xylene	
Toluene	
Xylene (total)	
10178606	Organochlorine Pesticides by GC/ECD
<u>Analyte</u>	•
4,4'-DDD	•
· ,	
· ·	·
	nexane)
, , , ,	,
	· ·
•	rachiorocyclo havanE)
	adiliolocyclo rioxaric,
•	
	Polychlori nated Biphenyls (PCBs) by GC/ECD
	Polychiot Hawa Diphotiyis (Pobs) by Gorcob
·	
· · · · · ·	· ·
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· · · · · · · · · · · · · · · · · · ·	
· ·	
' '	
	Volatile O rganic Compounds by purge and trap GC/MS
	Tolatile O Iganic compounds by pulge and hap domic
, , ,	
1,1-Dichloroethane	
1 1 Dichloroothyissa	
1,1-Dichloroethylene	
1,1-Dichloropropene	
1,1-Dichioropropene 1,2,3-Trichiorobenzene	
1,1-Dichloropropene 1,2,3-Trichlorobenzene 1,2,3-Trichloropropane	
1,1-Dichioropropene 1,2,3-Trichiorobenzene	
	Analyte Benzene Ethylbenzene m+p-xylene Methyl tert-butyl ether (MTBE) o-Xylene Toluene Xylene (total) 10178606 Analyte

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4585	1,2-Dibromoethane (EDB, Ethylene dibromide)
4610	1,2-Dichlorobenzene
4635	1,2-Dichloroethane
4655	1,2-Dichloropropane
5215	1,3,5-Trimethylbenzene
4615	1,3-Dichlorobenzene
4660	1,3-Dichloropropane
4620	1,4-Dichlorobenzene
6380	1-Methylnaphthalene
4665	2,2-Dichloropropane
4410	2-Butanone (Methyl ethyl ketone, MEK)
4535	2-Chlorotoluene
4860	2-Hexanone
6385	2-Methylnaphthalene
4540	4-Chiorotoluene
4995	4-Methyl-2-pentanone (MIBK)
4315	Acetone
4375	Benzene
4385	Bromobenzene
4390	Bromochloromethane
4395	Bromodichloromethane
4400	Bromoform
4950	Bromomethane (Methyl bromide)
4450	Carbon disulfide
4455	Carbon tetrachloride
4475	Chlorobenzene
4485	Chloroethane
4505	Chloroform
105	Chloromethane
4645	cis-1,2-Dichloroethylene
4680	cis-1,3-Dichloropropene
4575	Dibromochloromethane
4595	Dibromomethane
4625	Dichlorodifluoromethane
4650	Dichloromethane (DCM, Methylene chloride)
4765	Ethylbenzene
4835	Hexachtorobutadiene
4900	Isopropylbenzene
5240	m+p-xylene
5000	Methyl tert-butyl ether (MTBE)
5005	Naphthalene
4435	n-Butylbenzene
5090	n-Propylbenzene
5250	o-Xylene
4910	p-Isopropyltoluene
4440	sec-Butylbenzene
5100	Styrene
4445	tert-Butylbenzene
5115	Tetrachloroethylene (Perchloroethylene)
5140	Toluene
4700	trans-1,2-Dictoroethylene

ORELAPID: NM100001 EPACode: NM00035

Certificate:

NM100001-009

Hall Environmental Analysis Laboratory, Inc.

4901 Hawkins Rd. NE, Suite D Albuquerque, NM, 87109

Issue Date: 3/1/2008

Expiration Date: 2/28/2009

	4685	trans-1,3-Dichloropropylene	
	5170	Trichtoroethene (Trichtoroethylene)	
	5175	Trichlorofluoromethane	
	5235	Vinyl chloride	
	5260	Xylene (total)	
EPA	8270C 3	10185805	SemiVolitile Organic compounds by GC/MS
	Analyte Code	Analyte	
	5155	1,2,4-Trichlorobenzene	
	4610	1,2-Dichlorobenzene	·
	4615	1,3-Dichtorobenzene	
	4620	1,4-Dichlorobenzene	
	6835	2,4,5-Trichlorophenol	
	6840	2,4,6-Trichlorophenol	
	6000	2,4-Dichlorophenol	
	6130	2,4-Dimethylphenol	
	6175	2,4-Dinitrophenol	
	6185	2,4-Dinitrotoluene (2,4-DNT)	·
	6190	2,6-Dinitrotoluene (2,6-DNT)	•
	5795	2-Chloronaphthalene	
	5800	2-Chlorophenol	
	6385	2-Methylnaphthalene	
	6400	2-Methylphenol (o-Cresol)	
	6460	2-Nitroanlline	
	6490	2-Nitrophenol	
	6412	3 & 4 Methylphenol	
	5945	3,3'-Dichlorobenzidine	
	6465	3-Nitroaniline	
	6140	4,6-Dinitro-2-methylphenol	
	5660	4-Bromophenyl phenyl ether	
	5700	4-Chloro-3-methylphenol	
	5745	4-Chloroaniline	
	5825	4-Chlorophenyl phenylether	
	6470 6500	4-Nitrophonal	
	5500	4-Nitrophenol Acenaphthene	
	5505	Acenaphthylene	
	5545	Aniline	
	555 5	Anthracene	
	123	Azobenzene	
	5575	Benzo[a]anthracene	
	5580	Benzo[a]pyrene	
	5585	Benzo[b]fluoranthene	
	5590	Benzo[g,h,i]perylene	·
	5600	Benzo[k]fluoranthene	
	5610	Benzoic acld	
	5630	Benzyl alcohol	•
	5760	bis(2-Chloroethoxy)methane	
	5765	bis(2-Chloroethyl)ether	
	5780	bis(2-Chloroisopropyl)ether	
	6255	bis(2-Ethylhexyl)phthalate (DEHP)	
	5670	Butyl benzyl phthalate	

ORELAPID: NM100001 EPACode: NM00035

Certificate:

NM100001-009

Hall Environmental Analysis Laboratory, Inc.

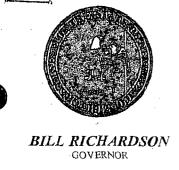
4901 Hawkins Rd. NE, Suite D Albuquerque, NM, 87109

Issue Date: 3/1/2008

Expiration Date: 2/28/2009

5680	Carbazole
5855	Chrysene
5895	Dibenz[a,h]anthracene
5905	Dibenzofuran
6070	Diethyl phthalate
6135	Dimethyl phthalate
5925	Di-n-butyl phthalate
6200	Di-n-octyl phthalate
6265	Fluoranthene
6270	Fluorene
627 5	Hexachiorobenzene
4835	Hexachlorobutadiene
6285	Hexachlorocyclopentadiene
4840	Hexachloroethane
6315	Indeno[1,2,3-cd]pyrene
6320	Isophorone
5005	Naphthalene
5015	Nitrobenzene
6530	n-Nitrosodimethylamine
653 5	n-Nitrosodiphenylamine
6540	n-Nitrosodipropylamine
660 5	Pentachlorophenol
6615	Phenanthrene
6625	Phenol
6665	Pyrene
5 D95	Pyridine
EPA 8310	101876

Analyte Code	<u>Analyte</u>
6380	1-Methylnaphthalene
6385	2-Methylnaphthalene
5500	Acenaphthene
5505	Acenaphthylene
5555	Anthracene
557 5	Benzo[a]anthracene
.5580	Benzo[a]pyrene
5585	Benzo[b]fluoranthene
5590	Benzo[g,h,i]perylene
5600	Benzo[k]fluoranthene
5855	Chrysene
5895	Dibenz[a,h]anthracene
6265	Fluoranthene
6270	Fluorene
6315	indeno[1,2,3-cd]pyrene
5005	Naphthalene
6615	Phenanthrene
6665	Pyrene



State of New Mexico

ENVIRONMENT DEPARTMENT

Field Operations Division
Drinking Water Bureau
525 Camino de Los Marquez
Santa Fe, New Mexico 87501
Telephone (505) 476-8620
Fax (505) 476-8658



March 11, 2008

Hall Environmental Analysis Laboratory Inc. 4901 Hawkins Rd. NE, Suite D Albuquerque, NM 87109

Dear Mr. Freeman

The Drinking Water Bureau of the New Mexico Environment Department (NMED-DWB) has received and reviewed your Nelap certification /accreditation information from the state of Oregon, The documentation is acceptable and your New Mexico certification is now valid through February 29, 2009.

This certification is to perform drinking water analysis in compliance with the Federal Safe Drinking Water Act, pursuant 40CFR Part 141, and the New Mexico Environment Department Drinking Water Regulations for the Primary Regulated contaminants, including Contaminants in as listed in your Oregon Scope Accreditation.

You must advise NMED-DWB of any change in your accreditation by the State of Oregon and continue to provide this office with performance evaluation results. You are also required to provide evidence of renewal of accreditation by the state of Oregon to continue certification past February 29, 2009.

Laboratories certified by the New Mexico can be purged from the list if there is no evidence that they are performing drinking water compliance samples analysis for public water supply systems in New Mexico.

IF you have any questions or require additional information, please contact me at 505-476-8635.

Sincerely,

Jac Chavez

Section 11.0 Chemical Analytical Reports

Title	Tab Number
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Soil Gas First Quarter 2009	18
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Soil Gas Third Quarter 2009	20
Soil Gas Fourth Quarter 2009	21
GAC Analysis – January to December 2009	22



COVER LETTER

Monday, March 23, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990

Bloomfield, NM 87413 TEL: (505) 632-4161

FAX (505) 632-3911

RE: River Terrace 1ST QTR 2009

Dear Cindy Hurtado:

Order No.: 0903075

Hall Environmental Analysis Laboratory, Inc. received 10 sample(s) on 3/5/2009 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. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager

Nancy McDuffie, Laboratory Manager

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



Date: 23-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Project:

River Terrace 1ST QTR 2009

Lab Order:

0903075

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date
0903075-01A	TP-2	R32758	EPA Method 8021B: Volatiles	3/4/2009 8:35:00 AM
0903075-01A	TP-2	R32758	EPA Method 8015B: Gasoline Range	3/4/2009 8:35:00 AM
0903075-01A	TP-2	R32758	EPA Method 8021B: Volatiles	3/4/2009 8:35:00 AM
0903075-01A	TP-2	R32758	EPA Method 8015B: Gasoline Range	3/4/2009 8:35:00 AM
0903075-01A	TP-2	18457	EPA Method 8015B: Diesel Range	3/4/2009 8:35:00 AM
0903075-01B	TP-2	18471	EPA 6010B: Total Recoverable Metals	3/4/2009 8:35:00 AM
0903075-02A	TP-1	18457	EPA Method 8015B: Diesel Range	3/4/2009 8:55:00 AM
0903075-02A	TP-1	R32758	EPA Method 8021B: Volatiles	3/4/2009 8:55:00 AM
0903075-02A	TP-1	R32758	EPA Method 8015B: Gasoline Range	3/4/2009 8:55:00 AM
0903075-02A	TP-1	R32758	EPA Method 8021B: Volatiles	3/4/2009 8:55:00 AM
0903075-02A	TP-1	R32758	EPA Method 8015B: Gasoline Range	3/4/2009 8:55:00 AM
0903075-02B	TP-1	18471	EPA 6010B: Total Recoverable Metals	3/4/2009 8:55:00 AM
0903075-03A	TP-6	R32758	EPA Method 8015B: Gasoline Range	3/4/2009 9:20:00 AM
0903075-03A	TP-6	R32758	EPA Method 8021B: Volatiles	3/4/2009 9:20:00 AM
0903075-03A	TP-6	R32758	EPA Method 8015B: Gasoline Range	3/4/2009 9:20:00 AM
0903075-03A	TP-6	18457	EPA Method 8015B: Diesel Range	3/4/2009 9:20:00 AM
0903075-03A	TP-6	R32758	EPA Method 8021B: Volatiles	3/4/2009 9:20:00 AM
0903075-03B	TP-6	18471	EPA 6010B: Total Recoverable Metals	3/4/2009 9:20:00 AM
0903075-04A	TP-5	18457	EPA Method 8015B: Diesel Range	3/4/2009 9:35:00 AM
0903075-04A	TP-5	R32758	EPA Method 8021B: Volatiles	3/4/2009 9:35:00 AM
0903075-04A	TP-5	R32758	EPA Method 8015B: Gasoline Range	3/4/2009 9:35:00 AM
0903075-04A	TP-5	R32758	EPA Method 8021B: Volatiles	3/4/2009 9:35:00 AM
0903075-04A	TP-5	R32758	EPA Method 8015B: Gasoline Range	3/4/2009 9:35:00 AM
0903075-04A	TP-5	R32758	EPA Method 8021B: Volatiles	3/4/2009 9:35:00 AM
0903075-04B	TP-5	18471	EPA 6010B: Total Recoverable Metals	3/4/2009 9:35:00 AM
0903075-05A	DW #1	R32758	EPA Method 8015B: Gasoline Range	3/4/2009 10:10:00 AM
0903075-05A	DW #1	R32758	EPA Method 8021B: Volatiles	3/4/2009 10:10:00 AM
0903075-05A	DW #1	18457	EPA Method 8015B: Diesel Range	3/4/2009 10:10:00 AM
0903075-05B	DW #1	18477	EPA Method 7470: Mercury	3/4/2009 10:10:00 AM
0903075-05B	DW #1	18477	EPA Method 7470: Mercury	3/4/2009 10:10:00 AM
0903075-05B	DW #1	18471	EPA 6010B: Total Recoverable Metals	3/4/2009 10:10:00 AM
0903075-06A	TP-8	18457	EPA Method 8015B: Diesel Range	3/4/2009 10:25:00 AM
0903075-06A	TP-8	R32758	EPA Method 8021B: Volatiles	3/4/2009 10:25:00 AM
0903075-06A	TP-8	R32758	EPA Method 8015B: Gasoline Range	3/4/2009 10:25:00 AM
0903075-06A	TP-8	R32758	EPA Method 8021B. Volatiles	3/4/2009 10:25:00 AM
0903075-06A	TP-8	R32758	EPA Method 8015B: Gasoline Range	3/4/2009 10:25:00 AM
0903075-06B	TP-8	18471	EPA 6010B: Total Recoverable Metals	3/4/2009 10:25:00 AM
0903075-07A	MW #49	18457	EPA Method 8015B: Diesel Range	3/4/2009 10:55:00 AM

Project: Lab Order:

CLIENT:

Western Refining Southwest, Inc.

River Terrace 1ST QTR 2009

0903075

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date
0903075-07A	MW #49	R32758	EPA Method 8015B: Gasoline Range	3/4/2009 10:55:00 AM
0903075-07A	MW #49	R32758	EPA Method 8021B: Volatiles	3/4/2009 10:55:00 AM
0903075-07A	MW #49	R32758	EPA Method 8021B: Volatiles	3/4/2009 10:55:00 AM
0903075-07A	MW #49	R32758	EPA Method 8015B: Gasoline Range	3/4/2009 10:55:00 AM
0903075-07B	MW #49	18471	EPA 6010B: Total Recoverable Metals	3/4/2009 10:55:00 AM
0903075-08A	TP-9	18457	EPA Method 8015B: Diesel Range	3/4/2009 11:25:00 AM
0903075-08A	TP-9	R32758	EPA Method 8021B: Volatiles	3/4/2009 11:25:00 AM
0903075-08A	TP-9	R32758	EPA Method 8015B: Gasoline Range	3/4/2009 11:25:00 AM
0903075-08B	TP-9	18471	EPA 6010B: Total Recoverable Metals	3/4/2009 11:25:00 AM
0903075-09A	FIELD BLANK	R32758	EPA Method 8021B: Volatiles	3/4/2009 11:30:00 AM
0903075-09A	FIELD BLANK	R32758	EPA Method 8015B: Gasoline Range	3/4/2009 11:30:00 AM
0903075-10A	Trip Blank	R32758	EPA Method 8015B: Gasoline Range	
0903075-10A	Trip Blank	R32758	EPA Method 8021B: Volatiles	,



Date: 23-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0903075

Client Sample ID: TP-2

Collection Date: 3/4/2009 8:35:00 AM

Project:

River Terrace 1ST QTR 2009

Date Received: 3/5/2009

Lab ID:

0903075-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RAN	GE			·	Analyst: SCC
Diesel Range Organics (DRO)	6.0	1.0	mg/L	1	3/6/2009
Motor Oil Range Organics (MRO)	ND	. 5.0	mg/L	1	3/6/2009
Surr: DNOP	1 0 8	58-140	%REC	1	3/6/2009
EPA METHOD 8015B: GASOLINE R	ANGE				Analyst: DAM
Gasoline Range Organics (GRO)	3.7	0.25	mg/L	5	3/14/2009 5:56:34 PM
Surr: BFB	93.6	59.9-122	%REC	. 5	3/14/2009 5:56:34 PM
EPA METHOD 8021B: VOLATILES			•		Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	13	μg/L	5	3/14/2009 5:56:34 PM
Benzene	390	5.0	µg/L	5	3/14/2009 5:56:34 PM
Toluene	ND	5.0	µg/L	5	3/14/2009 5:56:34 PM
Ethylbenzene	500	10	μg/L	10	3/13/2009 4:17:59 PM
Xylenes, Total	580	. 10	μg/L÷	~ 5	3/14/2009 5:56:34 PM
Surr: 4-Bromofluorobenzene	110	65.9-130	%REC	5	3/14/2009 5:56:34 PM
EPA 6010B: TOTAL RECOVERABLE	E METALS				Analyst: NMO
Lead	0.0060	0.0050	mg/L	1	3/16/2009 10:19:58 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Estimated value E
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 1 of 10

Date: 23-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order: Project:

0903075

River Terrace 1ST QTR 2009

Collection Date: 3/4/2009 8:55:00 AM

Matrix: AQUEOUS

Client Sample ID: TP-1

Date Received: 3/5/2009

Lab ID:

0903075-02

PQL Qual Units Analyses Result DF Date Analyzed **EPA METHOD 8015B: DIESEL RANGE** Analyst: SCC 1 3/6/2009 Diesel Range Organics (DRO) 14 1.0 mg/L 3/6/2009 Motor Oil Range Organics (MRO) ND 5.0 mg/L 1 Surr: DNOP 118 58-140 %REC 3/6/2009 **EPA METHOD 8015B: GASOLINE RANGE** Analyst: DAM 3/14/2009 6:57:29 PM 100 Gasoline Range Organics (GRO) 46 mg/L 5.0 3/14/2009 6:57:29 PM 100 %REC Surr: BFB 81.4 59.9-122

PA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	250	μg/L	100	3/14/2009 6:57:29 PM
Benzene	850	100	μg/L	100	3/14/2009 6:57:29 PM
Toluene	· ND	100	µg/L	100	3/14/2009 6:57:29 PM
Ethylbenzene	3000	100	μg/L	100	3/14/2009 6:57:29 PM
Xylenes, Total	15000	200	μg/L	100	3/14/2009 6:57:29 PM
Surr: 4-Bromofluorobenzene	91.6	65.9-130	%REC	100	3/14/2009 6:57:29 PM

EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: NMO
Lead	•	0.040	0.0050	mg/L	1	3/16/2009 10:32:50 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank.

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 2 of 10

Date: 23-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0903075

River Terrace 1ST QTR 2009

Project: Lab ID:

0903075-03

Client Sample ID: TP-6

Collection Date: 3/4/2009 9:20:00 AM

Date Received: 3/5/2009

Matrix: AQUEOUS

Analyses	Result	PQL (ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	3E				Analyst: SCC
Diesel Range Organics (DRO)	2.5	1.0	mg/L	1	3/6/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	3/6/2009
Surr: DNOP	118	58-140	%REC	1	3/6/2009
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: DAM
Gasoline Range Organics (GRO)	12	1.0	mg/L	20	3/14/2009 7:58:16 PM
Surr: BFB	81.0	59.9-122	%REC	20	3/14/2009 7:58:16 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	50	µg/L	20	3/14/2009 7:58:16 PM
Benzene	25	20	μg/L	20	3/14/2009 7:58:16 PM
Toluene	ND	. 20	μg/L	20	3/14/2009 7:58:16 PM
Ethylbenzene	1100	20	µg/L	20	3/14/2009 7:58:16 PM
Xylenes, Total	4500	100	μg/L	50	3/13/2009 5:18:51 PM
Surr: 4-Bromofluorobenzene	90.6	65.9-130	%REC	20	3/14/2009 7:58:16 PM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: NMO
Lead	0.019	0.0050	mg/L	1	3/16/2009 10:37:14 AM

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

Page 3 of 10

Date: 23-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0903075

Client Sample ID: TP-5

Project:

River Terrace 1ST QTR 2009

Date Received: 3/5/2009

Lab ID:

0903075-04

Matrix: AQUEOUS

Collection Date: 3/4/2009 9:35:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	GE				Analyst: SCC
Diesel Range Organics (DRO)	12	1.0	mg/L	1	3/6/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	3/6/2009
Surr: DNOP	119	58-140	%REC	1	3/6/2009
EPA METHOD 8015B: GASOLINE R.	ANGE				Analyst: DAM
Gasoline Range Organics (GRO)	37	5.0	mg/L	100	3/14/2009 8:59:26 PM
Surr: BFB	87.2	59 .9-1 2 2	%REC	100	3/14/2009 8:59:26 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	25	µg/L	10 .	3/18/2009 12:48:13 PM
Benzene	19	10	μg/L	10	3/18/2009 12:48:13 PM
Toluene	ND	10	µg/L	10	3/18/2009 12:48:13 PM
Ethylbenzene	1800	100	μg/L	100	3/14/2009 8:59:26 PM
Xylenes, Total	14000	200	μg/L	100	3/14/2009 8:59:26 PM
Surr: 4-Bromofluorobenzene	101	65.9-130	%REC	100	3/14/2009 8:59:26 PM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: NMO
Lead	0.026	0.0050	mg/L	1	3/16/2009 10:40:16 AM
					i i



Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 4 of 10



Date: 23-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0903075

River Terrace 1ST QTR 2009

Project: Lab ID:

0903075-05

Client Sample ID: DW #1

Collection Date: 3/4/2009 10:10:00 AM

Date Received: 3/5/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E					Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	3/6/2009
Motor Oil Range Organics (MRO)	, ND	5.0		mg/L	1	3/6/2009
Surr: DNOP	123	58-140		%REC	1	3/6/2009
EPA METHOD 8015B: GASOLINE RA	ANGE					Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	3/13/2009 9:23:01 PM
Surr. BFB	86.4	59.9-122		%REC	1	3/13/2009 9:23:01 PM
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	3/13/2009 9:23:01 PM
Benzene	NĎ	1.0		μg/L	. 1	3/13/2009 9:23:01 PM
Toluene	ND	1.0		μg/L	1	3/13/2009 9:23:01 PM
Ethylbenzene	ND	1.0		µg/L	1	3/13/2009 9:23:01 PM
Xylenes, Total	ND	2.0		µg/L	1	3/13/2009 9:23:01 PM
Surr: 4-Bromofluorobenzene	93.9	65.9-130		%REC	1	3/13/2009 9:23:01 PM
EPA METHOD 7470: MERCURY						Analyst: SNV
Mercury	ND	0.0010		mg/L	- 5	3/9/2009 5:34:16 PM
EPA 6010B: TOTAL RECOVERABLE	METALS					Analyst: NMO
Lead	ND .	0.0050		mg/L	1	3/16/2009 10:52:58 AM

Ou	ali	íñe	ers

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

Page 5 of 10

Date: 23-Mar-09

CLIENT: Lab Order:

Western Refining Southwest, Inc.

0903075

River Terrace 1ST QTR 2009

Project: Lab ID:

0903075-06

Client Sample ID: TP-8

Collection Date: 3/4/2009 10:25:00 AM

Date Received: 3/5/2009

Matrix: AQUEOUS

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	GE				Analyst: SCC
Diesel Range Organics (DRO)	5.6	1.0	mg/L	1	3/6/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	3/6/2009
Surr: DNOP	119	58-140	%REC	1	3/6/2009
EPA METHOD 8015B: GASOLINE RA	ÂNGE		·	•	Analyst: DAM
Gasoline Range Organics (GRO)	9.1	0.25	mg/L	5	3/13/2009 9:56:06 PM
Surr: BFB	93.3	59.9-122	%REC	5	3/13/2009 9:56:06 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	13	μg/L	5	3/13/2009 9:56:06 PM
Benzene	8.9	5.0	μ g/L	5	3/13/2009 8:56:06 PM
Toluene:	ND	5.0	μ g/L	5	3/13/2009 9:56:06 PM
Ethylbenzene	290	. 5.0	μg/L	5	3/13/2009 9:56:06 PM
Xylenes, Total	2800	100	μg/L	50	3/14/2009 9:29:57 PM
Surr: 4-Bromofluorobenzene	114	65.9-130	%REC	5	3/13/2009 9:56:06 PM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: NMO
Lead	0.033	0.0050	mg/L	1	3/16/2009 10:57:01 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Е Estimated value
- Analyte detected below quantitation limits J
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Page 6 of 10

Date: 23-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0903075

River Terrace 1ST QTR 2009

Project: Lab ID:

0903075-07

Client Sample ID: MW #49

Collection Date: 3/4/2009 10:55:00 AM

Date Received: 3/5/2009

Matrix: AQUEOUS

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E				Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	3/6/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	. 1	3/6/2009
Surr: DNOP	126	58-140	%REC	1	3/6/2009
EPA METHOD 8015B: GASOLINE RA	NGE				Analyst: DAM
Gasoline Range Organics (GRO)	0.083	0.050	mg/L	1	3/14/2009 10:00:29 PM
Surr: BFB	87.5	59.9-122	%REC	1	3/14/2009 10:00:29 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	` 2.5	µg/L	1	3/14/2009 10:00:29 PM
Benzene	ND	1.0	μg/L	1	3/14/2009 10:00:29 PM
Toluene	ND	1.0	μg/L	1	3/14/2009 10:00:29 PM
Ethylbenzene	ND	1.0	μg/L	1	3/14/2009 10:00:29 PM
Xylenes, Total	, ND	2.0	µg/L	1 .	3/14/2009 10:00:29 PM
Surr: 4-Bromofluorobenzene	94.7	65.9-130	%REC	1	3/14/2009 10:00:29 PM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: NMO
Lead	ND	0.0050	mg/L	1	3/16/2009 11:01:12 AM

Value exceeds Maximum Contaminant Level

Page 7 of 10

Estimated value E

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Date: 23-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0903075

River Terrace 1ST QTR 2009

Project: Lab ID:

0903075-08

Client Sample ID: TP-9

Collection Date: 3/4/2009 11:25:00 AM

Date Received: 3/5/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual U	Jnits	[DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	GE	-		····		Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	n	ng/L	1	3/6/2009
Motor Oil Range Organics (MRO)	ND	5.0	n	ng/L	1	3/6/2009
Surr: DNOP	111	58-140	9/	6REC	1	3/6/2009
EPA METHOD 8015B: GASOLINE RA	ANGE					Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	m	ng/L	1	3/13/2009 10:57:05 PM
Surr: BFB	77.6	59.9-122	. %	&REC	1	3/13/2009 10:57:05 PM
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	μ	g/L	. 1	3/13/2009 10:57:05 PM
Benzene	ND	1.0	μ	g/L	1	3/13/2009 10:57:05 PM
Toluene	ŊD	1.0	μ	g/L	1	3/13/2009 10:57:05 PM
Ethylbenzene	ND	1.0	μ	g/L	1	3/13/2009 10:57:05 PM
Xylenes, Total	ND	2.0	þ	g/L	1	3/13/2009 10:57:05 PM
Surr: 4-Bromofluorobenzene	80.1	65.9-130	%	REC .	1	3/13/2009 10:57:05 PM
EPA 6010B: TOTAL RECOVERABLE	METALS					Analyst: NMO
Lead	· ND	0.0050	m	ng/L	1	3/16/2009 11:05:26 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 8 of 10

Date: 23-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0903075

Project:

River Terrace 1ST QTR 2009

Lab ID:

0903075-09

Client Sample ID: FIELD BLANK

Collection Date: 3/4/2009 11:30:00 AM

Date Received: 3/5/2009

Matrix: AQUEOUS

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	3/13/2009 11:58:11 PM
Benzene	ND ·	1.0	μg/L	1	3/13/2009 11:58:11 PM
Toluene	·ND	1.0	μg/L	1	3/13/2009 11:58:11 PM
Ethylbenzene	ND	1.0	μg/L	1	3/13/2009 11:58:11 PM
Xylenes, Total	ND	2.0	μg/L	1	3/13/2009 11:58:11 PM
Surr: 4-Bromofluorobenzene	95.8	65.9-130	%REC	1	3/13/2009 11:58:11 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 9 of 10

Date: 23-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Client Sample ID: Trip Blank

Lab Order:

0903075

Collection Date:

Project:

River Terrace 1ST QTR 2009

Date Received: 3/5/2009

Lab ID:

0903075-10

Matrix: TRIP BLANK

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RAN	IGE		· · · · · · · · · · · · · · · · · · ·		Analyst: DAM
Gasoline Range Organics (GRO)	· ND	0.050	mg/L	1	3/14/2009 12:31:32 AM
Surr: BFB	84.0	59.9-122	%REC	1	3/14/2009 12:31:32 AM
EPA METHOD 8021B: VOLATILES	·				Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	· µg/L	1	3/14/2009 12:31:32 AM
Benzene	ND	1.0	μg/L	1	3/14/2009 12:31:32 AM
Toluene	ND	1.0	µg/L	1	3/14/2009 12:31:32 AM
Ethylbenzene	ND	1.0	μg/L	1	3/14/2009 12:31:32 AM
Xylenes, Total	ND	2.0	μg/L	1	3/14/2009 12:31:32 AM
Surr: 4-Bromofluorobenzene	87.1	65.9-130	%REC	1	3/14/2009 12:31:32 AM



Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 10 of 10

Lab Order:	0903075			-				
Client: Project:	Western Refining Southwest, Inc. River Terrace 1ST OTR 2009	Southwest, Inc. OTR 2009				DATE	DATES REPORT	ORT
Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Instrument Run ID	QC Batch ID	Prep Date	Analysis Date
0903075-01A	\mathcal{L}_{-}	3/4/2009 8:35:00 AM	Aqueous	EPA Method 8015B: Diesel Range	FID(17A)_090306A	18457	3/5/2009	3/6/2009
				EPA Method 8015B. Gasoline Range	ZEUS_090313A	R32758		3/13/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090314A	R32758		3/14/2009
				EPA Method 8021B: Volatiles	ZEUS_090314A	R32758		3/14/2009
				EPA Method 8021B. Volatiles	ZEUS_090313A	R32758		3/13/2009
0903075-01B			**	EPA 6010B: Total Recoverable Metals	ISIS_090316B	18471	3/6/2009	3/16/2009
0903075-02A	TP-1	3/4/2009 8:55:00 AM		EPA Method 8015B: Diesel Range	FID(17A)_090306A	18457	3/5/2009	3/6/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090313A	R32758		3/13/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090314A	R32758		3/14/2009
				EPA Method 8021B: Volatiles	ZEUS_090313A	R32758		3/13/2009
				EPA Method 8021B: Volatiles	ZEUS_090314A	R32758		3/14/2009
0903075-02B				EPA 6010B. Total Recoverable Metals	ISIS_090316B	18471	3/6/2009	3/16/2009
0903075-03A	TP-6	3/4/2009 9:20:00 AM		EPA Method 8015B: Diesel Range	FID(17A)_090306A	18457	3/5/2009	3/6/2009
				EPA Method 8015B. Gasoline Range	ZEUS_090314A	R32758		3/14/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090313A	R32758		3/13/2009
				EPA Method 8021B: Volatiles	ZEUS_090313A	R32758		3/13/2009
				EPA Method 8021B: Volatiles	ZEUS_090314A	R32758		3/14/2009
0903075-03B				EPA 6010B: Total Recoverable Metals	ISIS_090316B	18471	3/6/2009	3/16/2009
0903075-04A	TP-5	3/4/2009 9:35:00 AM		EPA Method 8015B: Diesel Range	FID(17A)_090306A	18457	3/5/2009	3/6/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090313A	R32758	-	3/13/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090314A	R32758		3/14/2009
				EPA Method 8021B: Volatiles	ZEUS_090313A	R32758		3/13/2009
				EPA Method 8021B: Volatiles	ZEUS_090314A	R32758		3/14/2009
				EPA Method 8021B: Volatiles	ZEUS_090318A	R32758		3/18/2009
0903075-04B				EPA 6010B: Total Recoverable Metals	ISIS_090316B	18471	3/6/2009	3/16/2009

DATES REPORT

Hall Environmental Analysis Laboratory, Inc.

Western Refining Southwest, Inc. 0903075 Lab Order: Client:

River Terrace 1ST QTR 2009 Project:

Sample ID	Sample ID Client Sample ID Collection I	Date	Matrix	Test Name	Instrument Ron ID QC Batch ID	QC Batch ID	24	rep Date Analysis Date
0903075-05A	DW#1	3/4/2009 10:10:00 AM	Aqueous	EPA Method 8015B: Diesel Range	FID(17A)_090306A	18457	3/5/2009	3/6/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090313A	R32758		3/13/2009
				EPA Method 8021B: Volatiles	ZEUS_090313A	R32758		3/13/2009
0903075-05B				EPA 6010B: Total Recoverable Metals	ISIS_090316B	18471	3/6/2009	3/16/2009
				EPA Method 7470: Mercury	NEMO_090309A	18477	3/8/2009	3/9/2009
				EPA Method 7470: Mercury	NEMO_090309A	18477	3/8/2009	3/9/2009
0903075-06A	TP-8	3/4/2009 10:25:00 AM		EPA Method 8015B: Diesel Range	FID(17A)_090306A	18457	3/5/2009	3/6/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090313A	R32758		3/13/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090314A	R32758		3/14/2009
				EPA Method 8021B: Volatiles	ZEUS_090313A	R32758	•	3/13/2009
				EPA Method 8021B: Volatiles	ZEUS_090314A	R32758		3/14/2009
0903075-06B				EPA 6010B: Total Recoverable Metals	ISIS_090316B	18471	3/6/2009	3/16/2009
0903075-07A	MW #49	3/4/2009 10:55:00 AM		EPA Method 8015B: Diesel Range	FID(17A)_090306A	18457	3/5/2009	3/6/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090314A	R32758		3/14/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090313A	R32758		3/13/2009
				EPA Method 8021B; Volatiles	ZEUS_090313A	R32758		3/13/2009
				EPA Method 8021B: Volatiles	ZEUS_090314A	R32758	٠	3/14/2009
0903075-07B	•			EPA 6010B: Total Recoverable Metals	ISIS_090316B	18471	3/6/2009	3/16/2009
0903075-08A	1P-9	3/4/2009 11:25:00 AM		EPA Method 8015B: Diesel Range	FID(17A)_090306A	18457	3/5/2009	3/6/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090313A	R32758		3/13/2009
				EPA Method 8021B: Volatiles	ZEUS_090313A	R32758		3/13/2009
0903075-08B			-	EPA 6010B: Total Recoverable Metals	ISIS_090316B	18471	3/6/2009	3/16/2009
0903075-09A	FIELD BLANK	3/4/2009 11:30:00 AM		EPA Method 8021B: Volatiles	ZEUS_090313A	R32758	•	3/13/2009
0903075-10A	Trip Blank	F	Trip Blank	EPA Method 8015B: Gasoline Range	ZEUS_090313A	R32758		3/14/2009
				EPA Method 8021B: Volatiles	ZEUS_090313A	R32758		3/14/2009



Date: 23-Mar-09

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

Project:

River Terrace 1ST QTR 2009

Work Order:

0903075

Analyte	Result	Units	PQL	%Rec	LowLimit F	lighLimit	%RPD	RPDLimi	t Qual
Method: EPA Method 8015B: D	iesel Range								
Sample ID: MB-18457		MBLK			Batch ID	: 18457	Analysis Da	te:	3/6/2009
Diesel Range Organics (DRO)	ND	mg/L	1.0			•			
Motor Oil Range Organics (MRO)	ND	mg/L	5.0						
Surr: DNOP	1.147	mg/L	0	115	58	140			
Sample ID: LCS-18457		LCS			Batch ID	18457	Analysis Da	te:	3/6/2009
Diesel Range Organics (DRO)	5.760	mg/L	1.0	115	74	157			
Surr: DNOP	0.5692	mg/L	. 0	114	58	140			
Sample ID: LCSD-18457		LCSD			Batch ID	: 18457	Analysis Da	te:	3/6/2009
Diesel Range Organics (DRO)	5.694	mg/L	1.0	114	74	157	1.15	23	
Surr: DNOP	0.6002	mg/L	0	120	. 58	140	0	0	
Method: EPA Method 8015B: G	asoline Ran	σe					ř	*	*
Sample ID: 5ML RB		MBLK			Batch ID	R32768	Analysis Da	te: 3/1	3/2009 8:40:25 AM
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Surr: BFB	16.77	mg/L	0	83.8	59.9	122			
Sample ID: 2.5UG GRO LCS		LCS			Batch ID	: R32758	Analysis Da	te: 3/1	3/2009 5:49:25 PM
Gasoline Range Organics (GRO)	0.5498	mg/L	0.050	110	80	115			
Surr: BFB	19.38	mg/L	0	96.9	59.9	122	•		
Sample ID: 2.5UG GRO LCSD		LCSD			Batch ID	: R32758	Analysis Da	te: 3/1	3/2009 6:19:56 PM
Gasoline Range Organics (GRO)	0.5652	mg/L	0.050	113	80	115 .	2.76	8.39	
Surr: BFB	20.10	mg/L	0	100	59.9	122	. 0	0	
Sample ID: 0903075-08A DUP		DUP			Batch ID	: R32758	Analysis Da	te: 3/13	/2009 11:27:39 PM
Gasoline Range Organics (GRO)	ND	mg/L	0.050				0	20	•
Surr BFB	16.33	mg/L	0	81.7	59.9	122	0	0	

Qualifiers:

Е Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

Holding times for preparation or analysis exceeded Н

Not Detected at the Reporting Limit ND

Spike recovery outside accepted recovery limits



Date: 23-Mar-09

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

ject:

River Terrace 1ST QTR 2009

Work Order:

0903075

ict. River remade		. 2007					·	UIK	Muei:	09030	J/3
Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPD	Limit (Qual	
Method: EPA Method 8021B; V	olatiles										
Sample ID: 5ML RB		MBLK			Batch II	D: R32768	Analysis Da	ite:	3/13/20	009 8:40:2	5 AM
Methyl tert-butyl ether (MTBE)	ND	µg/L	2.5								
Benzene	ND	µg/L	1.0	-							
Toluene	ND	µg/L	1.0								
Ethylbenzene	ND	μg/L	1.0								
Xylenes, Total	ND	µg/L	2.0	•							
Surr: 4-Bromofluorobenzene	17.57	µg/L	0	87.9	65.9	130					
Sample ID: 100NG BTEX LCS		LCS			Batch II): R32758	Analysis Da	te:	3/14/20	09 2:02:50	6 AM
Methyl tert-butyl ether (MTBE)	22.20	μg/L	2.5	111	51.2	138					
Benzene	20.24	μg/L	1.0	101	85.9	113					
Toluene	20.76	μg/L	1.0	104	86.4	113					
Ethylbenzene	20.95	μg/L	1.0	105	83.5	118				•	
Xylenes, Total	63.26	μg/L	2.0	105	83.4	122					
Surr: 4-Bromofluorobenzene	.20.83	μg/L	0	104	65.9	130					
Sample ID: 100NG BTEX LCSD		LCSD			Batch ID	R32758	Analysis Da	te:	3/14/20	09 2:33:19	∌ AM
Methyl tert-butyl ether (MTBE)	22.81	μg/L	2.5	114	51.2	138	2.70	28			
Benzene	20.54	μg/L	1.0	103	85.9	113	1.46	27			
Toluene	21.17	μg/L	1.0	106	86.4	113	1.95	19			
Ethylbenzene	21.07	µg/L	1.0	105	83.5	118	0.533	10		•	
Xylenes, Total	63.27	μg/L	2.0	105	83.4	122	0.0221	13			
3urr: 4-Bromofluorobenzene	18.35	μg/L	. 0	91.7	65.9	130	. 0	0			
pple ID: 0903075-08A DUP		DUP			Batch ID	R32758	Analysis Da	te:	3/13/200	9 11:27:39	∍ PM
Methyl tert-butyl ether (MTBE)	ND	μg/L	2.5				0	20			
Benzene	ND	μg/L	1.0				0	20			
Toluene	ND	μg/L	1.0				0	20			
Ethylbenzene	ND	μg/L	1.0				D	20			
Xylenes, Total	ND	μg/L	2.0				D	20			
Surr: 4-Bromofluorobenzene	16.60	µg/L	0	83.0	65.9	130	0	0			
Method: EPA Method 7470: Mer											
Method: EPA Method 7470: Met Sample ID: 0903075-05BMSD	cury	MSD			Batch ID	: 18477	Analysis Da	le:	3/9/20	09 5:37:54	1 PM
Mercury	0.004392	mg/L	0.0010	87.8	75	125	0.528	20			
Sample ID: MB-18477	0.004002	MBLK	0.0010	51.0	Batch ID		Analysis Da		3/9/20	09 4:16:39	∂ PM
·	ND		0.00000		24.07772		yuiu uu			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Mercury	ND	mg/L	0.00020		Batch ID	40477	Angliaia Da	to:	2/0/20	09 4:18:24	4 084
Sample ID: LCS-18477		LCS					Analysis Da	IÇ.	<i>31912</i> 0	UJ 4, 10:24	, I_1/)
Mercury	0.004668	mg/L	0.00020	93.4	80	120					
Sample ID: 0903075-05BMS		MS			Batch ID	: 18477	Analysis Da	te:	3/9/20	09 5:36:04	PM
Mercury	0.004369	mg/L	0.0010	87.4	75	125					

Our	116	are.



Estimated value

Analyte detected below quantitation limits

RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 2

Date: 23-Mar-09

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

Project:

River Terrace 1ST QTR 2009

Work Order:

0903075

Analyte	Result	Units	PQL	%Rec	LowLimit Hig	hĹimit	%RPD RP	DLimit Qual
Method: EPA 6010B: Total Re	coverable Me	tals			, ,			
Sample ID: 0903075-01BMSD		MSD			Batch ID:	18471	Analysis Date:	3/16/2009 10:28:36 AM
Lead	0.4929	mg/L	0.0050	97.4	75 1:	25	4.42	20
Sample ID: MB-18471		MBLK		,	Batch ID:	18471	Analysis Date:	3/16/2009 9:16:50 AM
Lead	ND	mg/L	0.0050					•
Sample ID: LCS-18471		LCS			Batch ID:	18471	Analysis Date:	3/16/2009 9:20:05 AM
Lead	0.4818	mg/L	0.0050	96.4	80 1:	20		
Sample ID: LCSD-18471	•	LCSD			Batch ID:	18471	Analysis Date:	3/16/2009 9:23:21 AM
Lead	0.4863	mg/L	0.0050	97.3	80 1:	20		
Sample ID: 0903075-01BMS		MS			Batch ID:	18471	Analysis Date:	3/16/2009 10:24:22 AM
Lead	0.4716	mg/L	0.0050	93.1	75 1:	25		•



E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 3



Sample Receipt Checklist nt Name WESTERN REFINING SOUT Date Received: 3/5/2009 Work Order Number 0903075 Received by: TLS Sample ID labels checked by: Checklist completed by: Matrix: Carrier name: UPS Yes V No 🗌 Not Present Shipping container/cooler in good condition? Yes 🗸 No 🗆 Custody seals intact on shipping container/cooler? Not Present Not Shipped No 🗆 V Yes 🗌 Custody seals intact on sample bottles? N/A Yes 🗹 No 🗆 Chain of custody present? Yes 🗹 No 🔲 Chain of custody signed when relinquished and received? No 🗌 Yes 🗸 Chain of custody agrees with sample labels? Samples in proper container/bottle? No 🗌 No 🗆 Yes 🗹 Sample containers intact? No 🗌 Yes 🗹 Sufficient sample volume for indicated test? No 🗀 All samples received within holding time? Yes 🔽 Yes 🗹 No 🗌 No VOA vials submitted Water - VOA vials have zero headspace? No 🔲 N/A ater - Preservation labels on bottle and cap match? Yes 🗹 No 🔲 N/A Water - pH acceptable upon receipt? <6° C Acceptable Container/Temp Blank temperature? 3° If given sufficient time to cool. COMMENTS: Client contacted Date contacted: Person contacted Contacted by: Regarding: Comments: Corrective Action

Clienti	Shain	of-Cu	Chain-of-Custody Record	Turn-Around Time:	Time: □ Rush					HALL		Z	-	Ö.	Σ		Y (}	
	10100	5	3	Project Name:]		18.	***				n n		ia C	Š				
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		Bloom	P. M. N. BAUS	Project #:	-1	1000	· 		705-3	505-345-3975	٠	Moude Fax	Albuqueique, ININ 67 109 Fax 505-345-4107	2, INIV.	IIM 67 IV	D			
Phone #:		505-633	12/1/2/					1422					100	iggi					4422
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	(16)			Sample frem	eramine P		8E +								∀ ΟΛ	9 9 ard	,	ю Y)	
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Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type		BTEX +	BTEX +	M) HAT	EDB (M	q) 0158	RCRA 8	9 1808) E09Z8	8) 0728	149	1/28	Air Bubk	
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Date:	Time:	Relinquished by:	ð by:	Received by:		Date	•												
	If necessary,	samples subm	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.	ntracted to other ac	credited laboratorie	es. This serves as notice of thi	possibil	ity. Any	sub-cor	tracted	data wil	be clea	rly notate	4 to b	te analy	tical rep	Į.		\neg

	HALL ENVIRONMENTAL	ANALIOTO POORALORI	www.namenvironinencar.com 4901 Hawkins NE - Albumierone NM 87109	Tel: 505-345-3075	A Amalysis Rec	:e1)	no ssට seiQ\sa	O ^{2,} E (G ^{2,} F)	HT+ F.81 F.81 F.90 F.1. F.00 F.1. F.00 F.1. F.00 F.1. F.00 F.1. F.00 F.00	a 8 bod of the state of the sta	BTEX + MT TPH Methor TPH (Methor EDB (Methor B310 (PNA B081 Pestic Mnions (F,C B081 Pestic S260B (VO B260B (VO	X	X	×	X					Remarks: PAGE 20f2	•	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.
Turn-Around Time:	☐ Standard ☐ Rush	·	River Tarace 13 BR 1009	Project #:		Project Manager:		Sampler (Mdw/ BD)		Femperatures 11.2	Container Preservative + + Type and # Type		1-500M HADS 7			Hcc	Ql			Received by: Stock Compared time Received by: Stock Stock	Received by Date Time	Intracted to other accredited laboratories. This serves as notice of this poss
Jin-of-Custody Record	Client: Wesper Kolows Blom Lift Robus		Mailing Address # 50 Z 4990	Bloomfull MM BA413	10	email or Fax#: 505-632-391/	QA/QC Package: ☐ Standard ☐ Standard ☐ W Level 4 (Full Validation)	`	□ EDD (Type)		Date Time Matrix Sample Request ID	105/4 HZD MN #49		11054 HZB TP-9		1 (1304 AED FEED Blank	Trip Blank M3/2			Date: Time: Refinguished by: July 2010	1	If necessary, samples submitted to Hall Environmental may be subco



COVER LETTER

Wednesday, March 18, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990 Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: River Terrace 1st QTR 2009

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory, Inc. received 9 sample(s) on 3/6/2009 for the analyses presented in the following report.

Order No.: 0903097

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. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Preeman, Business Manager Nancy McDuffie, Laboratory Manager

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



Date: 18-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Project:

River Terrace 1st QTR 2009

Lab Order:

0903097

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Batch 1D	Test Name	Collection Date
0903097-01A	TP-3	R32764	EPA Method 8015B: Gasoline Range	3/5/2009 9:40:00 AM
0903097-01A	TP-3	R32764	EPA Method 8021B: Volatiles	3/5/2009 9:40:00 AM
0903097-01A	TP-3	18475	EPA Method 8015B: Diesel Range	3/5/2009 9:40:00 AM
0903097-01B	TP-3	18484	EPA 6010B: Total Recoverable Metals	3/5/2009 9:40:00 AM
0903097-02A	TP-3 Dupe	18475	EPA Method 8015B: Diesel Range	3/5/2009 9:45:00 AM
0903097-02A	TP-3 Dupe	R32764	EPA Method 8015B: Gasoline Range	3/5/2009 9:45:00 AM
0903097-02A	TP-3 Dupe	R32764	EPA Method 8021B: Volatiles	3/5/2009 9:45:00 AM
0903097-02B	TP-3 Dupe	18484	EPA 6010B: Total Recoverable Metals	3/5/2009 9:45:00 AM
0903097-03A	TP-10	R32764 ·	EPA Method 8021B: Volatiles	3/5/2009 10:05:00 AM
0903097-03A	TP-10	18475	EPA Method 8015B: Diesel Range	3/5/2009 10:05:00 AM
0903097-03A	TP-10	R32764	EPA Method 8015B: Gasoline Range	3/5/2009 10:05:00 AM
0903097-03B	TP-10	18484	EPA 6010B: Total Recoverable Metals	3/5/2009 10:05:00 AM
0903097-04A	TP-11	18475	EPA Method 8015B: Diesel Range	3/5/2009 10:25:00 AM
0903097-04A	TP-11	R32764	EPA Method 8015B: Gasoline Range	3/5/2009 10:25:00 AM
0903097-04A	TP-11	R32764	EPA Method 8021B: Volatiles	3/5/2009 10:25:00 AM
0903097-04B	TP-11	18484	EPA 6010B: Total Recoverable Metals	3/5/2009 10:25:00 AM
0903097-05A	TP-13	R32764	EPA Method 8021B: Volatiles	3/5/2009 10:45:00 AM
0903097-05A	TP-13	R32764	EPA Method 8015B: Gasoline Range	3/5/2009 10:45:00 AM
0903097-05A	TP-13	18475	EPA Method 8015B: Diesel Range	3/5/2009 10:45:00 AM
0903097-05B	TP-13	18484	EPA 6010B: Total Recoverable Metals	3/5/2009 10:45:00 AM
0903097-06A	TP-12	18475	EPA Method 8015B: Diesel Range	3/5/2009 11:10:00 AM
0903097-06A	TP-12	R32764	EPA Method 8015B: Gasoline Range	3/5/2009 11:10:00 AM
0903097-06A	TP-12	R32764	EPA Method 8021B: Volatiles	3/5/2009 11:10:00 AM
0903097-06B	TP-12	18484	EPA 6010B: Total Recoverable Metals	3/5/2009 11:10:00 AM
0903097-07A	TP-7	R32764	EPA Method 8021B: Volatiles	3/5/2009 11:20:00 AM
0903097-07A	TP-7	18475	EPA Method 8015B: Diesel Range	3/5/2009 11:20:00 AM
0903097-07A	TP-7	R32764	EPA Method 8015B: Gasoline Range	3/5/2009 11:20:00 AM
0903097-07B	TP-7	18484	EPA 6010B: Total Recoverable Metals	3/5/2009 11:20:00 AM
0903097-08A	FIELD BLANK	18475	EPA Method 8015B: Diesel Range	3/5/2009 11:25:00 AM
0903097-08A	FIELD BLANK	R32764	EPA Method 8015B: Gasoline Range	3/5/2009 11:25:00 AM
0903097-08A	FIELD BLANK	R32764	EPA Method 8021B: Volatiles	3/5/2009 11:25:00 AM
0903097-09A	Trip Blank	R32764	EPA Method 8021B: Volatiles	•
0903097-09A	Trip Blank	R32764	EPA Method 8015B: Gasoline Range	

Date: 18-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0903097

River Terrace 1st QTR 2009

Project: Lab ID:

0903097-01

Client Sample ID: TP-3

Collection Date: 3/5/2009 9:40:00 AM

Date Received: 3/6/2009

Matrix: AQUEOUS

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	SE .				Analyst: SCC
Diesel Range Organics (DRO)	ND .	1.0	mg/L	1	3/9/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	3/9/2009
Surr: DNOP	113	58-140	%REC	1	3/9/2009
EPA METHOD 8015B: GASOLINE RA	ANGÉ				Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	3/15/2009 3:58:22 PM
Surr: BFB	80.9	59.9-122	%REC	. 1	3/15/2009 3:58:22 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	µg/L	1	3/15/2009 3:58:22 PM
Benzene	ND	1.0	µg/L	1	3/15/2009 3:58:22 PM
Toluene	ND	1.0	μg/L	1	3/15/2009 3:58:22 PM
Ethylbenzene	ND	1.0	μg/L	1	3/15/2009 3:58:22 PM
Xylenes, Total	ND	2.0	μg/Ľ	1 .	3/15/2009 3:58:22 PM
Surr: 4-Bromofluorobenzene	84.5	65.9-130	%REC	. 1	3/15/2009 3:58:22 PM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: TES
Lead	ND	0.0050	mg/L	1	3/10/2009 1:36:48 PM

Qualifiers:

RL Reporting Limit .

Page 1 of 9

Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

Not Detected at the Reporting Limit ND

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Date: 18-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

Client Sample ID: TP-3 Dupe

0903097

Collection Date: 3/5/2009 9:45:00 AM

Project:

River Terrace 1st QTR 2009

Date Received: 3/6/2009

Lab ID:

0903097-02

Matrix: AQUEOUS

Analyses	Result	PQL Qu	ial Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	3E				Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	3/9/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	3/9/2009
Surr: DNOP	119	58-140	%REC	1	3/9/2009
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	3/15/2009 4:28:52 PM
Surr: BFB	83.4	59.9-122	%REC	1	3/15/2009 4:28:52 PM
EPA METHOD 8021B: VOLATILES				•	Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	. 1	3/15/2009 4:28:52 PM
Benzene	ND	1.0	μg/L	1	3/15/2009 4:28:52 PM
Toluene	ND	1.0	μg/L	1	3/15/2009 4:28:52 PM
Ethylbenzene	ND	1.0	μg/L	1	3/15/2009 4:28:52 PM
Xylenes, Total	ND	2.0	μg/L	1	3/15/2009 4:28:52 PM
Surr: 4-Bromofluorobenzene	88.5	65.9-130	%REC	1	3/15/2009 4:28:52 PM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: TES
Lead	ND	0.0050	mg/L	1	3/10/2009 1:45:13 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- Not Detected at the Reporting Limit ND
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 2 of 9

Date: 18-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0903097

Client Sample ID: TP-10

Collection Date: 3/5/2009 10:05:00 AM

Project: Lab ID:

River Terrace 1st QTR 2009 0903097-03

Date Received: 3/6/2009

Matrix: AQUEOUS

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE	<u> </u>	·			Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	3/9/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	3/9/2009
Surr: DNOP	124	58-140	%REC	1	3/9/2009
EPA METHOD 8015B; GASOLINE RAI	NGE				Analyst; DAM
Gasoline Range Organics (GRO)	ND	0.050	mg/L	. 1	3/15/2009 4:59:15 PM
Surr: BFB	89.9	59.9-122	%REC	1	3/15/2009 4:59:15 PM
EPA METHOD 8021B: VOLATILES		*			Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	µg/L	1	3/15/2009 4:59:15 PM
Benzene	ND	1.0	μg/L	1	3/15/2009 4:59:15 PM
Toluene	ND	1.0	μg/L	1	3/15/2009 4:59:15 PM
Ethylbenzene	ND	1.0	μg/L	1	3/15/2009 4:59:15 PM
Xylenes, Total	. ND	. 2.0	μg/L	1	3/15/2009 4:59:15 PM
Surr: 4-Bromofluorobenzene	98.7	65.9-130	%REC	1	3/15/2009 4:59:15 PM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: TES
Lead	ND	0.0050	mg/L	1	3/10/2009 1:49:44 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Reporting Limit

Page 3 of 9

Date: 18-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0903097

Client Sample ID: TP-11

River Terrace 1st QTR 2009

Collection Date: 3/5/2009 10:25:00 AM

Project: Lab 1D:

0903097-04

Date Received: 3/6/2009 Matrix: AQUEOUS

Analyses	Result	PQL (Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE		· · · · · · · · · · · · · · · · · · ·			Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	3/9/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	.1	3/9/2009
Surr: DNOP	123	58-140	%REC	1	3/9/2009
EPA METHOD 8015B: GASOLINE RANG	3E	,			`Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	3/15/2009 5:29:45 PM
Surr: BFB	85.5	59.9-122	%REC	1	3/15/2009 5:29:45 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	3/15/2009 5:29:45 PM
Benzene	ND	1.0	μg/L	1	3/15/2009 5:29:45 PM
Toluene	ND	1.0	μg/L	1	3/15/2009 5:29:45 PM
Ethylbenzene	ND	1.0	μg/L	1	3/15/2009 5:29:45 PM
Xylenes, Total	ND	2.0	μg/L	1	3/15/2009 5:29:45 PM
Surr: 4-Bromofluorobanzene	91.9	65.9-130	%REC	1	3/15/2009 5:29:45 PM
EPA 6010B: TOTAL RECOVERABLE MI	ETALS				Analyst: TES
Lead	ND	0.0050	mg/L	1	3/10/2009 1:52:52 PM

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

Page 4 of 9

Date: 18-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0903097

Client Sample ID: TP-13

Vestern recoming Boddivest, me

Collection Date: 3/5/2009 10:45:00 AM

Project: Lab ID: River Terrace 1st QTR 2009

0903097-05

Date Received: 3/6/2009

Matrix: AQUEOUS

Analyses	Result	PQL (Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E			- n - 12 v -	Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	3/9/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1 .	3/9/2009
Surr: DNOP	124	58-140	%REC	1	3/9/2009
EPA METHOD 8015B: GASOLINE RA	NGE				Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1.	3/15/2009 6:00:16 PM
Surr: BFB	85.4	59.9-122	%REC	1	3/15/2009 6:00:16 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	µg/L	1	3/15/2009 6:00:16 PM
Benzene	ND	1.0	μg/L	1	3/15/2009 6:00:16 PM
Toluene	ND	1.0	μg/L	1	3/15/2009 6:00:16 PM
Ethylbenzene	ND	1.0	µg/L	1	3/15/2009 6:00:16 PM
Xylenes, Total	ND	2.0	µg/L	1	3/15/2009 6:00:16 PM
Surr: 4-Bromofluorobenzene	91.0	65.9-130	%REC	1	3/15/2009 6:00:16 PM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: TES
Lead	ND	0,0050	mg/L	1	3/10/2009 2:14:57 PM

Qualifiers:

Page 5 of 9

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 18-Mar-09

CLIENT: Lab Order: Western Refining Southwest, Inc.

0903097

River Terrace 1st QTR 2009

Project: Lab ID:

0903097-06

Client Sample ID: TP-12

Collection Date: 3/5/2009 11:10:00 AM

Date Received: 3/6/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	3E		1:		Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	3/9/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1.	3/9/2009
Surr: DNOP	129	58-140	%REC	1	3/9/2009
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	3/15/2009 6:30:51 PM
Surr: BFB	83.5	59.9-122	%REC	1	3/15/2009 6:30:51 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	, µg/L	1	3/15/2009 6:30:51 PM
Benzene	ND	1.0	μg/L	1	3/15/2009 6:30:51 PM
Toluene	ND	1.0	μg/L	1	3/15/2009 6:30:51 PM
Ethylbenzene	ND	1.0	μg/L	1	3/15/2009 6:30:51 PM
Xylenes, Total	ND	2.0	μg/L	1	3/15/2009 6:30:51 PM
Surr: 4-Bromofluorobenzene	. 88.0	65.9-130	%REC	1	3/15/2009 6:30:51 PM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: TES
Lead	0.0057	0.0050	mg/L	1	3/10/2009 2:17:44 PM

Value exceeds Maximum Contaminant Level

Page 6 of 9

E Estimated value

Analyte detected below quantitation limits

Not Detected at the Reporting Limit ND

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank В

Holding times for preparation or analysis exceeded Н

MCL Maximum Contaminant Level

Reporting Limit

Date: 18-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0903097

River Terrace 1st QTR 2009

Project: Lab ID:

0903097-07

Client Sample ID: TP-7

Collection Date: 3/5/2009 11:20:00 AM

Date Received: 3/6/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual 1	Jnits	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	<u> </u>		·			Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	rr	ng/L	1	3/9/2009
Motor Oil Range Organics (MRO)	ND	5.0	m	ng/L	1	3/9/2009
Surr. DNOP	120	58-140	%	6REC	1	3/9/2009
EPA METHOD 8015B: GASOLINE RA	NGE					Analyst: DAM
Gasoline Range Organics (GRO)	0.063	0.050	m	ng/L	1	3/15/2009 7:01:23 PM
Surr: BFB	80.8	59.9-122	%	REC	1	3/15/2009 7:01:23 PM
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	μ	g/L	1	3/15/2009 7:01:23 PM
Benzene	ND	1.0	μ	g/L	1	3/15/2009 7:01:23 PM
Toluene	ND	1.0	μ	g/L	. 1	3/15/2009 7:01:23 PM
Ethylbenzene	2.4	1.0	μ	g/L	• 1	3/15/2009 7:01:23 PM
Xylenes, Total	21	. 2.0	μ	g/L	1	3/15/2009 7:01:23 PM
Surr: 4-Bromofluorobenzene	86.0	65.9-130	%	REC	1	3/15/2009 7:01:23 PM
EPA 6010B: TOTAL RECOVERABLE	METALS					Analyst: TES
Lead	ND	0.0050	m	ıg/L	1	3/10/2009 2:20:40 PM

Qualifiers:

Page 7 of 9

Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

Not Detected at the Reporting Limit ND

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Date: 18-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0903097

Project: Riv

River Terrace 1st QTR 2009

Lab ID:

0903097-08

Client Sample ID: FIELD BLANK

Collection Date: 3/5/2009 11:25:00 AM

Date Received: 3/6/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E				Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	3/9/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	3/9/2009
Surr; DNOP	119	58-140	%REC	1 -	3/9/2009
EPA METHOD 8015B: GASOLINE RA	NGE				Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	3/15/2009 7:31:56 PM
Surr: BFB	88.8	59.9-122	%REC	1	3/15/2009 7:31:56 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1.	3/15/2009 7:31:56 PM
Benzene	. ND	1.0	μg/L	1	3/15/2009 7:31:56 PM
Toluene	ND	1.0	μg/L	1 -	3/15/2009 7:31:56 PM
Ethylbenzene	. ND	1.0	μg/L	1	3/15/2009 7:31:56 PM
Xylenes, Total	ND	2.0	μg/L _.	· 1	3/15/2009 7:31:56 PM
Surr: 4-Bromofluorobenzene	97.4	65.9-130	%REC	1	3/15/2009 7:31:56 PM

Qualifiers:

Page 8 of 9

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 18-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0903097

Project:

River Terrace 1st QTR 2009

Lab ID:

0903097-09

Client Sample ID: Trip Blank

Collection Date:

Date Received: 3/6/2009

Matrix: TRIP BLANK

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RAN	GE			·	Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	3/15/2009 8:02;20 PM
Surr: BFB	78.4	59.9-122	%REC	1	3/15/2009 8:02:20 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	3/15/2009 8:02:20 PM
Benzene	ND	1.0	μg/L	1	3/15/2009 8:02:20 PM
Toluene	ND	1.0	µg/L	. 1	3/15/2009 8:02:20 PM
Ethylbenzene	ND	1.0	μg/L	1	3/15/2009 8:02:20 PM
Xylenes, Total	ND	2.0	µg/L	1	3/15/2009 8:02:20 PM
Surr: 4-Bromofluorobenzene	80.2	65.9-130	%REC	1	3/15/2009 8:02:20 PM



Value exceeds Maximum Contaminant Level

Page 9 of 9

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

0903097

Lab Order:

				ı			dieta or	Fuc
Client:	Western Refining Southwest, Inc.	g Southwest, Inc.				DAII	DATES KELOKI	OKI
Project:	River Terrace 1st QTR 2009	t QTR 2009						
Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Instrument Run ID QC Batch ID	QC Batch ID	Prep Date	Analysis Date
0903097-01A	TP-3	3/5/2009 9:40:00 AM	Aqueous	EPA Method 8015B: Diesel Range	FID(17A)_090309A	18475	3/8/2009	3/9/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090315A	R32764		3/15/2009
				EPA Method 8021B: Volatiles	ZEUS_090315A	R32764	•	3/15/2009
0903097-01B				EPA 6010B: Total Recoverable Metals	ISIS_090310A	18484	3/9/2009	3/10/2009
0903097-02A	TP-3 Dupe	3/5/2009 9:45:00 AM		EPA Method 8015B: Diesel Range	FID(17A)_090309A	18475	3/8/2009	3/9/2009
				EPA Method 8015B. Gasoline Range	ZEUS_090315A	R32764		3/15/2009
				EPA Method 8021B: Volatiles	ZEUS_090315A	R32764		3/15/2009
0903097-02B				EPA 6010B: Total Recoverable Metals	ISIS_090310A	18484	3/9/2009	3/10/2009
0903097-03A	TP-10	3/5/2009 10:05:00 AM		EPA Method 8015B: Diesel Range	FID(17A)_090309A	18475	3/8/2009	3/9/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090315A	R32764	•	3/15/2009
				EPA Method 8021B: Volatiles	ZEUS_090315A	R32764		3/15/2009
0903097-03B				EPA 6010B: Total Recoverable Metals	ISIS_090310A	18484	3/9/2009	3/10/2009
0903097-04A	TP-11	3/5/2009 10:25:00 AM		EPA Method 8015B: Diesel Range	FID(17A)_090309A	18475	3/8/2009	3/9/2009
				EPA Method 8015B. Gasoline Range	ZEUS_090315A	R32764		3/15/2009
				EPA Method 8021B. Volatiles	ZEUS_090315A	R32764		3/15/2009
0903097-04B	÷			EPA 6010B: Total Recoverable Metals	ISIS_090310A	18484	3/9/2009	3/10/2009
0903097-05A	TP-13	3/5/2009 10:45:00 AM		EPA Method 8015B: Diesel Range	FD(17A)_090309A	18475	3/8/2009	3/9/2009
	٠			EPA Method 8015B: Gasoline Range	ZEUS_090315A	R32764		3/15/2009
				EPA Method 8021B: Volatiles	ZEUS_090315A	R32764		3/15/2009
0903097-05B				EPA 6010B: Total Recoverable Metals	ISIS_090310A	18484	3/9/2009	3/10/2009
0903097-06A	TP-12	3/5/2009 11:10:00 AM		EPA Method 8015B: Diesel Range	FID(17A)_090309A	18475	3/8/2009	3/9/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090315A	R32764	-	3/15/2009
			·	EPA Method 8021B: Volatiles	ZEUS_090315A	R32764		3/15/2009
0903097-06B				EPA 6010B: Total Recoverable Metals	A01609_03181	18484	3/9/2009	3/10/2009
0903097-07A	TP-7	3/5/2009 11:20:00 AM		EPA Method 8015B: Diesel Range	FID(17A)_090309A	18475	3/8/2009	3/9/2009

DATES REPORT

Hall Environmental Analysis Laboratory, Inc.

0903097 Lab Order: Client:

Western Refining Southwest, Inc.

Project:	River Terrace 1st QTR 2009							
Sample 🛈	Client Sample ID Collection Dat		Matrix		Instrument Run ID QC Batch ID Prep Date	QC Batch ID	Prep Date	Analysis Date
0903097-07A	0903097-07A TP-7 3/5/2009 11:20:00	3/5/2009 11:20:00 AM	Aqueous	AM Aqueous EPA Method 8015B: Gasoline Range	ZEUS_090315A R32764	R32764		3/15/2009
				EPA Method 8021B: Volatiles	ZEUS_090315A	R32764		3/15/2009
0903097-07B				EPA 6010B: Total Recoverable Metals	ISIS_090310A	18484	3/9/2009	3/10/2009
0903097-08A	FIELD BLANK	3/5/2009 11:25:00 AM		EPA Method 8015B: Diesel Range	FID(17A)_090309A	18475	3/8/2009	3/9/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090315A	R32764		3/15/2009
				EPA Method 8021B: Volatiles	ZEUS_090315A	R32764		3/15/2009
0903097-09A	Trip Blank		Trip Blank	EPA Method 8015B: Gasoline Range	ZEUS_090315A	R32764		3/15/2009
				EPA Method 8021B: Volatiles	ZEUS 090315A	R32764		3/15/2009

Date: 18-Mar-09

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

Project:

River Terrace 1st QTR 2009

Work Order:

0903097

Analyte	Result	Units	PQL	%Rec	LowLimit H	lighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: D	iesel Range			<u> </u>					
Sample ID: MB-18475		MBLK			Batch ID:	18475	Analysis Date	e:	3/9/2009
Diesel Range Organics (DRO)	ND	mg/L	1.0						
Motor Oil Range Organics (MRO)	ND	mg/L	5.0						
Surr: DNOP	1.128	mg/L	0	113	58	140			
Sample ID: LCS-18475		LCS			Batch ID:	18475	Analysis Dat	9;	3/9/2009
Diesel Range Organics (DRO)	5.667	mg/L	1.0	113	74	157			
Surr: DNOP	0.5827	mg/L	0	117	58	140			
Sample ID: LCSD-18475		LCSD			Batch ID:	18475	Analysis Date	B :	3/9/2009
Diesel Range Organics (DRO)	5.184	mg/L	1.0	104	74	157	8.90	23	
Surr: DNOP	0.5582	mg/L	0	112	58	140	0	0	
Method: EPA Method 8015B: G	asoline Ran	ae							
Sample ID: 0903097-07A MSD		MSD			Batch ID:	R32764	Analysis Date	e: 3/15/2	009 10:34:07 PM
Gasoline Range Organics (GRO)	0.6086	mg/L	0.050	109	80	115	1.92	8.39	
Surr. BFB	18.63	mg/L	0	93.2	59.9	122	0	0	
Sample ID: 5ML RB		MBLK			Batch ID:	R32764	Analysis Date	e: 3/15/	2009 1:25:27 PN
Gasoline Range Organics (GRO)	ND	mg/L	0.050						,
Surr: BFB	16.88	mg/L	0	84.4	59.9	122			
Sample ID: 2.5UG GRO LCS		LCS			Batch ID;	R32764	Analysis Date	e: 3/15/2	:009 11:35:04 PN
Gasoline Range Organics (GRO)	0.5530	mg/L	0.050	111	80	115			
Surr: BFB	19.35	mg/L	0	96.7	59.9	122			
Sample ID: 0903097-07A MS		MS			Batch ID:	R32764	Analysis Date	e: 3/15/2	009 10:03:52 PN
Gasoline Range Organics (GRO)	0.6204	mg/L	0.050	112	80	115			
Surr: BFB	17.95	mg/L	0	89.8	59.9	122			



E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 1



QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

River Terrace 1st QTR 2009

Work Order:

0903097

Method: EPA Method 8021B: Volatiles Sample ID: 0903097-014 MSD	Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD RF	DLimit Qual
Sample ID: 0903097-01A MSD Batch ID: R32764 Analysis Date: 3/15/2009 9.33: Methyl teth-bulyl ether (MTBE) 23.13 μg/L 2.5 115 51.2 138 0.0519 28 27 27 28 28 28 28 28								,	
Benzere		Volatiles	MSD			Batch	ID: R32764	Analysis Date:	3/15/2009 9:33:33 PM
Toluene 21.83 µg/L 1.0 109 85.4 113 2.08 19 Ethylbenzene 21.87 µg/L 1.0 109 83.5 118 1.74 10 Sample ID: 64.99 µg/L 2.0 108 83.4 122 Surr. 4-Bromofluorobenzene 20.70 µg/L 0 104 65.9 130 0 0 Methyl tert-butyl ether (MTBE) ND µg/L 1.0 Toluene ND µg/L 1.0 Sylines, Total ND µg/L 2.5 Sample ID: 100NG BTEX LCS Methyl tert-butyl ether (MTBE) 22.70 µg/L 2.0 Sample ID: 100NG BTEX LCS Methyl tert-butyl ether (MTBE) 22.70 µg/L 2.5 Senzene 17.98 µg/L 2.0 Surr. 4-Bromofluorobenzene 22.73 µg/L 1.0 109 85.9 113 Toluene 22.73 µg/L 1.0 111 83.5 118 Surr. 4-Bromofluorobenzene 20.37 µg/L 2.0 111 83.4 122 Surr. 4-Bromofluorobenzene 20.37 µg/L 2.0 111 83.4 122 Surr. 4-Bromofluorobenzene 21.58 µg/L 1.0 109 85.9 113 Surr. 4-Bromofluorobenzene 22.29 µg/L 1.0 111 83.4 122 Surr. 4-Bromofluorobenzene 21.58 µg/L 1.0 111 83.4 122 Surr. 4-Bromofluorobenzene 21.58 µg/L 1.0 111 83.4 122 Surr. 4-Bromofluorobenzene 22.29 µg/L 1.0 111 83.4 122 Surr. 4-Bromofluorobenzene 20.92 µg/L 2.0 111 83.4 122 Surr. 4-Bromofluorobenzene 20	Methyl tert-butyl ether (MTBE)	23.13	μg/L	2.5	115	51.2	138	0.0519	28
Ethylbenzene 21.87 µg/L 1.0 109 83.5 118 1.74 10 Xylenes, Total 64.99 µg/L 2.0 108 83.4 122 2.00 13 Sample ID: 5ML RB	Benzene	21.12	µg/L	1.0	106	85.9	113	2.12	27
Ethylbenzene 21.87 µg/L 1.0 109 83.5 118 1.74 10 Xylenes, Total 64.99 µg/L 2.0 108 83.4 122 2.00 13 Sample ID: 6ML RB	Toluene	21.83	μg/L	1.0	109	86.4	113	2.08	19
Surn: 4-Bromofluorobenzene 20.70 μg/L 0 104 65.9 130 0 0 0 0 0 0 0 0 0	Ethylbenzene	21.87		1.0	109	83.5	118	1.74	10
Mathyl tert-butyl ether (MTBE) ND	Xylenes, Total	64.99	µg/L	2.0	108	83.4	122	2.00	13
Methyl tert-butyl ether (MTBE) ND	Surr: 4-Bromofluorobenzene	20.70	µg/L	0	104	65.9	130	0.	0
Benzene	Sample ID: 5ML RB		MBLK			Batch !	ID: R32764	Analysis Date:	3/15/2009 1:25:27 PM
Toluene ND µg/L 1.0 Ethylbenzene ND µg/L 1.0 Xylenes, Total ND µg/L 2.0 Samr, 4-Bromofiluorobenzene 17.98 µg/L 1.0 Toluene 22.73 µg/L 1.0 111 83.4 122 Surr. 4-Bromofiluorobenzene 20.37 µg/L 2.5 115 51.2 138 Benzene 21.58 µg/L 1.0 111 83.4 122 Smple ID: 0903097-01BMSD MSD MSD Batch ID: Rastor ID:	Methyl tert-butyl ether (MTBE)	ND	μg/L	2.5					•
Ethylbenzene ND		ND		1.0					
Xylenes, Total ND	Toluene	ND	μg/L	1.0					
Surr. 4-Bromofluorobenzene 17.98	Ethylbenzene	ND	μg/L	1.0					
Batch ID: 100NG BTEX LCS LCS Batch ID: R32764 Analysis Date: 3/15/2009 11:04:3	Xylenes, Total	ND	μg/L	2.0					
Methyl tert-butyl ether (MTBE) 22.70 µg/L 2.5 113 51.2 138 Benzene 21.83 µg/L 1.0 109 85.9 113 Toluene 22.73 µg/L 1.0 114 86.4 113 S Ethylbenzene 22.17 µg/L 1.0 111 83.5 118 Xylenes, Total 66.37 µg/L 2.0 111 83.4 122 Surr: 4-Bromofluorobenzene 20.37 µg/L 0 102 65.9 130 Benzene 21.58 µg/L 1.0 108 85.9 113 Totuene 21.58 µg/L 1.0 108 85.9 113 Totuene 21.58 µg/L 1.0 108 85.9 113 Totuene 22.29 µg/L 1.0 108 85.9 113 Totuene 22.29 µg/L 1.0 111 83.4 122 Sylenes, Total 66.31 µg/L 2.5 115 51.2 138 Ethylbenzene 21.58 µg/L 1.0 108 85.9 113 Totuene 22.29 µg/L 1.0 111 83.4 113 Ethylbenzene 22.25 µg/L 1.0 111 83.4 122 Sylenes, Total 66.31 µg/L 2.0 111 83.4 122 Surr: 4-Bromofluorobenzene 20.92 µg/L 0 105 65.9 130 Method: EPA 6010B: Total Recoverable Metals Sample ID: 0903097-01BMSD MSD Batch ID: 18484 Analysis Date: 3/10/2009 1:42:2 Batch ID: 18484 Analysis Date: 3/10/2009 1:25:1 Lead ND mg/L 0.0050 Batch ID: 18484 Analysis Date: 3/10/2009 1:28:1 Lead 0.4658 mg/L 0.0050 Batch ID: 18484 Analysis Date: 3/10/2009 1:28:1	Surr: 4-Bromofluorobenzene	17.98	µg/L	0	89.9	65.9	130		
Benzene 21.83 µg/L 1.0 109 85.9 113 Toluene 22.73 µg/L 1.0 114 86.4 113 S Ethylbenzene 22.17 µg/L 1.0 111 83.5 118 S S S S S S S S S	Sample ID: 100NG BTEX LCS		LCS			Batch I	D: R32764	Analysis Date:	3/15/2009 11:04:33 PN
Benzene 21.83	Methyl tert-butyl ether (MTBE)	22.70	μg/L	2.5	113	51.2	138		
Ethylbenzene 22.17 µg/L 1.0 111 83.5 118 Xylenes, Total 66.37 µg/L 2.0 111 83.4 122 Surr: 4-Bromofluorobenzene 20.37 µg/L 0 102 65.9 130 Batch ID: R32764 Analysis Date: 3/15/2009 9:03:0 Methyl tert-butyl ether (MTBE) 23.12 µg/L 2.5 115 51.2 138 Benzene 21.58 µg/L 1.0 108 85.9 113 Totuene 22.29 µg/L 1.0 111 83.4 113 Ethylbenzene 22.25 µg/L 1.0 111 83.5 118 Xylenes, Total 66.31 µg/L 2.0 111 83.4 122 Surr: 4-Bromofluorobenzene 20.92 µg/L 0 105 65.9 130 Method: EPA 6010B: Total Recoverable Metals Sample ID: 0903097-01BMSD MSD Batch ID: 18484 Analysis Date: 3/10/2009 1:25:1 ead 0.4518 mg/L 0.0050 90.4 75 125 2.84 20 Sample ID: MB-18484 MBLK Batch ID: 18484 Analysis Date: 3/10/2009 1:25:1 ead ND mg/L 0.0050 Sample ID: LCS-18484 LCS Batch ID: 18484 Analysis Date: 3/10/2009 1:28:1 ead 0.4658 mg/L 0.0050 93.2 80 120 Sample ID: 0903097-01BMS Date: 3/10/2009 1:39:3	Benzene	21.83		1.0	109	85.9	113		
Xylenes, Total 66.37 μg/L 2.0 111 83.4 122	Toluene	22.73		1.0	114	86.4	113		S
Surr: 4-Bromofluorobenzene 20.37 µg/L 0 102 65.9 130 Batch ID: R32764 Analysis Date: 3/15/2009 9:03:05	Ethylbenzene	22.17	μg/L	1.0	111	83.5	118		•
Marrian Mar	Xylenes, Total	66.37	μg/L	2.0	111	83.4	122		
Methyl tert-butyl ether (MTBE) 23.12 µg/L 2.5 115 51.2 138 Benzene 21.58 µg/L 1.0 108 85.9 113 Totuene 22.29 µg/L 1.0 111 86.4 113 Ethylbenzene 22.25 µg/L 1.0 111 83.5 118 Xylenes, Total 66.31 µg/L 2.0 111 83.4 122 Surr: 4-Bromofluorobenzene 20.92 µg/L 0 105 65.9 130 Method: EPA 6010B: Total Recoverable Metals Sample ID: 0903097-01BMSD MSD Batch ID: 18484 Analysis Date: 3/10/2009 1:42:2 Lead 0.4518 mg/L 0.0050 90.4 75 125 2.84 20 Sample ID: MB-18484 MBLK Batch ID: 18484 Analysis Date: 3/10/2009 1:25:1 Lead ND mg/L 0.0050 Sample ID: LCS-18484 Analysis Date: 3/10/2009 1:25:1 Batch ID: 18484 Analysis Date: 3/10/2009 1:25:1 Batch ID: 18484 Analysis Date: 3/10/2009 1:25:1 Batch ID: 18484 Analysis Date: 3/10/2009 1:28:1 Batch ID: 18484 Analysis Date: 3/10/2009 1:28:1 Batch ID: 18484 Analysis Date: 3/10/2009 1:28:1 Batch ID: 18484 Analysis Date: 3/10/2009 1:39:3	Surr: 4-Bromofluorobenzene	20.37	μg/L	0	102	65.9	130		
Benzene 21.58	mple ID: 0903097-01A MS		MS			Batch I	D: R32764	Analysis Date:	3/15/2009 9:03:06 PM
Benzene 21.58	Methyl tert-butyl ether (MTBE)	23.12	μg/L	2.5	115	51.2	138		
Toluene 22.29 µg/L 1.0 111 86.4 113 Ethylbenzene 22.25 µg/L 1.0 111 83.5 118 Xylenes, Total 66.31 µg/L 2.0 111 83.4 122 Surr: 4-Bromofluorobenzene 20.92 µg/L 0 105 65.9 130 Method: EPA 6010B: Total Recoverable Metals Sample ID: 0903097-01BMSD MSD Batch ID: 18484 Analysis Date: 3/10/2009 1:42:2 Lead 0.4518 mg/L 0.0050 90.4 75 125 2.84 20 Sample ID: MB-18484 MBLK Batch ID: 18484 Analysis Date: 3/10/2009 1:25:1 Lead ND mg/L 0.0050 Sample ID: LCS-18484 LCS Batch ID: 18484 Analysis Date: 3/10/2009 1:28:1 Lead 0.4658 mg/L 0.0050 93.2 80 120 Sample ID: 0903097-01BMS MS Batch ID: 18484 Analysis Date: 3/10/2009 1:39:3	Benzene	21,58		1.0	108	85.9	113		
Ethylbenzene 22.25 µg/L 1.0 111 83.5 118 Xylenes, Total 66.31 µg/L 2.0 111 83.4 122 Surr: 4-Bromofluorobenzene 20.92 µg/L 0 105 65.9 130 Method: EPA 6010B: Total Recoverable Metals Sample ID: 0903097-01BMSD MSD Batch ID: 18484 Analysis Date: 3/10/2009 1:42:2 Lead 0.4518 mg/L 0.0050 90.4 75 125 2.84 20 Sample ID: MB-18484 Analysis Date: 3/10/2009 1:25:1 Lead ND mg/L 0.0050 Sample ID: LCS-18484 LCS Batch ID: 18484 Analysis Date: 3/10/2009 1:28:1 Lead 0.4658 mg/L 0.0050 93.2 80 120 Sample ID: 0903097-01BMS MS Batch ID: 18484 Analysis Date: 3/10/2009 1:39:3	Toluene	22.29		1.0	111	86.4	113		
Surr: 4-Bromofluorobenzene 20.92 µg/L 0 105 65.9 130 Method: EPA 6010B: Total Recoverable Metals Sample ID: 0903097-01BMSD	Ethylbenzene	22.25	µg/L	1.0	111	83.5	118		
Method: EPA 6010B: Total Recoverable Metals Sample ID: 0903097-01BMSD	Xylenes, Total	66.31	µg/L	2.0	111	83.4	122		
Sample ID: 0903097-01BMSD MSD Batch ID: 18484 Analysis Date: 3/10/2009 1:42:2 Lead 0.4518 mg/L 0.0050 90.4 75 125 2.84 20 Sample ID: MB-18484 MBLK Batch ID: 18484 Analysis Date: 3/10/2009 1:25:1 Lead ND mg/L 0.0050 Batch ID: 18484 Analysis Date: 3/10/2009 1:28:1 Lead 0.4658 mg/L 0.0050 93.2 80 120 Sample ID: 0903097-01BMS MS Batch ID: 18484 Analysis Date: 3/10/2009 1:39:3	Surr: 4-Bromofluorobenzene	20.92	µg/L	0	105	65.9	130		
Sample ID: 0903097-01BMSD MSD Batch ID: 18484 Analysis Date: 3/10/2009 1:42:2 Lead 0.4518 mg/L 0.0050 90.4 75 125 2.84 20 Sample ID: MB-18484 MB-18484 Analysis Date: 3/10/2009 1:25:1 Lead ND mg/L 0.0050 Sample ID: LCS-18484 LCS Batch ID: 18484 Analysis Date: 3/10/2009 1:28:1 Lead 0.4658 mg/L 0.0050 93.2 80 120 Sample ID: 0903097-01BMS MS Batch ID: 18484 Analysis Date: 3/10/2009 1:39:3	Method: EPA 6010B: Total Rec	overable Me	tais						
Sample ID: MB-18484 MBLK Batch ID: 18484 Analysis Date: 3/10/2009 1:25:1 Lead ND mg/L 0.0050 Sample ID: LCS Batch ID: 18484 Analysis Date: 3/10/2009 1:28:1 Lead 0.4658 mg/L 0.0050 93.2 80 120 Sample ID: 0903097-01BMS MS Batch ID: 18484 Analysis Date: 3/10/2009 1:39:3						Batch !	D: 18484	Analysis Date:	3/10/2009 1:42:26 PM
Lead ND mg/L 0.0050 Sample ID: LCS-18484	Lead	0.4518	mg/L	0.0050	90.4	75	125	2.84	20
Sample ID: LCS-18484 LCS Batch ID: 18484 Analysis Date: 3/10/2009 1:28:1 Lead 0.4658 mg/L 0.0050 93.2 80 120 Sample ID: 0903097-01BMS MS Batch ID: 18484 Analysis Date: 3/10/2009 1:39:3	Sample ID: MB-18484		MBLK			Batch I	D: 18484	Analysis Date:	3/10/2009 1:25:11 PM
Sample ID: LCS-18484 LCS Batch ID: 18484 Analysis Date: 3/10/2009 1:28:1 Lead 0.4658 mg/L 0.0050 93.2 80 120 Sample ID: 0903097-01BMS MS Batch ID: 18484 Analysis Date: 3/10/2009 1:39:3	_ead	ND	ma/L	0.0050				•	
Lead 0.4658 mg/L 0.0050 93.2 80 120 Sample ID: 0903097-01BMS MS Batch ID: 18484 Analysis Date: 3/10/2009 1:39:3	· · · · · · · · · · · · · · · · · · ·					Batch f	D: 18484	Analysis Date:	3/10/2009 1:28:12 PM
Sample ID: 0903097-01BMS	·	0 466R		ก กกรก์	93.2			•	
		0.7000	-	0.0000	33.2			Analysis Date:	3/10/2009 1·39·37 PM
_ead 0.4648 mg/L 0.0050 93.0 75 125		0.40.40				•		, maiyaia Date.	0/10/2000 1:09:5/ FW

Qua	li	fi	e	'S	:
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Estimated value

Analyte detected below quantitation limits?

RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 2

Sample	Rec	eipt Ch	necklist				
Client Name WESTERN REFINING SOUT			Date Receive	ed:	3/6/200	19	Ē
Work Order Number 0903097			Received by	y: TLS	<i>(</i>)	مسير	
Checklist completed by:		3 U Date	Sample ID I	abels checked	by: //	<u> </u>	
Matrix: Carrier name:	UPS	<u>6</u>					
Shipping container/cooler in good condition?	Yes	V	No 🗆	Not Present			
Custody seals intact on shipping container/cooler?	Yes	\checkmark	No 🗀	Not Present	☐ Not Ship	pped 🔲	
Custody seals intact on sample bottles?	Yes		No 🗆	N/A	¥		
Chain of custody present?	Yes	\checkmark	No 🗀	,			
Chain of custody signed when relinquished and received?	Yes	V	No 🗆				
Chain of custody agrees with sample labels?	Yes	V	No 🗀				
Samples in proper container/bottle?	Yes	V	No 🗆				
Sample containers intact?	Yes	\checkmark	No 🗀				
Sufficient sample volume for indicated test?	Yes	$\overline{\mathbf{V}}$	No 🗆			•	
All samples received within holding time?	Yes	\checkmark	No 🗆				
Water - VOA vials have zero headspace? No VOA vials sub	mitted		Yes 🗹	No 🗌			
Water - Preservation labels on bottle and cap match?	Yes	V	No 🗆	N/A □			
Water - pH acceptable upon receipt?	Yes	V	No 🗆	N/A □			
Container/Temp Blank temperature?		1°	<6° C Acceptab	ole .			
COMMENTS:			If given sufficien	t time to cool.			
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			_				
Client contacted Date contacted:			Pers	son contacted			
Contacted by: Regarding:				<u> </u>			
Comments: OMO VATE LOUND DIAL	`0 t/)	0:00	m arri	m an	Leedd	Orla	1/8/
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Corrective Action							
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				4901 Hawkins NF	Tel. 505-345-3975		(ζ)ι	no se	D) F	19T) 8 8	804 1E+	TEX + MTB	.B		*		X		X		×		×		Remarks:	, la	
		hsr		972-709				1208)	94		+ 3	ive TEX + MTB	8 2 1		2 ×	2	,	3	X 5	Ź	х Б	1-	× e,	0	Date Time Re	Date Time	
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	Chain-or-Custody Record	(8)	Pd.	CR 4990	NM 87413	1-4/61		The sound (Ently/elidetion)	7			Sample Request ID	123		7-3 Dupe		TP-10 4	1	TP-11		TP.13	_	77-12				
	Haln-or-C	Western		Mailing Address:#50	Bloom Sield	Phone #: 505 - 632	1 117 1			tation AP 🗆 Other		Time Matrix	que the		9454		Joos	\	103CA		1045A		0111		Time: Relinguished by	Time: Relinquished by	
	ا د	Client:		Mailing	12	Phone ≱	email or	QA/QC Package:		Accreditation NELAP	☐ EDD (Type)	Date	3/6/09												Sak of	Date:	

	HALL ENVIRONMENTAL Anai ysts i archatody		www.nallenvironmental.com ins NF - Albuquergue, NM 87109	rc	1211				1085 1085	HA 1, ₆ (8 \ ;	alsista (NC)	Orkouthouse (Methouse) 80 (PAV (C)	28 28 28 7	*						4		tracted data will be clearly notated on the analogous
		調整	www.n 4901 Hawkins NE	Tel 50		ام)	uo s	(Ga	НЬ	⊥ +	3E	FEX + MTE FEX + MTE FEX + MTE	8		×					Remarks: PAGES OF	-	as notice of this possibility. Any sub-contracted data
Turn-Around Time:	Standard 🗆 Rush	Ì	River Terlace (51) 712-2009			Project Manager:	,	, , , ,	Sampler, wer/ BD		Sample remperature	Container Preservative Type and # Type	4 164 HCC 7		Nec	0				S CO Date	Received by Date Time	er accredited laborates This serves
Chain-of-Custody Record	Q	1	Mailing Address: #50 CR 4990	NW Abus	30 - 4161	ax#:505-639-37/		☐ Standard ★ Level 4 (Full Validation)	, uo	□ NELAP □ Other	□ EDD (Type)	Date Time Matrix Sample Request ID	36/09 1120A HOU TP-7		(1154 / Field Blank	Trip Blank Male				Time: Relinguished by:	Date: Time: Relinquished by:	Ssary, samples submitted to Hall Environmental may be subcontracted to oth



COVER LETTER

Friday, December 11, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990 Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: River Terrace 2ND QTR 2009

Dear Cindy Hurtado:

Order No.: 0904344

Hall Environmental Analysis Laboratory, Inc. received 11 sample(s) on 4/22/2009 for the analyses presented in the following report.

This report is an addendum to the report dated June 4, 2009. This is an updated report.

No determination of compounds below these (denoted by the ND or < sign) has been made.

Reporting limits are determined by EPA methodology.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

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



Date: 11-Dec-09

CLIENT: Wes

Western Refining Southwest, Inc.

Project: River Terrace 2ND QTR 2009

Lab Order: 0904344

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date
0904344-01A	TP-8	R33450	EPA Method 8015B: Gasoline Range	4/21/2009 8:45:00 AM
0904344-01A	TP-8	R33450	EPA Method 8021B: Volatiles	4/21/2009 8:45:00 AM
0904344-01A	TP-8	R33450	EPA Method 8021B: Volatiles	4/21/2009 8:45:00 AM
0904344-01A	TP-8	18937	EPA Method 8015B: Diesel Range	4/21/2009 8:45:00 AM
0904344-01B	TP-8	18923	EPA 6010B: Total Recoverable Metals	4/21/2009 8:45:00 AM
0904344-02A	MW #49	18937	EPA Method 8015B: Diesel Range	4/21/2009 9:20:00 AM
0904344-02A	MW #49	R33450	EPA Method 8015B: Gasoline Range	4/21/2009 9:20:00 AM
0904344-02A	MW #49	R33450	EPA Method 8021B: Volatiles	4/21/2009 9:20:00 AM
0904344-02B	MW #49	.18923	EPA 6010B: Total Recoverable Metals	4/21/2009 9:20:00 AM
0904344-03A	DW #1	R33450	EPA Method 8015B: Gasoline Range	4/21/2009 10:15:00 AM
0904344-03A	DW #1	R33450	EPA Method 8021B: Volatiles	4/21/2009 10:15:00 AM
0904344-03A	DW #1	18937	EPA Method 8015B: Diesel Range	4/21/2009 10:15:00 AM
0904344-03B	DW #1	18923	EPA 6010B: Total Recoverable Metals	4/21/2009 10:15:00 AM
0904344-03B	DW #1	18932	EPA Method 7470: Mercury	4/21/2009 10:15:00 AM
0904344-04A	TP-6	18937	EPA Method 8015B: Diesel Range	4/21/2009 10:40:00 AM
0904344-04A	TP-6	R33450	EPA Method 8015B: Gasoline Range	4/21/2009 10:40:00 AM
0904344-04A	TP-6	R33450	EPA Method 8021B: Volatiles	4/21/2009 10:40:00 AM
0904344-04B	TP-6	18923	EPA 6010B: Total Recoverable Metals	4/21/2009 10:40:00 AM
0904344-05A	TP-5	18937	EPA Method 8015B: Diesel Range	4/21/2009 11:10:00 AM
0904344-05A	TP-5	R33450	EPA Method 8015B: Gasoline Range	4/21/2009 11:10:00 AM
0904344-05A	TP-5	R33450	EPA Method 8021B: Volatiles	4/21/2009 11:10:00 AM
0904344-05A	TP-5	R33450	EPA Method 8021B: Volatiles	4/21/2009 11:10:00 AM
0904344-05B	TP-5	18923	EPA 6010B: Total Recoverable Metals	4/21/2009 11:10:00 AM
0904344-06A	TP-7	18937	EPA Method 8015B: Diesel Range	4/21/2009 12:25:00 PM
0904344-06A	TP-7	R33450	EPA Method 8021B: Volatiles	4/21/2009 12:25:00 PM
0904344-06A	TP-7	R33450	EPA Method 8021B: Volatiles	4/21/2009 12:25:00 PM
0904344-06A	TP-7	R33450	EPA Method 8015B: Gasoline Range	4/21/2009 12:25:00 PM
0904344-06B	TP-7	18923	EPA 6010B: Total Recoverable Metals	4/21/2009 12:25:00 PM
0904344-07A	TP-9	18937	EPA Method 8015B: Diesel Range	4/21/2009 12:50:00 PM
0904344-07A	TP-9	R33450	EPA Method 8015B: Gasoline Range	4/21/2009 12:50:00 PM
· 0904344-07A	TP-9	R33450	EPA Method 8021B: Volatiles	4/21/2009 12:50:00 PM
0904344-07B	TP-9	18955	EPA 6010B: Total Recoverable Metals	4/21/2009 12:50:00 PM
0904344-08A	TP-1	R33450	EPA Method 8021B: Volatiles	4/21/2009 1:15:00 PM
0904344-08A	TP-1	18937	EPA Method 8015B: Diesel Range	4/21/2009 1:15:00 PM
0904344-08A	TP-1	R33450	EPA Method 8015B: Gasoline Range	4/21/2009 1:15:00 PM
0904344-08B	TP-1	18955	EPA 6010B: Total Recoverable Metals	4/21/2009 1:15:00 PM
0904344-09A	TP-2	R33450	EPA Method 8015B: Gasoline Range	4/21/2009 1:40:00 PM
0904344-09A	TP-2	R33450	EPA Method 8021B: Volatiles	4/21/2009 1:40:00 PM

CLIENT:

Western Refining Southwest, Inc.

Project:

River Terrace 2ND QTR 2009

Lab Order:

0904344

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date
0904344-09A	TP-2	R33450	EPA Method 8021B: Volatiles	4/21/2009 1:40:00 PM
0904344-09A	TP-2	18937	EPA Method 8015B: Diesel Range	4/21/2009 1:40:00 PM
0904344-09B	TP-2	18955	EPA 6010B: Total Recoverable Metals	4/21/2009 1:40:00 PM
0904344-10A	Field Blank	18937	EPA Method 8015B: Diesel Range	4/21/2009 1:45:00 PM
0904344-10A	Field Blank	R33450	EPA Method 8015B: Gasoline Range	4/21/2009 1:45:00 PM
0904344-10A	Field Blank	R33450	EPA Method 8021B: Volatiles	4/21/2009 1:45:00 PM
0904344-10A	Field Blank	R33450	EPA Method 8021B: Volatiles	4/21/2009 1:45:00 PM
0904344-11A	Trip Blank	R33450	EPA Method 8021B: Volatiles	
0904344-11A	Trip Blank	R33450	EPA Method 8015B: Gasoline Range	

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Project:

River Terrace 2ND QTR 2009

Lab Order:

0904344

CASE NARRATIVE

Analytical Comments for METHOD 8021BTEX_W, SAMPLE 0904344-03A: Necessary dilution for foamy matrix. Analytical Comments for METHOD 8015GRO_W, SAMPLE 0904344-03A: Necessary dilution for foamy matrix.

Date: 11-Dec-09

CLIENT: Lab Order: Western Refining Southwest, Inc.

0904344

River Terrace 2ND QTR 2009

Project: Lab ID:

0904344-01

Client Sample ID: TP-8

Collection Date: 4/21/2009 8:45:00 AM

Date Received: 4/22/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Un	its DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	SE				Analyst: SCC
Diesel Range Organics (DRO)	6.8	1.0	mg/	/L 1	4/24/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/	/L 1	4/24/2009
Surr: DNOP	109	58-140	%R	EC 1	4/24/2009
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: DAM
Gasoline Range Organics (GRO)	18	2.5	mg/	L 50	4/28/2009 3:38:07 PM
Surr: BFB	95.6	59.9-122	%R	EC 50	4/28/2009 3:38:07 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	25	μg/l	L 10	4/29/2009 12:06:55 PM
Benzene	14	10	μg/L	_ 10	4/29/2009 12:06:55 PM
Toluene	NĐ	10	μg/l	_ 10	4/29/2009 12:06:55 PM
Ethylbenzene	350	50	μg/l	50	4/28/2009 3:38:07 PM
Xylenes, Total	3600	100	μg/l	_ 50	4/28/2009 3:38:07 PM
Surr: 4-Bromofluorobenzene	105	65.9-130	%R	EC 50	4/28/2009 3:38:07 PM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: NMO
Barium	0.38	0.020	mg/	'L 1	4/29/2009 9:33:45 AM
Chromium	ND	0.0060	mg/	L 1	4/29/2009 9:33:45 AM
Lead	0.030	0.0050	mg/	'L 1	4/29/2009 9:33:45 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904344

0904344-02

Client Sample ID: MW #49

Collection Date: 4/21/2009 9:20:00 AM

Project: Lab ID: River Terrace 2ND QTR 2009

Date Received: 4/22/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E				Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	4/24/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	4/24/2009
Surr: DNOP	108	58-140	%REC	. 1	4/24/2009
EPA METHOD 8015B: GASOLINE RA	NGE				Analyst: DAM
Gasoline Range Organics (GRO)	0.16	0.050	mg/L	1	4/28/2009 4:08:45 PM
Surr: BFB	99.6	59.9-122	%REC	1	4/28/2009 4:08:45 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1.	4/28/2009 4:08:45 PM
Benzene	ND	1.0	μg/L.	1	4/28/2009 4:08:45 PM
Toluene	ND	1.0	μg/L	1 -	4/28/2009 4:08:45 PM
Ethylbenzene	3.3	1.0	μg/L	1	4/28/2009 4:08:45 PM
Xylenes, Total	2.4	2.0	µg/L	1	4/28/2009 4:08:45 PM
Surr: 4-Bromofluorobenzene	105	65.9-130.	%REC	1	4/28/2009 4:08:45 PM
EPA 6010B: TOTAL RECOVERABLE	METALS			·	Analyst: NMO
Barium	0.062	0.020	mg/L	1	4/29/2009 9:36:52 AM
Chromium	ND	0.0060	mg/L	1	4/29/2009 9:36:52 AM

0.0050

mg/L

ND

Oug	ifiers	•
Vua	MATCES	

Lead

4/29/2009 9:36:52 AM





Value exceeds Maximum Contaminant Level

E Estimated value

j Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Client Sample ID: DW #1

Lab Order:

0904344

Collection Date: 4/21/2009 10:15:00 AM

Project:

River Terrace 2ND QTR 2009

Date Received: 4/22/2009

Lab ID:

0904344-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E		····			Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	4/24/2009
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	4/24/2009
Surr: DNOP	106	58-140		%REC	1	4/24/2009
EPA METHOD 8015B: GASOLINE RA	NGE					Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.50	1	mg/L	10	4/28/2009 4:39:21 PM
Surr: BFB	87.9	59.9-122		%REC	10	4/28/2009 4:39:21 PM
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	25	ı	μg/L	10	4/28/2009 4:39:21 PM
Benzene	ND	5.0	1	μg/L	10	4/28/2009 4:39:21 PM
Toluene	ND	10		μg/L	10	4/28/2009 4:39:21 PM
Ethylbenzene	ND	10	ı	μ g/Ĺ	10	4/28/2009 4:39:21 PM
Xylenes, Total	ND	20	ı	µ g/L	10	4/28/2009 4:39:21 PM
Surr: 4-Bromofluorobenzene	89.6	65.9-130	(%REC	10	4/28/2009 4:39:21 PM
EPA METHOD 7470: MERCURY						Analyst: MMS
Mercury	0.00081	0.00020	τ	mg/L	1	4/24/2009 3:00:57 PM
EPA 6010B: TOTAL RECOVERABLE	METALS					Analyst: NMO
Barium	0.61	0.020	r	mg/L	1	4/29/2009 9:40:56 AM
Chromium	ND	0.0060	r	mg/L	1	4/29/2009 9:40:56 AM
Lead	ND	0.0050	r	mg/L	1	4/29/2009 9:40:56 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

В Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded Н

MCL Maximum Contaminant Level

Reporting Limit

Page 3 of 11

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904344

Client Sample ID: TP-6

Collection Date: 4/21/2009 10:40:00 AM

Project: Lab ID: River Terrace 2ND QTR 2009

Date Received: 4/22/2009

0904344-04

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	GE				Analyst: SCC
Diesel Range Organics (DRO)	2.9	1.0	mg/L	1	4/24/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	4/24/2009
Surr: DNOP	108	58-140	%REC	1	4/24/2009
EPA METHOD 8015B: GASOLINE R.	ANGE				Analyst: DAM
Gasoline Range Organics (GRO)	11	1.0	mg/L	20	4/28/2009 10:16:08 PM
Surr: BFB	93.3	59.9-122	%REC	20	4/28/2009 10:16:08 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	50	μg/L	20	4/28/2009 10:16:08 PM
Benzene	25	20	µg/L	20	4/28/2009 10:16:08 PM
Toluene	ND	20	μg/L	. 20	4/28/2009 10:16:08 PM
Ethylbenzene	. 850	20	μg/L	20	4/28/2009 10:16:08 PM
Xylenes, Total	3400	40	μg/L	20	4/28/2009 10:16:08 PM
Surr: 4-Bromofluorobenzene	104	65.9-130	%REC	20	4/28/2009 10:16:08 PM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: NMO
Barium	0.34	0.020	mg/L	1	4/29/2009 9:44:52 AM
Chromium	ND	0.0060	mg/L	1	4/29/2009 9:44:52 AM
Lead	0.036	0.0050	mg/L	1	4/29/2009 9:44:52 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Client Sample ID: TP-5

Lab Order:

0904344

Collection Date: 4/21/2009 11:10:00 AM

Project:

River Terrace 2ND QTR 2009

Date Received: 4/22/2009

Lab ID:

0904344-05

Matrix: AQUEOUS

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	GE			·····	Analyst: SCC
Diesel Range Organics (DRO)	11	1.0	mg/L	1	4/24/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	4/24/2009
Surr: DNOP	111	58-140	%REC	1	4/24/2009
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: DAM
Gasoline Range Organics (GRO)	49	5.0	mg/L	1 0 0	4/28/2009 10:46:31 PM
Surr: BFB	97.3	59.9-122	%REC	100	4/28/2009 10:46:31 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	25	μg/L	10	4/29/2009 12:37:33 PM
Benzene	25	10	μg/L	10	4/29/2009 12:37:33 PM
Toluene	11	10	μg/L	10	4/29/2009 12:37:33 PM
Ethylbenzene	2400	100	μg/L	100	4/28/2009 10:46:31 PM
Xylenes, Total	15000	200	μg/L	100	4/28/2009 10:46:31 PM
Surr: 4-Bromofluorobenzene	112	6 5.9 -13 0	%REC	100	4/28/2009 10:46:31 PM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: NMO
Barium	0.47	0.020	mg/L	1	4/29/2009 9:47:51 AM
Chromium	ND	0.0060	mg/L	1	4/29/2009 9:47:51 AM
Lead	0.026	0.0050	mg/L	1	4/29/2009 9:47:51 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 5 of 11

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Client Sample ID: TP-7

Lab Order:

0904344

Project:

River Terrace 2ND QTR 2009

Collection Date: 4/21/2009 12:25:00 PM

Date Received: 4/22/2009

Lab ID:

0904344-06

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Unit	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	GE	· · · · · · · · · · · · · · · · · · ·			Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	. mg/L	. 1	4/24/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	. 1	4/24/2009
Surr: DNOP	106	58-140	%RE	C 1	4/24/2009
EPA METHOD 8015B: GASOLINE RA	ANGE .				Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	mg/L	. 1	4/28/2009 11:17:01 PM
Surr: BFB	94.8	59.9-122	%RE	C 1,	4/28/2009 11:17:01 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	4/29/2009 2:09:16 PM
Benzene	ND	1.0	μg/L	1	4/29/2009 2:09:16 PM
Toluene	ND	1.0	μg/L	1	4/29/2009 2:09:16 PM
Ethylbenzene	1.2	1.0	μg/L	1	4/29/2009 2:09:16 PM
Xylenes, Total	7.8	2.0	μg/L	1	4/29/2009 2:09:16 PM
Surr: 4-Bromofluorobenzene	88.6	65.9-130	%RE	C 1	4/29/2009 2:09:16 PM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: NMO
Barium	0.065	0.020	mg/L	. 1	4/29/2009 10:21:15 AM
Chromium	ND	0.0060	mg/L	. 1	4/29/2009 10:21:15 AM
Lead	ND	0.0050	mg/L	. 1	4/29/2009 10:21:15 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н
- MCL Maximum Contaminant Level
- RL Reporting Limit

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

0904344

Client Sample ID; TP-9

Lab Order:

Collection Date: 4/21/2009 12:50:00 PM

Project:

River Terrace 2ND QTR 2009

Date Received: 4/22/2009

Lab ID:

0904344-07

Matrix: AQUEOUS

Analyses	Result	PQL (Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	GE				Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	. 1	4/24/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	4/24/2009
Surr: DNOP	102	58-140	%REC	1	4/24/2009
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	4/28/2009 3:07:29 PM
Surr: BFB	94.5	59.9-122	%REC	1	4/28/2009 3:07:29 PM
EPA METHOD 8021B: VOLATILES		•			Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	4/28/2009 3:07:29 PM
Benzene	ND	1.0	μg/L	1	4/28/2009 3:07:29 PM
Toluene	ND	1.0	μ g/L	1	4/28/2009 3:07:29 PM
Ethylbenzene	ND	1.0	μg/L	1	4/28/2009 3:07:29 PM
Xylenes, Total	ND	2.0	μg/L	1	4/28/2009 3:07:29 PM
Surr: 4-Bromofluorobenzene	96.6	65.9-130	%REC	1	4/28/2009 3:07:29 PM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: SNV
Barium	0.081	0.020	mg/L	1	4/30/2009 2:20:32 PM
Chromium	ND	0.0060	mg/L	1	4/30/2009 2:20:32 PM
Lead	0.0089	0.0050	mg/L	1	4/30/2009 2:20:32 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

Ε Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

Client Sample ID: TP-1

0904344

Collection Date: 4/21/2009 1:15:00 PM

Project:

River Terrace 2ND QTR 2009

Date Received: 4/22/2009

Lab ID:

0904344-08

Matrix: AQUEOUS

Analyses	Result	PQL	Qual U	nits	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E				•	Analyst: SCC
Diesel Range Organics (DRO)	15	1.0	mg	g/L	1	4/24/2009
Motor Oil Range Organics (MRO)	, ND	5.0	m	g/L	1	4/24/2009
Surr: DNOP	110	58-140	%	REC	1 .	4/24/2009
EPA METHOD 8015B: GASOLINE RA	NGE					Analyst: DAM
Gasoline Range Organics (GRO)	59	5.0	mę	g/L	100	4/28/2009 11:47:24 PM
Surr: BFB	92.9	59.9-122	%1	REC	100	4/28/2009 11:47:24 PM
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	250	μg	J/L	100	4/28/2009 11:47:24 PM
Benzene	430	100	μg	J/L	100	4/28/2009 11:47:24 PM
Toluene	ND	100	μg	J/L	100	4/28/2009 11:47:24 PM
Ethylbenzene	2500	100	μg	J/L	100	4/28/2009 11:47:24 PM
Xylenes, Total	14000	200	μg	J/L	100	. 4/28/2009 11:47:24 PM
Surr: 4-Bromofluorobenzene	105	65.9-130	%I	REC	100	4/28/2009 11:47:24 PM
EPA 6010B: TOTAL RECOVERABLE	METALS					Analyst: SNV
Barium	0.075	0.020	m	g/L	1	4/30/2009 2:24:33 PM
Chromium	ND	0.0060	mg	g/L	1	4/30/2009 2:24:33 PM
Lead	0.042	0.0050	m	g/L	1	4/30/2009 2:24:33 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

Ε Estimated value

J Analyte detected below quantitation limits

Not Detected at the Reporting Limit ND

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank В

Holding times for preparation or analysis exceeded H

MCL Maximum Contaminant Level

Reporting Limit

Date: 11-Dec-09

CLIENT: Lab Order: Western Refining Southwest, Inc.

0904344

Collection Date: 4/21/2009 1:40:00 PM

Project:

River Terrace 2ND QTR 2009

Date Received: 4/22/2009

Client Sample ID: TP-2

Lab ID:

0904344-09

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE					Analyst: SCC
Diesel Range Organics (DRO)	6.7	1.0	mg/L	1	4/24/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	4/24/2009
Surr: DNOP	107	58-140	%REC	1	4/24/2009
EPA METHOD 8015B: GASOLINE RANGE					Analyst: DAM
Gasoline Range Organics (GRO)	14	0.50	mg/L	10	4/29/2009 12:18:06 AM
Surr: BFB	97.6	59.9-122	%REC	10	4/29/2009 12:18:06 AM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	25	μg/L	10	4/29/2009 12:18:06 AM
Benzene	690	10	µg/L	10	4/29/2009 12:18:06 AM
Toluene	ND	10	μg/L	10	4/29/2009 12:18:06 AM
Ethylbenzene	1800	50	μg/L	50	4/29/2009 2:39:59 PM
Xylenes, Total	. 2100	20	µg/L	10	4/29/2009 12:18:06 AM
Surr: 4-Bromofluorobenzene	113	65.9-130	%REC	10	4/29/2009 12:18:06 AM
EPA 6010B: TOTAL RECOVERABLE METALS				•	Analyst: SNV
Barium	0.22	0.020	mg/L	1	4/30/2009 2:28:27 PM
Chromium	ND	0.0060	mg/L	1	4/30/2009 2:28:27 PM
Lead	0.011	0.0050	mg/L	1	4/30/2009 2:28:27 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Page 9 of 11

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904344

Client Sample ID: Field Blank

Collection Date: 4/21/2009 1:45:00 PM

Project:

River Terrace 2ND QTR 2009

Date Received: 4/22/2009

Lab ID:

0904344-10

Matrix: AQUEOUS

Analyses	Result	PQL	Qual U	nits	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE					·····	Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	m	ig/L	1	4/24/2009
Motor Oil Range Organics (MRO)	ND	5.0	m	ng/L	1	4/24/2009
Surr: DNOP	113	58-140	%	REC	1	4/24/2009
EPA METHOD 8015B: GASOLINE RAN	IGE					Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	m	ng/L	1	4/29/2009 12:48:41 AM
Surr: BFB	93.1	59.9-122	%	REC	1	4/29/2009 12:48:41 AM
EPA METHOD 8021B: VOLATILES					•	Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	μ	g/L	1	4/29/2009 3:10:40 PM
Benzene	ND	1.0	μ	g/L	1	4/29/2009 3:10:40 PM
Toluene	ND	1.0	μ	g/L	1	4/29/2009 3:10:40 PM
Ethylbenzene	ND	1.0	μ	g/L	1	4/29/2009 3:10:40 PM
Xylenes, Total	ND	2.0	μ	g/L	1	4/29/2009 3:10:40 PM
Surr: 4-Bromofluorobenzene	88.6	65.9-130	%	REC	1	4/29/2009 3:10:40 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904344

River Terrace 2ND QTR 2009

Project: Lab ID:

0904344-11

Client Sample ID: Trip Blank

Collection Date:

Date Received: 4/22/2009

Matrix: TRIP BLANK

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RAN	IGE				Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	4/29/2009 1:19:15 AM
Surr: BFB	90.2	59.9-122	%REC	1	4/29/2009 1:19:15 AM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	4/29/2009 1:19:15 AM
Benzene	ND	1.0	μg/L	1	4/29/2009 1:19:15 AM
Toluene	ND	1.0	μg/L	1	4/29/2009 1:19:15 AM
Ethylbenzene	ND	1.0	μg/L	1	4/29/2009 1:19:15 AM
Xylenes, Total	ND	2.0	μ g/ L	1	4/29/2009 1:19:15 AM
Surr: 4-Bromofluorobenzene	90.3	65.9-130	%REC	1	4/29/2009 1:19:15 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 11 of 11

Hall Environmental Analysis Laboratory, Inc.

	DATES REPORT		ement of all the second of the
0904344	Western Refining Southwest, Inc.	River Terrace 2ND QTR 2009	والمراجعة والمرا
Lab Order:	Client:	Project:	Secretary of the second

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Instrument Run ID	QC Batch ID	Prep Date	Analysis Date
0904344-01A	TP-8	4/21/2009 8:45:00 AM	Aqueous	EPA Method 8015B: Diesel Range	. TD(17A) 2_090424,	18937	4/24/2009	4/24/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090428A	R33450		4/28/2009
				EPA Method 8021B: Volatiles	ZEUS_090428A	R33450		4/28/2009
				EPA Method 8021B: Volatiles	ZEUS_090429A	R33450		4/29/2009
0904344-01B				EPA 6010B: Total Recoverable Metals	ISIS_090429A	18923	4/22/2009	4/29/2009
0904344-02A	MW #49	4/21/2009 9:20:00 AM		EPA Method 8015B: Diesel Range	TD(17A) 2_090424,	18937	4/24/2009	4/24/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090428A	R33450		4/28/2009
	•			EPA Method 8021B: Volatiles	ZEUS_090428A	R33450		4/28/2009
0904344-02B				EPA 6010B: Total Recoverable Metals	ISIS_090429A	18923	4/22/2009	4/29/2009
0904344-03A	DW #1	4/21/2009 10:15:00 AM		EPA Method 8015B: Diesel Range	ID(17A) 2_090424,	18937	4/24/2009	4/24/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090428A	R33450		4/28/2009
				EPA Method 8021B: Volatiles	ZEUS_090428A	R33450		4/28/2009
0904344-03B				EPA 6010B: Total Recoverable Metals	ISIS_090429A	18923	4/22/2009	4/29/2009
				EPA Method 7470: Mercury	NEMO_090423B	18932	4/23/2009	4/24/2009
0904344-04A	TP-6	4/21/2009 10:40:00 AM		EPA Method 8015B: Diesel Range	'ID(17A) 2_090424,	18937	4/24/2009	4/24/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090428A	R33450		4/28/2009
				EPA Method 8021B: Volatiles	ZEUS_090428A	R33450		4/28/2009
0904344-04B				EPA 6010B: Total Recoverable Metals	ISIS_090429A	18923	4/22/2009	4/29/2009
0904344-05A	TP-5	4/21/2009 11:10:00 AM		EPA Method 8015B: Diesel Range	'ID(17A) 2_090424,	18937	4/24/2009	4/24/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090428A	R33450		4/28/2009
-				EPA Method 8021B: Volatiles	ZEUS_090428A	R33450		4/28/2009
				EPA Method 8021B: Volatiles	ZEUS_090429A	R33450		4/29/2009
0904344-05B				EPA 6010B: Total Recoverable Metals	ISIS_090429A	18923	4/22/2009	4/29/2009
0904344-06A	TP-7	4/21/2009 12:25:00 PM		EPA Method 8015B: Diesel Range	'ID(17A) 2_090424,	18937	4/24/2009	4/24/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090428A	R33450		4/28/2009

Page 1 of 2

DATES REPORT

Hall Environmental Analysis Laboratory, Inc.

Lab Order: 0904344

Client

Western Refining Southwest, Inc.

Project: River Terrace 2ND QTR 2009

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Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Instrument Run D	QC Batch ID	Prep Date	Analysis Date
0904344-06A	TP-7	4/21/2009 12:25:00 PM	Aqueous	EPA Method 8021B: Volatiles	ZEUS_090428A	R33450		4/28/2009
				EPA Method 8021B; Volatiles	ZEUS_090429A	R33450		4/29/2009
0904344-06B				EPA 6010B: Total Recoverable Metals	ISIS_090429A	18923	4/22/2009	4/29/2009
0904344-07A	1P-9	4/21/2009 12:50:00 PM		EPA Method 8015B: Diesel Range	ID(17A) 2_090424,	18937	4/24/2009	4/24/2009
				EPA Method 8015B; Gasoline Range	ZEUS_090428A	R33450		4/28/2009
				EPA Method 8021B: Volatiles	ZEUS_090428A	R33450		4/28/2009
0904344-07B				EPA 6010B: Total Recoverable Metals	ISIS_090430C	18955	4/27/2009	4/30/2009
0904344-08A	TP-1	4/21/2009 1:15:00 PM		EPA Method 8015B: Diesel Range	'ID(17A) 2_090424,	18937	4/24/2009	4/24/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090428A	R33450		4/28/2009
				EPA Method 8021B: Volatiles	ZEUS_090428A	R33450		4/28/2009
0904344-08B				EPA 6010B: Total Recoverable Metals	ISIS_090430C	18955	4/27/2009	4/30/2009
0904344-09A	TP-2	4/21/2009 1:40:00 PM		EPA Method 8015B: Diesel Range	ID(17A) 2_090424,	18937	4/24/2009	4/24/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090428A	R33450		4/29/2009
				EPA Method 8021B: Volatiles	ZEUS_090428A	R33450		4/29/2009
				EPA Method 8021B: Volatiles	ZEUS_090429A	R33450		4/29/2009
0904344-09B				EPA 6010B: Total Recoverable Metals	ISIS_090430C	18955	4/27/2009	4/30/2009
0904344-10A	Field Blank	4/21/2009 1:45:00 PM		EPA Method 8015B: Diesel Range	TD(17A) 2_090424	18937	4/24/2009	4/24/2009
		•		EPA Method 8015B: Gasoline Range	ZEUS_090428A	R33450		4/29/2009
				EPA Method 8021B: Volatiles	ZEUS_090428A	R33450		4/29/2009
				EPA Method 8021B: Volatiles	ZEUS_090429A	R33450		4/29/2009
0904344-11A	Trip Blank		Trip Blank	EPA Method 8015B: Gasoline Range	ZEUS_090428A	R33450		4/29/2009
				EPA Method 8021B: Volatiles	ZEUS_090428A	R33450		4/29/2009

Date: 11-Dec-09

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

Project:

River Terrace 2ND QTR 2009

Work Order:

0904344

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec Lo	owLimit Hig	ghLimit %RPD	RPDLimit Qual
Method: EPA Method 8015B; D	iesel Range								
Sample ID: MB-18937		MBLK			•	Batch ID:	18937	Analysis Date:	4/24/2009
Diesel Range Organics (DRO)	ND	mg/L	1.0						
Motor Oll Range Organics (MRO)	ND	mg/L	5.0		•			•	
Sample ID: LC\$-18937		LCS				Batch ID:	18937	Analysis Date:	4/24/2009
Diesel Range Organics (DRO)	5.829	mg/L	1.0	5	0	117	74	157	
Method: EPA Method 8015B: G	asoline Rang	je							
Sample ID: 5ML RB		MBLK				Batch ID:	R33450	Analysis Date:	4/28/2009 9:30:36 AM
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Sample ID: 2.5UG GRO LCS		LCS				Batch ID:	R33450	Analysis Date:	4/28/2009 7:12:10 PM
Gasoline Range Organics (GRO)	0.5518	mg/L	0.050	0.5	0.0282	105	80	115	
Method: EPA Method 8021B: V	olatiles								
Sample ID: 5ML RB		MBLK				Batch ID:	R33450	Analysis Date:	4/28/2009 9:30:36 AM
Methyl tert-butyl ether (MTBE)	ND	μg/L	2.5						
Benzene	ND	μg/L	1.0					•	•
Toluene	ND	μg/L	1.0						
Ethylbenzene	ND	μg/L	1.0			•	•	•	
Xylenes, Total	ND	μg/L	2.0			•			
Sample ID: 100NG BTEX LCS		LCS				Batch ID:	R33450	Analysis Date:	4/28/2009 7:42:54 PN
Methyl tert-butyl ether (MTBE)	19.50	µg/L	2.5	20	0	97.5	51.2	138	
Benzene	19.66	μg/L	1.0	20	. 0	98.3	85.9	113	
Toluene	-21.12	μg/L	1.0	20	0.558	103	86.4	113	
Ethylbenzene	20.98	μg/L	1.0	20	0.076	105	83.5	118	
Xylenes, Total	62.70	µg/L	2.0	60	0	104	83.4	122	
Method: EPA Method 7470: Me	ercury								
Sample ID: MB-18932		MBLK				Batch ID:	18932	Analysis Date:	4/24/2009 2:22:57 PN
Mercury	ND	mg/L	0.00020						
Sample ID: LCS-18932		LCS				Batch ID:	18932	Analysis Date:	4/24/2009 2:24:42 PN
Mercury	0.004984	mg/L	0.00020	0.005	4E-05	98.9	80	120	

Qualifiers:

E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 1

Date: 11-Dec-09

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

oject:

River Terrace 2ND QTR 2009

Work Order:

0904344

nalyte		Result	Units	PQL	SPK Va SI	PK ref	%Rec Lo	owLimit Hk	ghLimit %RI	PD RPDLimit Qual
Method: E	EPA 6010B: Total	Recoverable Me	itals							
Sample ID:	MB-18923		MBLK				Batch ID:	18923	Analysis Date	e: 4/29/2009 8:31:05 Al
Barium		ND	mg/L	0.010					•	
Chromium		ND	mg/L	0.0060						
Lead		ND	mg/L	0.0050						
Sample ID:	MB-18955		MBLK				Batch ID:	18955	Analysis Date	e: 4/30/2009 2:15:03 PI
Barium		ND	mg/L	0.010						
Chromium		ND	mg/L	0.0060						
Lead		ND	mg/L	0.0050						
Sample ID:	LCS-18923		LCS				Batch ID:	18923	Analysis Date	e: 4/29/2009 8:33:35 Al
Barium		0.4699	mg/L	0.010	0.5	0	94.0	80	120	
Chromium		0.4801	mg/L	0.0060	0.5	0	96.0	80	120	•
Lead		0.4798	mg/L	0.0050	0.5	0	96.0	80	120	
Sample ID:	LCS-18955	•	LCS				Batch ID:	18955	Analysis Date	e: 4/30/2009 2:17:48 PM
Barium		0.4599	mg/L	0.010	0.5	0	92.0	80	120	
Chromium		0.4694	mg/L	0.0060	0.5	0	93.9	80	120	
Lead	*	0.4621	mg/L	0.0050	0.5	0	92.4	80	120	



Estimated value

Analyte detected below quantitation limits

RPD outside accepted recovery limits

Н Holding times for preparation or analysis exceeded

NDNot Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits Page 2

Sample Receipt Checklist

Client Name WESTERN REFINING	SOUT			Date Receiv	ed:	4/22/2009	* •	
Work Order Number 0904344				Received by Sample ID	y: ARS labels checked by	y: <u>W</u>		
Checklist completed by: Signature	My		<u>'4]</u>	1409	-	initiala		
•		J						
Matrix:	Carrier name:	<u>yps</u>	2					
Shipping container/cooler in good con	dilion?	Yes	V	No 🗆	Not Present []		
Custody seals intact on shipping conti	alner/cooler?	Yes	V	No 🗆	Not Present [Not Shippe	j 🗆	
Custody seals intact on sample bottle	3?	Yes		No 🗆	N/A	Ž		
Chain of custody present?		Yes	V	No 🗌				
Chain of custody signed when relinqui	shed and received?	Yes	V	No 🗌		i.		
Chain of custody agrees with sample I	abels?	Yes	¥	No 🗆			,	
Samples in proper container/bottle?		Yes	V	No 🗀		•		
Sample containers intact?	•	Yes	\mathbf{V}	No 🗀				
Sufficient sample volume for indicated	test?	Yes	V	No 🗀				
All samples received within holding tim	· ·	Yes	\checkmark	No 🗀				
Water - VOA vials have zero headspace	%? No VOA vials subm	nitted		Yes 🗹	No 🗀			
Water - Preservation labels on bottle a	nd cap match?	Yes	V	No 🗆	N/A 🗆			
Water - pH acceptable upon receipt?		Yes	$ \mathbf{Z} $	No 🗆	N/A			
Container/Temp Blank temperature?			5°	<6° C Acceptel				
COMMENTS:				If given sufficien	it time to cool.			
								= :
Client contacted	Date contacted:			Pers	son contacted			
						·		
Contacted by:	Regarding:	 !			10.1.1			
Comments: (Idule)	Iml HNO3 1	_تنا	10	mple 0	904344	<u>-03B</u>	101	
acceptable ph	. A 4/22						<i>.</i>	
A 1 8 2								
Corrective Action								

Air Bubbles (Y or N) analysis Laboratory HALL ENVIRONMENTAL 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. 4901 Hawkins NE - Albuquerque, NM 87109 Fax 505-345-4107 www.hallenvironmental.com (AOV) 808S8 8081 Pesticides / 8082 PCB's Anions (F,CI,NO3,NO2,PO4,SO4) RCRA 8 Metals Tel. 505-345-3975 (HA9 10 AN9) 01:E8 EDB (Method 504.1) tode 1 of of TPH Method 8015B Remarks: (ISO8) 25M7 Time 42207 Ø N \supset 9:35 □ Rush Preservative HALO3 HND3 H N. 古って H. 五分 HC オピ HND, 4007 なり River Testace Tum-Around Time: Project Manager: N Standard Project Name: 4-109-5000 1-500ng Type and # 1-5000 4-VOA Container 4-VOR 1-5000 4-164 4-40A Sampler: (1-520m 4- VOA-1-8-1 Received by Received by: Project #: Level 4 (Full Validation) Sample Request ID Chain-of-Custody Record Mailing Address: 450 CR 4990 Ø 32-381 9/4/W Client Western Refining DW # 17-6 4 AP-8 ndnished by: □ Other Phone #. Aor 16 V Matrix H-0 Hoom 1015A Time 9394 300 email or Fax#: QA/QC Package: 845A See 3050 Time: ☐ EDD (Type) Accreditation □ Standard Fime: () NELAP Date 1213 421-09 Date:

	TALLENVIRONMENTAL ANALYSIS LABORATORY	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	mallysis	(°C)S ^{'†} (⊃9,	(I) (I)	(A(C)	or ho bod 35 bod 30 bod	Metho Metho PNA 8 8 Me (F,C (VO)	TPH (I 8310 (8310 (8250 (8250 (8270 (X	X	X	X	X	X					rs of 2		This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
Ä			49	TE									X3T8 X3T8	!		X		X		×					Nemarks:	· 	tis possibility.
Time:	□ Rush	7	estace duthe 2009			ger:			dy/ 506		神學學學 是一個學學學	Preservative	Type	Hcc 7	4N03 7		~		HND3 G	HCC ID				Octs Times	9:33 42209	Date	to other accedited laboratories. This serves as notice of thi
Turn-Around Time:	Standard	Project Name:		Project #:		Project Manager:			Sampler			Container	Type and #	4.104	1-500rl	4-164	(Sta 2)	4-dox	Loves 1	4-1/04				1 :	Year ed Di	Received by:	
Chain-of-Custody Record	Client Western Refining		Mailing Address: #50 CR 4990	NW87413	1	632-3911	QA/QC Package:	☐ Standard ★Level 4 (Full Validation)	uo	□ NELAP □ Other	☐ EDD (Type)	1	Date Ime Matrix Sample Request ID	4-218 1850 1420 TP- 9		114 114		14m	\	14 Field Blank	Trip Blank 13	-		T	refragished by:	Time: Relinquished by:	If necessary, samples submitted to Hall Environmental may be subcontracted



COVER LETTER

Tuesday, May 05, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990 Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: River Terrace 2nd QTR 2009

Dear Cindy Hurtado:

Order No.: 0904312

Hall Environmental Analysis Laboratory, Inc. received 6 sample(s) on 4/21/2009 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. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager Nancy McDuffie, Laboratory Manager

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



Date: 05-May-09

CLIENT:

Western Refining Southwest, Inc.

Project:

River Terrace 2nd QTR 2009

Lab Order:

0904312

Work Order Sample Summary

Client Sample ID	Batch ID	Test Name	Collection Date
TP-13	R33450	EPA Method 8015B: Gasoline Range	4/20/2009 12:48:00 PM
TP-13	R33450	EPA Method 8021B: Volatiles	4/20/2009 12:48:00 PM
TP-13	18911	EPA Method 8015B: Diesel Range	4/20/2009 12:48:00 PM
TP-13	18903	EPA 6010B: Total Recoverable Metals	4/20/2009 12:48:00 PM
TP-12	18911	EPA Method 8015B: Diesel Range	4/20/2009 1:10:00 PM
TP-12	R33450	EPA Method 8015B: Gasoline Range	4/20/2009 1:10:00 PM
TP-12	R33450	EPA Method 8021B: Volatiles	4/20/2009 1:10:00 PM
TP-12	18903	EPA 6010B: Total Recoverable Metals	4/20/2009 1:10:00 PM
TP-11	R33450	EPA Method 8021B: Volatiles	4/20/2009 1:35:00 PM
TP-11	18911	EPA Method 8015B: Diesel Range	4/20/2009 1:35:00 PM
TP-11	R33450	EPA Method 8015B: Gasoline Range	4/20/2009 1:35:00 PM
TP-11	18903	EPA 6010B: Total Recoverable Metals	4/20/2009 1:35:00 PM
TP-11FD	R33450	EPA Method 8015B: Gasoline Range	4/20/2009 1:40:00 PM
TP-11FD	R33450	EPA Method 8021B: Volatiles	4/20/2009 1:40:00 PM
TP-11FD	18911	EPA Method 8015B: Diesel Range	4/20/2009 1:40:00 PM
TP-11FD	18903	EPA 6010B: Total Recoverable Metals	4/20/2009 1:40:00 PM
TP-10	18911	EPA Method 8015B: Diesel Range	4/20/2009 1:55:00 PM
TP-10	R33450	EPA Method 8015B: Gasoline Range	4/20/2009 1:55:00 PM
TP-10	R33450	EPA Method 8021B: Volatiles	4/20/2009 1:55:00 PM
TP-10	18903	EPA 6010B: Total Recoverable Metals	4/20/2009 1:55:00 PM
TP-3	18911	EPA Method 8015B: Diesel Range	4/20/2009 2:15:00 PM
TP-3	R33450	EPA Method 8015B: Gasoline Range	4/20/2009 2:15:00 PM
TP-3	R33450	EPA Method 8021B; Volatiles	4/20/2009 2:15:00 PM
TP-3	18903	EPA 6010B: Total Recoverable Metals	4/20/2009 2:15:00 PM
	TP-13 TP-13 TP-13 TP-13 TP-13 TP-12 TP-12 TP-12 TP-12 TP-12 TP-11 TP-11 TP-11 TP-11 TP-11 TP-11FD TP-11FD TP-11FD TP-11FD TP-10 TP-10 TP-10 TP-3 TP-3 TP-3 TP-3	TP-13 R33450 TP-13 R33450 TP-13 R33450 TP-13 R991 TP-13 R8903 TP-12 R33450 TP-12 R33450 TP-12 R33450 TP-12 R33450 TP-11 R33450 TP-11 R33450 TP-11 R33450 TP-11 R33450 TP-11 R33450 TP-11 R33450 TP-11FD R33450 TP-11FD R33450 TP-11FD R33450 TP-11FD R33450 TP-11FD R33450 TP-10 R33450 TP-10 R33450 TP-10 R33450 TP-10 R33450 TP-10 R33450 TP-10 R33450 TP-3 R33450 TP-3 R33450	TP-13 R33450 EPA Method 8015B: Gasoline Range TP-13 R33450 EPA Method 8021B: Volatiles TP-13 18911 EPA Method 8015B: Diesel Range TP-13 18903 EPA 6010B: Total Recoverable Metals TP-12 18911 EPA Method 8015B: Diesel Range TP-12 R33450 EPA Method 8015B: Gasoline Range TP-12 R33450 EPA Method 8021B: Volatiles TP-12 18903 EPA 6010B: Total Recoverable Metals TP-11 R33450 EPA Method 8015B: Diesel Range TP-11 18911 EPA Method 8015B: Gasoline Range TP-11 18903 EPA 6010B: Total Recoverable Metals TP-11FD R33450 EPA Method 8015B: Gasoline Range TP-11FD 18911 EPA Method 8015B: Diesel Range TP-11FD 18903 EPA 6010B: Total Recoverable Metals TP-10 18911 EPA Method 8015B: Diesel Range TP-10 R33450 EPA Method 8015B: Gasoline Range TP-10 R33450 EPA Method 8015B: Diesel Range TP-3 18911 EPA Method 8015B: D

Date: 05-May-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904312

River Terrace 2nd QTR 2009

Project: Lab ID:

0904312-01

Client Sample ID: TP-13

Collection Date: 4/20/2009 12:48:00 PM

Date Received: 4/21/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E c					Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	1	mg/L	1	4/22/2009
Motor Oil Range Organics (MRO)	ND	5.0	1	mg/L	1	4/22/2009
Surr: DNOP	104	58-140	Ç	%REC	1	4/22/2009
EPA METHOD 8015B: GASOLINE RA	NGE					Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	г	mg/L	1	4/28/2009 12:03:55 PM
Surr: BFB	90.5	59.9-122	q	%REC	1	4/28/2009 12:03:55 PM
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	1	Jg/L	1	4/28/2009 12:03:55 PM
Benzene	. ND	1.0	1	ıg/L	1 .	4/28/2009 12:03:55 PM
Toluene	ND	1.0	Ļ	ıg/L	1	4/28/2009 12:03:55 PM
Ethylbenzene	ND	1.0	Ļ	ıg/L	1	4/28/2009 12:03:55 PM
Xylenes, Total	ND	2.0	Ļ	ıg/L	i	4/28/2009 12:03:55 PM
Surr: 4-Bromofluorobenzene	90.1	65.9-130	9	%REC	1	4/28/2009 12:03:55 PM
EPA 6010B: TOTAL RECOVERABLE	METALS					Analyst: SNV
Barium	0.21	0.020	n	ng/L	1	4/23/2009 10:27:58 AM
Chromium	ND	0.0060		ng/L	1	4/23/2009 10:27:58 AM
Lead	ND	0.0050	n	ng/L	1	4/23/2009 10:27:58 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 05-May-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

-0904312

Project:

River Terrace 2nd QTR 2009

Lab ID:

0904312-02

Client Sample ID: TP-12

Collection Date: 4/20/2009 1:10:00 PM

Date Received: 4/21/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual U	nits	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	3E			•		Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	m	g/L	1	4/22/2009
Motor Oll Range Organics (MRO)	ND	5.0	m	g/L	1 ·	4/22/2009
Surr. DNOP	106	58-140	%1	REC	1	4/22/2009
EPA METHOD 8015B: GASOLINE RA	ANGE					Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	mg	g/L	1 .	4/28/2009 12:34:36 PM
Surr. BFB	93.5	59.9-122	%I	REÇ	1	4/28/2009 12:34:36 PM
EPA METHOD 8021B; VOLATILES						Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	µg	/L	1	4/28/2009 12:34:36 PM
Benzene	· ND	1.0	рg	/Ł	1	4/28/2009 12:34:36 PM
Toluene	ND	1.0	μg	/L	1	4/28/2009 12:34:36 PM
Ethylbenzene	ND	1.0	μġ	/L	1	4/28/2009 12:34:36 PM
Xylenes, Total	ND	2.0	μg	/L	· 1	4/28/2009 12:34:36 PM
Surr: 4-Bromofluorobenzene	95.9	65.9-130	%)	REC	1	4/28/2009 12:34:36 PM
EPA 6010B: TOTAL RECOVERABLE	METALS				٠	Analyst: SNV
Barium	0.047	0.020	mg	3/L	1	4/23/2009 10:30:31 AM
Chromium	ND	0.0060	mg		1	4/23/2009 10:30:31 AM
Lead	ND	0.0050	mg	g/L	1	4/23/2009 10:30:31 AM

Quai	ifiers
~~~	111010

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

Date: 05-May-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904312

Project:

River Terrace 2nd QTR 2009

Lab ID:

0904312-03

Client Sample ID: TP-11

Collection Date: 4/20/2009 1:35:00 PM

Date Received: 4/21/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	3E				Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	4/22/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	4/22/2009
Surr: DNOP	108	58-140	%REC	1	4/22/2009
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	·mg/L	1	4/28/2009 1:05:22 PM
Surr: BFB	90.6	59.9-122	%REC	1	4/28/2009 1:05:22 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	4/28/2009 1:05:22 PM
Benzene	ND	1.0	μg/L	1	4/28/2009 1:05:22 PM
Toluene	, ND	1.0	μg/L	1	4/28/2009 1:05:22 PM
Ethylbenzene	ND	1.0	µg/L	1	4/28/2009 1:05:22 PM
Xylenes, Total	ND	2.0	μg/L	1	4/28/2009 1:05:22 PM
Surr: 4-Bromofluorobenzene	91.9	65.9-130	%REC	1	4/28/2009 1:05:22 PM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: SNV
Barium	0.088	0.020	mg/L	1	4/23/2009 10:33:04 AM
Chromium	ND	0.0060	mg/L	. 1	4/23/2009 10:33:04 AM
Lead	ND	0.0050	mg/L	1	4/23/2009 10:33:04 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 05-May-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904312

**Order:** 09043

Project: Lab ID: River Terrace 2nd QTR 2009

.

0904312-04

Client Sample ID: TP-11FD

Collection Date: 4/20/2009 1:40:00 PM

Date Received: 4/21/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Ur	nits	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	GE		<del></del>			Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg	g/L	1	4/22/2009
Motor Oil Range Organics (MRO)	· ND	5.0	mg	ı/L	1	4/22/2009
Surr: DNOP	106	58-140	%F	REC	1	4/22/2009
EPA METHOD 8015B: GASOLINE R.	ANGE					Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	mg	j/L	1	4/28/2009 1:35:43 PM
Surr: BFB	95.5	59.9-122	· %F	REC	1	4/28/2009 1:35:43 PM
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	μgi	/L	1	4/28/2009 1:35:43 PM
Benzene	ND	1.0	μg/	/L	1	4/28/2009 1:35:43 PM
Toluene	ND	1.0	μg/	/L	1	4/28/2009 1:35:43 PM
Ethylbenzene	ND	1.0	μgμ	/L	1	4/28/2009 1:35:43 PM
Xylenes, Total	ND	2.0	μg/	/L	1	4/28/2009 1:35:43 PM
Surr: 4-Bromofluorobenzene	98.1	65.9-130	%F	REC	1	4/28/2009 1:35:43 PM
EPA 6010B: TOTAL RECOVERABLE	METALS					Analyst: SNV
Barium	0.16	0.020	mg	ı/L	1	4/23/2009 10:44:39 AM
Chromium	ND	0.0060	mg		1	4/23/2009 10:44:39 AM
Lead	0.0088	0.0050	mg	/L	1	4/23/2009 10:44:39 AM

Qualifiers:

Page 4 of 6

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 05-May-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904312

Client Sample ID: TP-10

Collection Date: 4/20/2009 1:55:00 PM

Project:

River Terrace 2nd QTR 2009

Date Received: 4/21/2009

Lab ID:

0904312-05

Matrix: AQUEOUS

Analyses	Result	PQL (	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	GE	····		· · · · · · · · · · · · · · · · · · ·	Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	4/22/2009
Motor Oll Range Organics (MRO)	ND	5.0	mg/L	1	4/22/2009
Surr: DNOP	101	58-140	%REC	1	4/22/2009
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	4/28/2009 2:06:15 PM
Surr: BFB	8.88	59.9-122	%REC	1	4/28/2009 2:06:15 PM
EPA METHOD 8021B: VOLATILES			1		Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	4/28/2009 2:06:15 PM
Benzene	ND	. 1.0	μg/L	1	4/28/2009 2:06:15 PM
Toluene	ND	1.0	μg/L	1	4/28/2009 2:06:15 PM
Ethylbenzene	ND	1.0	µg/L	1	4/28/2009 2:06:15 PM
Xylenes, Total	ND	2.0	μg/L	1	4/28/2009 2:06:15 PM
Surr: 4-Bromofluorobenzene	87.7	65.9-130	%REC	1	4/28/2009 2:06:15 PM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: SNV
Barium	0.11	0.020	mg/L	1	4/23/2009 10:47:12 AM
Chromium	ND	0.0060	mg/L	1	4/23/2009 10:47:12 AM
Lead	ND	0.0050	mg/L	1	4/23/2009 10:47:12 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

Е Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Page 5 of 6

Date: 05-May-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904312

River Terrace 2nd QTR 2009

Project: Lab ID:

0904312-06

Client Sample ID: TP-3

Collection Date: 4/20/2009 2:15:00 PM

Date Received: 4/21/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	GE			·		Analyst: SCC
Diesel Range Organics (DRO)	. ND	1.0		mg/L	. 1	4/22/2009
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	4/22/2009
Surr: DNOP	96.8	58-140		%REC	1	4/22/2009
EPA METHOD 8015B: GASOLINE R	ANGE					Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	4/28/2009 2:36;46 PM
Surr: BFB	95.0	59.9-122		%REC .	1	4/28/2009 2:36:46 PM
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5		μg/L	1	4/28/2009 2:36:46 PM
Benzene	ND	1.0		µg/L	1	4/28/2009 2:36:46 PM
Toluene	ND	1.0		µg/L	1	4/28/2009 2:36;46 PM
Ethylbenzene	ND	1.0		µg/L	1	4/28/2009 2:36:46 PM
Xylenes, Total	ND	2.0		μg/L	1	4/28/2009 2:36:46 PM
Surr: 4-Bromofluorobenzene	97.1	65.9-130		%REC	1	4/28/2009 2:36:46 PM
EPA 6010B: TOTAL RECOVERABLE	METALS					Analyst: SNV
Barium	0.10	0.020	~	mg/L	1	4/23/2009 10:52:07 AM
Chromium	ND	0.0060		mg/L	1	4/23/2009 10:52:07 AM
Lead	ND	0.0050		mg/L	1	4/23/2009 10:52:07 AM

Qualifiers:

Reporting Limit

Page 6 of 6

Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recoverý limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

DATES REPORT

# Han Environmental Analysis Laboratory, Inc.

0904312 Lab Order:

Western Refining Southwest, Inc. Client:

River Terrace 2nd QTR 2009

Project:

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Instrument Run ID	QC Batch ID	Prep Date	Analysis Date
0904312-01A	TP-13	4/20/2009 12:48:00 PM	Aqueous	EPA Method 8015B: Diesel Range	TD(17A) 2_0904221	18911	4/22/2009	4/22/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090428A	R33450		4/28/2009
				EPA Method 8021B: Volatiles	ZEUS_090428A	K33450		4/28/2009
0904312-01B				EPA 6010B: Total Recoverable Metals	ISIS_090423A	18903	4/21/2009	4/23/2009
0904312-02A	TP-12	4/20/2009 1:10:00 PM		EPA Method 8015B: Diesel Range	'D(17A) 2_090422,	18911	4/22/2009	4/22/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090428A	R33450		4/28/2009
				EPA Method 8021B: Volatiles	ZEUS_090428A	R33450		4/28/2009
0904312-02B				EPA 6010B: Total Recoverable Metals	ISIS_090423A	18903	4/21/2009	4/23/2009
0904312-03A	TP-11	4/20/2009 1:35:00 PM		EPA Method 8015B: Diesel Range	'ID(17A) 2_090422	18911	4/22/2009	4/22/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090428A	R33450		4/28/2009
				EPA Method 8021B; Volatiles	ZEUS_090428A	R33450		4/28/2009
0904312-03B				EPA 6010B: Total Recoverable Metals	ISIS_090423A	18903	4/21/2009	4/23/2009
0904312-04A	TP-11FD	4/20/2009 1:40:00 PM		EPA Method 8015B: Diesel Range	ID(17A) 2_090422,	18911	4/22/2009	4/22/2009
		•		EPA Method 8015B: Gasoline Range	ZEUS_090428A	R33450		4/28/2009
				EPA Method 8021B: Volatiles	ZEUS_090428A	R33450		4/28/2009
0904312-04B				EPA 6010B: Total Recoverable Metals	ISIS_090423A	18903	4/21/2009	4/23/2009
0904312-05A	TP-10	4/20/2009 1:55:00 PM	•	EPA Method 8015B: Diesel Range	'ID(17A) 2_090422	18911	4/22/2009	4/22/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090428A	R33450		4/28/2009
				EPA Method 8021B: Volatiles	ZEUS_090428A	R33450		4/28/2009
0904312-05B				EPA 6010B: Total Recoverable Metals	ISIS_090423A	18903	4/21/2009	4/23/2009
0904312-06A	TP-3	4/20/2009 2:15:00 PM		EPA Method 8015B: Diesel Range	ID(17A) 2_090422,	18911	4/22/2009	4/22/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090428A	R33450		4/28/2009
				EPA Method 8021B: Volatiles	ZEUS_090428A	R33450		4/28/2009
0904312-06B				EPA 6010B: Total Recoverable Metals	ISIS_090423A	18903	4/21/2009	4/23/2009

8



Date: 05-May-09

# **QA/QC SUMMARY REPORT**

Client:

Western Refining Southwest, Inc.

Project:

River Terrace 2nd QTR 2009

Work Order:

0904312

Analyte	Result	Units	PQL	%Rec	LowLimit I	HighLimit	%RPD	RPD	Limit (	Qual
Method: EPA Method 8015B: D	lesel Range									
Sample ID: MB-18911		MBLK			Batch ID	18911	Analysis D	ate:		4/22/2009
Diesel Range Organics (DRO)	ND	mg/L	1.0							
Motor Oil Range Organics (MRO)	ND	mg/L	5.0							
Surr: DNOP -	1.077	mg/L	0	108	58	140				
Sample ID: LCS-18911		LCS			Batch ID	: <b>18911</b>	Analysis D	ate:		4/22/2009
Diesel Range Organics (DRO)	5.116	mg/L	1.0	102	74	157				
Surr: DNOP	0.4826	mg/L	0	96.5	58	140				
Sample ID: LCSD-18911		LCSD			Batch ID	18911	Analysis D	ate:		4/22/2009
Diesel Range Organics (DRO)	5.905	mg/L	1.0	118	74	157	14.3	23	•	
Surr: DNOP	0.5014	mg/L	0	100	58	140	0	0		
Method: EPA Method 8015B; G	asoline Ran	ge .								
Sample ID: 0904312-02A MSD		MSD -			Batch ID	R33460	Analysis D	ate:	4/28/20	09 5:40:25 PM
Gasoline Range Organics (GRO)	0.5280	mg/L	0.050	106	80	115 .	3.39	8.39	•	
Surr: BFB	20.65	mg/L	0	103	59.9	122	0	0		•
Sample ID: 5ML RB		MBLK			Batch ID	: R33450	Analysis D	ate:	4/28/20	09 9:30:36 AM
Gasoline Range Organics (GRO)	ND .	mg/L	0.050							
Surr: BFB	18.95	mg/L	0	94.8	59.9	122				
Sample ID: 2.5UG GRO LCS		LCS			Batch ID	: R33450	Analysis D	ate:	4/28/20	09 7:12:10 PM
Gasoline Range Organics (GRO)	0.5518	mg/L	0.050	105	80	115				
Surr: BFB	20.26	mg/L	. 0	101	59.9	122				
Sample ID: 0904312-02A MS		MS			Batch ID	: R33450	Analysis D	ate:	4/28/20	09 5:09:56 PM
Gasoline Range Organics (GRO)	0.5462	mg/L	0.050	109	80	115				
		_								

Qua	l	fi	er	3	;
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E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 1

# QA/QC SUMMARY REPORT

Client: ject: Western Refining Southwest, Inc.

River Terrace 2nd QTR 2009

Work Order:

0904312

Cet. Rivor Terras	<del></del>							ik Older: 0904.
Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD F	RPDLimit Qual
Method: EPA Method 8021B: \	/olatiles					_		
Sample ID: 0904312-03A MSD		MSD			Batch I	D: <b>R33450</b>	Analysis Date	: 4/28/2009 6:41:3
Methyl tert-butyl ether (MTBE)	19.45	μg/L	2.5	97.3	51.2	138	0.268	28
Benzene	19.19	µg/L	1.0	96.0	85.9	113	4.19	27
Toluene	20.40	µg/L	1.0	101	. 86.4	113	5.35	19
Ethylbenzene	20.85	µg/L	1.0	104	83.5	118	2.03	10
Xylenes, Total	62.59	µg/L	2.0	104	83.4	122	3.06	13
Surr: 4-Bromofluorobenzene	21.14	μg/L	0	106	65.9	130	· O	0 .
Sample ID: 5ML RB		MBLK			Batch I	D: <b>R33450</b>	Analysis Date	: 4/28/2009 9:30:30
Methyl tert-butyl ether (MTBE)	ND	µg/L	2.5					
Benzene	ND	µg/L	1.0					
Toluene	ND	μg/L	1.0					
Ethylbenzene	ND	µg/L	1.0					
Xylenes, Total	ND	μg/L	2.0					
Surr: 4-Bromofluorobenzene	17.55	μg/L	0	87.8	65.9	130		
Sample ID: 100NG BTEX LCS		LCS			Batch f	D: <b>R33450</b>	Analysis Date	: 4/28/2009 7:42:54
Methyl tert-butyl ether (MTBE)	19.50	μg/L	2.5	97.5	51.2	138	*	
Benzene	19.66	μg/L	1.0	98.3	85.9	113		
Toluene	21.12	μg/L	1.0	103	86.4	113		
Ethylbenzene	20.98	µg/L	1.0	105	83.5	118	•	
Xylenes, Total	62.70	μg/L	2.0	104	83.4	122		
Gurr: 4-Bromofluorobenzene	20.81	µg/L	0	104	65.9	130		
mpte ID: 0904312-03A MS		MS			Batch II	D: <b>R33450</b>	Analysis Date	: 4/28/2009 6:10:52
Methyl tert-butyl ether (MTBE)	19.40	μg/L	2.5	97.0	51.2	138		
Benzene	20.01	μg/L	1.0	100	85.9	113		
Toluene	21.52	µg/L	1.0	107	86.4	113		
Ethylbenzene	21.27	µg/L	1.0	106	83.5	118		
Xylenes, Total	64.54	μg/L	2.0	108	83.4	122		
Surr: 4-Bromofluorobenzene	20.74	µg/L	0	104	65.9	130		
Method: EPA 6010B: Total Rec	overable Me	tals						
Sample ID: MB-18903		MBLK			Batch II	D: <b>18903</b>	Analysis Date	4/23/2009 10:20:07
Barium	ND	mg/L	0.010					
Chromium	ND	mg/L	0.0060					
Lead	ND	mg/L	0.0050					
Sample ID: LCS-18903		LCS			Batch II	D: 18903	Analysis Date	4/23/2009 10:22:39
Barium	0.4783	mg/L	0.010	95.7	80	120	i	
Chromium	0.4865	mg/L	0.0060	97.3	80	120		
Lead	0.4770	mg/L	0.0050	95.4	80	120		





Estimated value

Analyte detected below quantitation limits

RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 2

## Sample Receipt Checklist

Client Name WESTERN REFINING SOUT				Date Rece	eived:	4/21/2009	
Work Order Number 0904312  Checklist completed by: Signature	X		4/21 Date	09	I by: TLS D labels checked b	y: Initials	-
Matrix:	Carrier name:	UPS	<u> </u>				
Shipping container/cooler in good condition?	*	Yes	<b>V</b>	No 🗆	Not Present		
Custody seals intact on shipping container/coo	ler?	Yes	V	No 🗆	Not Present	Not Shipped	
Custody seals intact on sample bottles?		Yes		No 🗌	N/A	<b>₹</b>	
Chain of custody present?		Yes	V	No 🗌			
Chain of custody signed when relinquished and	received?	Yes	$\checkmark$	No 🗌			
Chain of custody agrees with sample labels?		Yes	<b>V</b>	No 🗌			
Samples in proper container/bottle?		Yes	$\overline{\mathbf{V}}$	No 🗌			
Sample containers intact?		Yes	V	No 🗌			
Sufficient sample volume for indicated test?		Yes	<b>Y</b>	No 🗀			
All samples received within holding time?	·	Yes	$\mathbf{Y}$	No 🗆		•	
Water - VOA vials have zero headspace?	No VOA vials subm	nitted		Yes 🗹	No 🗌		
Water - Preservation labels on bottle and cap r	natch?	Yes	$\checkmark$	No 🗀	N/A		
Water - pH acceptable upon receipt?		Yes	$\checkmark$	No 🗀	N/A		
Container/Temp Blank temperature?			1°	<6° C Accept	table		
COMMENTS:				If given suffici	ent time to cool.		
						,	•
Client contacted	Date contacted:			D	erson contacted		
Cheff Confacted	Date contacted.			F'	erson contacted		
Contacted by:	Regarding:						
Comments:							
			,				
,							
Corrective Action							
		-					

	ANALYSIS LABORATORY	www. hallanvironmental com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Analysis Request?	(Þ)(	os ses	0) I (C	HPH (181) (1.90 (1.40) (1.40) (HA) (A) (A)	180 180 180 180 180 180	+ MTE Aethod Method Method Method Method Method Method Method Method S (F, Cl S (POA) S (F, Cl S (POA) S (F, Cl S (Pomi-	ВТЕХ ТРН / ЕDB ( 8310 ( 8260E 8260E 8260E 8260E 8260E	X	X	X	X	X	X	X	X	X X	X	XXX	X	Remarks:		
Tum-Around Time:	<b>∆</b> VStandard □ Rush	Project Name:	River Lerrace 2 nd QTR-2009			Project Manager:		A. A.	Sampleundy, 1905	が、一般のでは、一般のでは、一般のでは、一般のでは、一般のでは、一般のでは、一般のでは、一般のでは、一般のでは、一般のでは、一般のでは、一般のでは、一般のでは、一般のでは、一般のでは、一般のでは、一般のでは、	Container Preservative	Type and # Type ROS RE	4-VOR 4 CL	1-500ml HNO3 1	440A HCC 2	150mg HNO2 2		1-500ml HNB3 3		1-5000 HNBS		1 HA103	4. VOA HEL 6	0 HND3 L	Received by:  Date Time	Received by: Date Time	)
Chain-of-Custody Record	Client: Western Refining		Mailing Address: #50 CR 4990		T 7 d	1185-559-305		Level 4 (ruil validation)	□ Other		Ol tooling Goldman O		1746 HZD TP-13		110 TP-12		135 TP-11		10 TP 11FD		1550 1 79-10		2150 TP-3		Remquished by:	Relinquished By:	
Sur Cur	Client: We		Mailing Add	Blow	Phone #:	email or Fax#:	QA/QC Package:	□ Standard	Accreditation   NELAP	□ EDD (Type	) F		1 200				6		140		35				Date: Time:	Date: Time:	



### COVER LETTER

Tuesday, December 15, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990 Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: River Terrace 3rd QTR 2009

Dear Cindy Hurtado:

Order No.: 0909213

Hall Environmental Analysis Laboratory, Inc. received 9 sample(s) on 9/11/2009 for the analyses presented in the following report.

This report is an addendum to the report dated October 6, 2009. This is an updated report.

No determination of compounds below these (denoted by the ND or < sign) has been made.

Reporting limits are determined by EPA methodology.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

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



**Batch ID** 

R35311

20107

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R35311

Date: 15-Dec-09

Work Order Sample Summary

CLIENT: Western Refining Southwest, Inc.

Project: River Terrace 3rd QTR 2009

TP #10

TP #10

TP #10

TP #13

TP #13

TP #13

TP #12

TP #12

TP #12

TP #11

TP #11

TP #11

**TP#3** 

TP #3

TP #3

MW #49

MW #49

MW #49

DW #1

DW #1

DW #1

FIELD BLANK

FIELD BLANK

Trip Blank

Trip Blank

Client Sample ID

Lab Order: 0909213

Lab Sample ID

0909213-01A

0909213-01A

0909213-01A

0909213-02A

0909213-02A

0909213-02A

0909213-03A

0909213-03A

0909213-03A

0909213-04A

0909213-04A

0909213-04A

0909213-05A

0909213-05A

0909213-05A

0909213-06A

0909213-06A

0909213-06A

0909213-07A

0909213-07A

0909213-07A

0909213-08A

0909213-08A

0909213-09A

0909213-09A

Test Name	Collection Date
EPA Method 8021B: Volatiles	9/10/2009 7:45:00 AM
EPA Method 8015B: Diesel Range	9/10/2009 7:45:00 AM
EPA Method 8015B: Gasoline Range	9/10/2009 7:45:00 AM
EPA Method 8015B: Gasoline Range	9/10/2009 8:10:00 AM
EPA Method 8021B: Volatiles	9/10/2009 8:10:00 AM
EPA Method 8015B: Diesel Range	9/10/2009 8:10:00 AM
EPA Method 8015B: Gasoline Range	9/10/2009 8:35:00 AM
EPA Method 8021B: Volatiles	9/10/2009 8:35:00 AM
EPA Method 8015B: Diesel Range	9/10/2009 8:35:00 AM
EPA Method 8015B: Diesel Range	9/10/2009 9:00:00 AM
EPA Method 8015B: Gasoline Range	9/10/2009 9:00:00 AM
EPA Method 8021B: Volatiles	9/10/2009 9:00:00 AM
EPA Method 8021B: Volatiles	9/10/2009 9:25:00 AM
EPA Method 8015B: Diesel Range	9/10/2009 9:25:00 AM
EPA Method 8015B: Gasoline Range	9/10/2009 9:25:00 AM
EPA Method 8015B: Gasoline Range	9/10/2009 10:10:00 AM
EPA Method 8021B: Volatiles	9/10/2009 10:10:00 AM
EPA Method 8015B: Diesel Range	9/10/2009 10:10:00 AM
EPA Method 8015B: Gasoline Range	9/10/2009 11:05:00 AM
EPA Method 8021B: Volatiles	9/10/2009 11:05:00 AM
EPA Method 8015B: Diesel Range	9/10/2009 11:05:00 AM

9/10/2009 11:15:00 AM

9/10/2009 11:15:00 AM

EPA Method 8015B: Gasoline Range

EPA Method 8015B: Gasoline Range

EPA Method 8021B: Volatiles

EPA Method 8021B: Volatiles

Date: 15-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0909213

. 0.

River Terrace 3rd QTR 2009

Project: Lab ID:

0909213-01

Client Sample ID: TP #10

Collection Date: 9/10/2009 7:45:00 AM

Date Received: 9/11/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE					Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	9/15/2009 12:29:14 PM
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	9/15/2009 12:29:14 PM
Surr: DNOP	106	58-140	%REC	. 1	9/15/2009 12:29:14 PM
EPA METHOD 8015B: GASOLINE RAN	IGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	9/15/2009 4:40:27 PM
Surr: BFB	83.0	55.2-107	%REC	1	9/15/2009 4:40:27 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	9/15/2009 4:40:27 PM
Benzene	ND	1.0	µg/L	1	9/15/2009 4:40:27 PM
Toluene	ND	1.0	. μg/L	1	9/15/2009 4:40:27 PM
Ethylbenzene	ND	1.0	μg/L	1	9/15/2009 4:40:27 PM
Xylenes, Total	ND	2.0	μg/L	1	9/15/2009 4:40:27 PM
Surr: 4-Bromofluorobenzene	86.3	65.9-130	%REC	1	9/15/2009 4:40:27 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 1 of 9

Date: 15-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0909213

River Terrace 3rd QTR 2009

Project: Lab ID:

0909213-02

Client Sample ID: TP #13

Collection Date: 9/10/2009 8:10:00 AM

Date Received: 9/11/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Unit	ts DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE					Analyst: SCC
Diesel Range Organics (DRO)	· ND	1.0	mg/L	. 1	9/15/2009 1:04:40 PM
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	. 1	9/15/2009 1:04:40 PM
Surr: DNOP	116	58-140	%RE	EC 1	9/15/2009 1:04:40 PM
EPA METHOD 8015B: GASOLINE RAN	IGE			•	Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050	mg/L	. 1	9/15/2009 5:10:52 PM
Surr: BFB	83.8	55.2-107	%RE	EC 1	9/15/2009 5:10:52 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	9/15/2009 5:10:52 PM
Benzene	ND	1.0	μg/L	1	9/15/2009 5:10:52 PM
Toluene	ND	1.0	μg/L	1	9/15/2009 5:10:52 PM
Ethylbenzene	ND	1.0	μg/L	1	9/15/2009 5:10:52 PM
Xylenes, Total	ND	2.0	μg/L	1	9/15/2009 5:10:52 PM
Surr: 4-Bromofluorobenzene	87.1	65.9-130	%RE	C 1	9/15/2009 5:10:52 PM

Qualifier	s:
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- Value exceeds Maximum Contaminant Level
- Estimated value Е
- Analyte detected below quantitation limits
- Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 2 of 9

Date: 15-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0909213

Project:

River Terrace 3rd QTR 2009

Lab ID:

0909213-03

Client Sample ID: TP #12

Collection Date: 9/10/2009 8:35:00 AM

Date Received: 9/11/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE				<del></del>	Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	9/15/2009 1:40:06 PM
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	9/15/2009 1:40:06 PM
Surr: DNOP	107	58-140	%REC	1	9/15/2009 1:40:06 PM
EPA METHOD 8015B: GASOLINE RAN	IGE				Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	9/15/2009 5:41:27 PM
Surr: BFB	74.8	55.2-107	%REC	1	9/15/2009 5:41:27 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	μ <b>g/L</b>	1	9/15/2009 5:41:27 PM
Benzene	ND.	1.0	μg/L	1	9/15/2009 5:41:27 PM
Toluene	ND	1.0	μg/L	1.	9/15/2009 5:41:27 PM
Ethylbenzene	ND	1.0	μg/L	1	9/15/2009 5:41:27 PM
Xylenes, Total	ND	2.0	μg/L	1	9/15/2009 5:41:27 PM
Surr: 4-Bromofluorobenzene	74.9	65.9-130	%REC	1	9/15/2009 5:41:27 PM



Value exceeds Maximum Contaminant Level

Page 3 of 9

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 15-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0909213

River Terrace 3rd QTR 2009

Project: Lab ID:

0909213-04

Client Sample ID: TP #11

Collection Date: 9/10/2009 9:00:00 AM

Date Received: 9/11/2009

Matrix: AQUEOUS

Analyses	Result	PQL (	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	BE .				Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	9/15/2009 2:15:47 PM
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	9/15/2009 2:15:47 PM
Surr: DNOP	114	58-140	%REC	1	9/15/2009 2:15:47 PM
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050	mg/L	. 1	9/15/2009 6:12:07 PM
Surr: BFB	80.9	55.2-107	%REC	1	9/15/2009 6:12:07 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	µg/L	1	9/15/2009 6:12:07 PM
Benzene	ND	1.0	µg/L	1	9/15/2009 6:12:07 PM
Toluene	ND	1.0	µg/L	1	9/15/2009 6:12:07 PM
Ethylbenzene	, ND	1.0	µg/L	1	9/15/2009 6:12:07 PM
Xylenes, Total	ND	2.0	µg/L	1	9/15/2009 6:12:07 PM
Surr: 4-Bromofluorobenzene	83.2	65.9-130	%REC	1	9/15/2009 6:12:07 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

Ε Estimated value

j Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

Maximum Contaminant Level MCL

Reporting Limit

Page 4 of 9

Date: 15-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0909213

Project:

River Terrace 3rd QTR 2009

Lab ID:

0909213-05

Client Sample ID: TP #3

Collection Date: 9/10/2009 9:25:00 AM

Date Received: 9/11/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Uni	ts DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E			·	Analyst: SCC
Diesel Range Organics (DRO)	. ND	1.0	mg/L	. 1	9/15/2009 2:51:28 PM
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	. 1	9/15/2009 2:51:28 PM
Surr: DNOP	115	58-140	%RE	C 1	9/15/2009 2:51:28 PM
EPA METHOD 8015B: GASOLINE RA	NGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050	mg/L	. 1	9/15/2009 6:42:44 PM
Surr: BFB	79.5	55.2-107	%RE	C 1	9/15/2009 6:42:44 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	µg/L	1	9/15/2009 6:42:44 PM
Benzene	ND	1.0	μg/L	1	9/15/2009 6:42:44 PM
Toluene	ND	1.0	μg/L	1	9/15/2009 6:42:44 PM
Ethylbenzene	ND	1.0	μg/L	1	9/15/2009 6:42:44 PM
Xylenes, Total	ND	2.0	µg/L	1	9/15/2009 6:42:44 PM
Surr: 4-Bromofluorobenzene	80.8	65.9-130	%RE	C 1	9/15/2009 6:42:44 PM







E Estimated value

Page 5 of 9

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Date: 15-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0909213

Project: Lab ID:

River Terrace 3rd QTR 2009

0909213-06

Client Sample ID: MW #49

Collection Date: 9/10/2009 10:10:00 AM

Date Received: 9/11/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Unit	s DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E				Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	9/15/2009 3:27:10 PM
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	9/15/2009 3:27:10 PM
Surr: DNOP	113	58-140	%RE	C 1	9/15/2009 3:27:10 PM
EPA METHOD 8015B: GASOLINE RA	NGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	9/15/2009 7:13:12 PM
Surr: BFB	84.8	55.2-107	%RE	C 1	9/15/2009 7:13:12 PM
EPA METHOD 8021B: VOLATILES				•	Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	µg/L	. 1	9/15/2009 7:13:12 PM
Benzene	ND	1.0	μg/L	1	9/15/2009 7:13:12 PM
Toluene	ND	1.0	µg/L	1	9/15/2009 7:13:12 PM
Ethylbenzene	ND	1.0	μg/L	1	9/15/2009 7:13:12 PM
Xylenes, Total	ND	2.0	μg/L	1	9/15/2009 7:13:12 PM
Surr: 4-Bromofluorobenzene	85.1	65.9-130	%RE	C 1	9/15/2009 7:13:12 PM

Qualifiers:

Page 6 of 9

Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Date: 15-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0909213

Project:

River Terrace 3rd QTR 2009

Lab ID:

0909213-07

Client Sample ID: DW #1

ient Sample ID; DW #1

Collection Date: 9/10/2009 11:05:00 AM

Date Received: 9/11/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE					Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	11	9/15/2009 4:02:52 PM
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	9/15/2009 4:02:52 PM
Surr: DNOP	111	58-140	%REC	1	9/15/2009 4:02:52 PM
EPA METHOD 8015B: GASOLINE RAN	IGE .				Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.50	m <b>g/L</b>	10	9/15/2009 7:43:42 PM
Surr: BFB	74.6	55.2-107	%REC	10	9/15/2009 7:43:42 PM
EPA METHOD 8021B: VOLATILES			•		Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	25	μg/L	10	9/15/2009 7:43:42 PM
Benzene	ND	5.0	µg/L	10	9/15/2009 7:43:42 PM
Toluene	ND	10	µg/L	10	9/15/2009 7:43:42 PM
Ethylbenzene	ND	10	μg/L	10	9/15/2009 7:43:42 PM
Xylenes, Total	ND	20	μg/L	10	9/15/2009 7:43:42 PM
Surr: 4-Bromofluorobenzene	74.5	65.9-130	%REC	10	9/15/2009 7:43:42 PM



Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 7 of 9

Date: 15-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Client Sample ID: FIELD BLANK

Lab Order:

0909213

Project:

Collection Date: 9/10/2009 11:15:00 AM

Lab ID:

River Terrace 3rd QTR 2009 0909213-08

Date Received: 9/11/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES		<u>-</u> .			Analyst: NSB
Methyl tert-butyl ether (MTBE)	. ND	2.5	µg/L	1	9/15/2009 8:14:18 PM
Benzene	ND	1.0	μg/L	·1	9/15/2009 8:14:18 PM
Toluene	ND	1.0	μg/L	1	9/15/2009 8:14:18 PM
Ethylbenzene	ND	1.0	μg/L	1	9/15/2009 8:14:18 PM
Xylenes, Total	ND	2.0	μg/L	1	9/15/2009 8:14:18 PM
Surr: 4-Bromofluorobenzene	83.9	65.9-130	%REC	. 1	9/15/2009 8:14:18 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 8 of 9

Date: 15-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order: 0909213

Project:

River Terrace 3rd QTR 2009

Lab ID:

0909213-09

Client Sample ID: Trip Blank

Collection Date:

Date Received: 9/11/2009

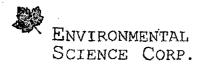
Matrix: TRIP BLANK

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RAI	NGE	<u> </u>			Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	9/15/2009 8:44:46 PM
Surr: BFB	77.1	55.2-107	%REC	1	9/15/2009 8:44:46 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ФИ	2.5	μg/L	1	9/15/2009 8:44:46 PM
Benzene	ND	1.0	μg/L	1	9/15/2009 8:44:46 PM
Toluene	ND	1.0	μg/L	1	9/15/2009 8:44:46 PM
Ethylbenzene	ND	1.0	μg/L	1	9/15/2009 8:44:46 PM
Xylenes, Total	ND	2.0	μg/L	1	9/15/2009 8:44:46 PM
Surr: 4-Bromofluorobenzene	78.1	65.9-130	%REC	1	9/15/2009 8:44:46 PM

Qualifiers:

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

Page 9 of 9



12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax 1.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

September 16, 2009

Anne Thorne Hall Environmental Analysis Laborat 4901 Hawkins NE Albuquerque, NM 67109

September 15, 2009 0909213

Date Received Description

Sample ID

TP 10

Collected By Collection Date

09/10/09 07:45

ESC Sample # : L422135-01

Site ID ;

0909213 5 Project # :

Parameter Method Result Det. Limit Units Date Lead 0.0066 0.0050 6010B 09/15/09 mg/11

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:

The reported analytical results relate only to the sample submitted.

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11

Reported: 09/16/09 09:17 Printed: 09/16/09 09:17



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Tax I.D. 62-0814289

1

Est. 1970

REPORT OF ANALYSIS

Anne Thorne Hall Environmental Analysis Laborat 4901 Hawkins NE albuquerque, NM 87109

September 16, 2009

Date Received Description

September 15, 2009 0909213

ESC Sample # : L422135-02

Site ID :

6010B

mg/1

Sample ID

Lead

TP 13

Reported: 09/16/09 09:17 Printed: 09/16/09 09:17

Project # : 0909213

Collected By : Collection Date :

09/10/09 08:10

Date Dil Units Method Parameter Result Det. Limit 09/15/09

0.0050

0.0092

BDL - Below Detection Limit Det, Limit - Practical Quantitation Limit(PQL) Note:
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

September 16, 2009

Anne Thorne Hall Environmental Analysis Laborat 4901 Hawkins NE Albuquerque, NM 87109

ESC Sample # : L422135-03

Date Received Description

September 15, 2009 0909213

Site ID :

Sample ID

TP 12

0909213 Project # :

Collected By : Collection Date :

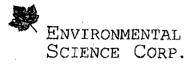
09/10/09 08:25

Units Method Parameter Result Lead BDL 0.0050 mg/1 6010B 09/15/09

BDL - Below Detection Limit Det. Limit - Prectical Quantitation Limit(PQL)

Note:
The reported analytical results relate only to the sample submitted.
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Reported: 09/16/09 09:17 Printed: 09/16/09 09:17



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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

September 16, 2009

Anne Thorne Hall Environmental Analysis Laborat 4901 Hawkins NE Albuquerque, NM 87109

September 15, 2009 0909213

Date Received Description

Sample ID TP 11

Collection Date : 09/10/09 09:00 ESC Sample # : L422135-04

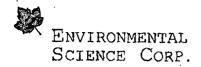
Site ID :

Project # : 0909213

Parameter Units Dil. Result Det. Limit Method Date mg/l Lead 0.0074 0.0050 6010B 09/15/09 1

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit (PQL) Note: The reported analytical results relate only to the sample submitted.

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Tax 1,D. 62-0814289

L422135-05

Est. 1970

REPORT OF ANALYSIS

September 16, 2009

Anne Thorne Hall Environmental Analysis Laborat 4901 Hawkins NE Albuquerque, NM 87109

September 15, 2009 0909213

Date Received Description

Sample ID

TP 3

Collected By : Collection Date :

09/10/09 09:25

ESC Sample # :

Site ID :

Project # :

0909213

Parameter Det. Limit Unita Result Method Date Dil. Lead 0.025 0.0050 mg/l 6010B 09/16/09

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL)

Note:
The reported analytical results relate only to the sample submitted.
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Reported: 09/16/09 09:17 Printed: 09/16/09 09:17



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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Anne Thorne Hall Environmental Analysis Laborat 4901 Hawkins NE Albuquerque, NM 87109

September 16, 2009

ESC Sample # :

L422135-06

Date Received Description

September 15, 2009 0909213

Site ID :

M# 49 Sample ID Collected By : Collection Date :

09/10/09 10:10

Project # : 0909213

Units Date Dil Result Det. Limit Method Parameter BDL 0.0050 mg/l 6010B 09/16/09 1 Lead

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note:

The reported analytical results relate only to the sample submitted.

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Reported: 09/16/09 09:17 Printed: 09/16/09 09:17



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Tan 1.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

september 16, 2009

Anne Thorne Hall Environmental Analysis Laborat 4901 Hawkins NE Albuquerque, NM 87109

ESC Sample # :

Date Received Description

September 15, 2009 0909213

1422135-07

Sample ID

DW 1

Site ID : Project # :

0909213

Collected By Collection Date

09/10/09 11:05

Units Parameter Result Det. Limit Method Date Dil. Lead BDL 0.0050 mg/l6010B 09/16/09 1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC. Reported: 09/16/09 09:17 Printed: 09/16/09 09:17

Date: 15-Dec-09

# **QA/QC SUMMARY REPORT**

Client:

Western Refining Southwest, Inc.

River Terrace 3rd OTR 2009

Work Order:

0909213

ject: River Terrac	ce 3ra Q1R	2009						Wo	rk Order: 09092
Analyte	Result	Units	PQL	SPK V	SPK ref	%Rec L	owLimit Hi	ghLimit %RP	PD RPDLimit Qual
Method: EPA Method 8015B: E	Diesel Range					<b>5</b>			
Sample ID: MB-20107		MBLK				Batch ID:	20107	Analysis Date	: 9/15/2009 10:42:10
Diesel Range Organics (DRO)	ND	mg/L	1.0						
Motor Oil Range Organics (MRO)	ND	mg/L	5.0						
Surr: DNOP	0.9979	mg/L	0	1	0	99.8	58	140	
Sample ID: LCS-20107		LCS				Batch ID:	20107	Analysis Date:	9/15/2009 11:17:52
Diesel Range Organics (DRO)	4.936	mg/L	1.0	5	0	98.7	74	157	
Surr: DNOP	0.5814	mg/L	0	0.5	0	116	58	140	
Method: EPA Method 8015B; G	asoline Ran	ge					•		
Sample ID: b 15		MBLK				Batch ID:	R35311	Analysis Date:	9/15/2009 4:09:58
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Surr: BFB	16.34	mg/L	0	20	0	81.7	55.2	107	
Sample ID: 2.5UG GRO LCS		LCS				Batch ID:	R35311	Analysis Date:	9/15/2009 11:16:51
Gasoline Range Organics (GRO)	0.5196	mg/L	0.050	0.5	0	104	80	115	
Surr: BFB	18.29	mg/L	0	20	0_	91.5	55.2	107	
Method: EPA Method 8021B: V	olatiles								
Sample ID: b 15		MBLK				Batch ID:	R35311	Analysis Date:	9/15/2009 4:09:58
Methyl tert-butyl ether (MTBE)	ND	μg/L	2.5						
Benzene	ND	μg/L	1.0						
Toluene	ND	μg/L	1.0						
ylbenzene	ND	μg/L	1.0						
enes, Total	ND	μg/L	2.0						
Surr: 4-Bromofluorobenzene	17.09	μg/L	0	20	0	85.4	65.9	130	
Sample ID: 100NG BTEX LCS		LCS				Batch ID:	R35311	Analysis Date:	9/16/2009 12:48:31
Methyl tert-butyl ether (MTBE)	19.23	µg/L	2.5	20	0	96.1	51.2	138	
Benzene	20.23	µg/L	1.0	20	0	101	85.9	113	
Tołuene	19.81	µg/L	1.0	20	0.272	97.7	86.4	113	
Ethylbenzene	19.55	µg/L	1.0	20	0.224	96.7	83.5	118	
Xylenes, Total	57.65	μg/L	2.0	60	0	96.1	83.4	122	
Surr: 4-Bromofluorobenzene	18.60	µg/L	0	20	0	93.0	65.9	130	





estimated value

Analyte detected below quantitation limits RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 1

## Sample Receipt Checklist

Client Name WESTERN REFINING SOUT		Date Receiv	ed:	9/11/2009
Work Order Number 0909213		Received t	y: TLS	1-
Checklist completed by:	a	Sample ID	labels checked by:	Initials
Signature	1 0	ate		
Matrix: Carrier nam	e: <u>UPS</u>			
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 🗀		5 a
Chain of custody agrees with sample labels?	Yes 🗹	No 🗌		
Samples in proper container/bottle?	Yes 🗹	No 🗀		
Sample containers intact?	Үев 🗹	No 🗀		
Sufficient sample volume for indicated test?	Yes 🗹	No 🗆		
All samples received within holding time?	Yes 🗹	No 🔲		Number of preserved bottles checked for
Water - VOA vials have zero headspace? No VOA vials sui	omitted	Yes 🗹	No 🗀	pH:
Water - Preservation labels on bottle and cap match?	Yes 🗹	No 🗌	N/A	(
Water - pH acceptable upon recelpt?	Yes 🗹	No 🗆	N/A	<2 12 unless noted
Container/Temp Blank temperature?	1.6°	<6° C Acceptat		
COMMENTS:		il given sufficier	it time to cool.	
				الله المسيحة المهامية والمؤدو يوسيك المسيحة المدينية الم
Client contacted Date contacted:	<del></del>	Pers	son contacted	
Contacted by: Regarding:				
comments: added Impletivos ti	N91	19213-1	AR LO	acceptable
Oh. 100 9/11/09			10.0	mayer
the way	<del></del>			
Corrective Action				
Contactive Action				
			·	· · ·

Air Bubbles (Y or N) analysis laboratory HALL ENVIRONMENTAL 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. 4901 Hawkins NE - Albuquerque, NM 87109 > × Fax 505-345-4107 (AOV-imed) 07S8 www.hallenvironmental.com (AOV) **B**0928 8081 Pesticides / 8082 PCB's Anions (F,CI,NO3,NO2,PO4,SO4) RCRA 8 Metals Tel. 505-345-3975 (HA9 10 AN9) 0168 EDB (Method 504.1) 7 to/ Bd (Nethod 418.1) TPH Method 8015B (Gas/Diesel) X >< MTBE + TPH (Gas only) (1208) SIGNAT × بز × 38.80 River Terrace 3 2 QTR 2009 Time 9 3 9 5 5 は □ Rush Preservative HN03 HNR3 HWB3 HM03 HCC 上の丁 五 だれ 4003 下って #W03 下って Turn-Around Time: Project Manager: A SERVICE THE PERSON Project Name: Standard Type and # Container 1-500 mg 1-Same Received by: 4-104. 1-500ms 4104 1-soon 4-10A 4- VOR 1-500m 4-10A 1-Sam Received by Sampler: 4-YOR 13 dillo Level 4 (Full Validation) Sample Request ID Chain-of-Custody Record Nr 87413 CR 4990 65#MW 17 505-632-416 632-891 TP-11 Client Western Refining TP-13 12-10 Relinguished by: Mailing Address: #55 □ Other Matrix 254 WATER email or Fax#: 5055 Bloom Pield QA/QC Package: Time PRA 8334 9 1340 Date: Time: 10 E olos 8/104 ☐ EDD (Type Accreditation □ Standard O NELAP Phone #: Date 9-10-09

Chain-of-Cu	ody Record	Tum-Around Time:	īme:					1			.		1				
Client: Western Refinence	Southwat Inc	X Standard	□ Rush					HALL ENVIRONMENTAL Amai vets 1 abodatody	ш ў Ц =	> ¥ Z			Σβ	ENVIRONMENTAL	<b>4</b> 6		
Sloom fiel	Referen	Project Name:	1				<b>4</b> ,	www hallenvironmental com			a street		) )	<b>-</b>	5	j≡s vd	
Mailing Address: #50 Road	4990	Kiver Terr	Terrace Judy	772 209		4901	Hawki	4901 Hawkins NE -	₹ .	- FILE	Albuquerdile NM 87109	2	8716	σ			
Choomfiel	1 RM 87413	Project #:	`		<del></del>	<u> </u>	05-34	505-345-3975	i In	Fax	Fax 505-345-4107	43	107	)	•		
Phone #: 505-633-	132-41101				r.				圓	Sign	inallysis Reques	10				ĸ,	Sales,
email or Fax#: 50g	505-637-3911	Project Manager:	er:		(				<u> </u>	(10						_	1
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Accreditation  UNELAP  Other		Sampler: Cand	4/600						fin	ΟΝ'ε	808 /		** (Y	, <u>I</u>		(1) -	/NL 1
□ EDD (Type)					3E +								<u>9</u> 100				~ -
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(2) 105 He)	Dw #1	4-164	Hcc	6	×	1		1	<u> </u>		-	1	-	-			,
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Date: Time: Relinquished	, ski peu	Received by: ()		Date Time		>							•				
If necessary, samples sul	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.	ontracted to other ac	redited laboratones	This serves as notice of t	idissoq sin	ity. Arry	sub-con	acted d	th will b	e clean	notate	8	e anah	fical rep	븅		7



### COVER LETTER

Friday, December 11, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990 Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: River Terrace 3rd QTR 2009

Dear Cindy Hurtado:

Order No.: 0909165

Hall Environmental Analysis Laboratory, Inc. received 10 sample(s) on 9/9/2009 for the analyses presented in the following report.

This report is an addendum to the report dated October 8, 2009. This is an updated report.

No determination of compounds below these (denoted by the ND or < sign) has been made.

Reporting limits are determined by EPA methodology.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

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



Date: 11-Dec-09

CLIENT:

Lab Order:

Western Refining Southwest, Inc.

Project:

River Terrace 3rd QTR 2009

0909165

# Work Order Sample Summary

Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date
0909165-01A	TP #2	R35281	EPA Method 8015B: Gasoline Range	9/8/2009 9:40:00 AM
0909165-01A	TP #2	R35281	EPA Method 8015B: Gasoline Range	9/8/2009 9:40:00 AM
0909165-01A	TP #2	R35281	EPA Method 8021B: Volatiles	9/8/2009 9:40:00 AM
0909165-01A	TP #2	R35281	EPA Method 8021B: Volatiles	9/8/2009 9:40:00 AM
0909165-01A	TP #2	20075	EPA Method 8015B: Diesel Range	9/8/2009 9:40:00 AM
0909165-01B	TP #2	20078	EPA 6010B: Total Recoverable Metals	9/8/2009 9:40:00 AM
0909165-02A	TP #1	20075	EPA Method 8015B: Diesel Range	9/8/2009 10:00:00 AM
0909165-02A	TP #1	R35281	EPA Method 8015B: Gasoline Range	9/8/2009 10:00:00 AM
0909165-02A	TP #1	R35281	EPA Method 8021B: Volatiles	9/8/2009 10:00:00 AM
0909165-02B	TP #1	20078	EPA 6010B: Total Recoverable Metals	9/8/2009 10:00:00 AM
0909165-03A	TP #6	R35281	EPA Method 8015B: Gasoline Range	9/8/2009 10:25:00 AM
0909165-03A	TP #6	R35281	EPA Method 8021B: Volatiles	9/8/2009 10:25:00 AM
0909165-03A	TP #6	20075	EPA Method 8015B: Diesel Range	9/8/2009 10:25:00 AM
0909165-03B	TP #6	20078	EPA 6010B: Total Recoverable Metals	9/8/2009 10:25:00 AM
0909165-04A	TP #8	20075	EPA Method 8015B: Diesel Range	9/8/2009 10:45:00 AM
0909165-04A	TP #8	R35281	EPA Method 8015B: Gasoline Range	9/8/2009 10:45:00 AM
0909165-04A	TP #8	R35281	EPA Method 8015B: Gasoline Range	9/8/2009 10:45:00 AM
0909165-04A	TP #8	R35281	EPA Method 8021B: Volatiles	9/8/2009 10:45:00 AM
0909165-04A	TP #8	R35281	EPA Method 8021B: Volatiles	9/8/2009 10:45:00 AM
0909165-04B	TP #8	20078	EPA 6010B: Total Recoverable Metals	9/8/2009 10:45:00 AM
0909165-05A	TP #8FD	R35329	EPA Method 8021B: Volatiles	9/8/2009 10:48:00 AM
0909165-05A	TP #8FD	R35281	EPA Method 8021B: Volatiles	9/8/2009 10:48:00 AM
0909165-05A	TP #8FD	20075	EPA Method 8015B: Diesel Range	9/8/2009 10:48:00 AM
0909165-05A	TP #8FD	R35281	EPA Method 8015B: Gasoline Range	9/8/2009 10:48:00 AM
0909165-05A	TP #8FD	R35281	EPA Method 8015B: Gasoline Range	9/8/2009 10:48:00 AM
0909165-05A	TP #8FD	R35281	EPA Method 8021B: Volatiles	9/8/2009 10:48:00 AM
0909165-05B	TP #8FD	20078	EPA 6010B: Total Recoverable Metals	9/8/2009 10:48:00 AM
0909165-06A	TP #5	20075	EPA Method 8015B: Diesel Range	9/8/2009 1:00:00 PM
0909165-06A	TP #5	R35281	EPA Method 8015B: Gasoline Range	9/8/2009 1:00:00 PM
0909165-06A	TP #5	R35281	EPA Method 8015B: Gasoline Range	9/8/2009 1:00:00 PM
0909165-06A	TP #5	R35281	EPA Method 8021B: Volatiles	9/8/2009 1:00:00 PM
0909165-06A	TP #5	R35281	EPA Method 8021B: Volatiles	9/8/2009 1:00:00 PM
0909165-06A	TP #5	R35329	EPA Method 8021B: Volatiles	9/8/2009 1:00:00 PM
0909165-06B	TP #5	20078	EPA 6010B: Total Recoverable Metals	9/8/2009 1:00:00 PM
0909165-07A	TP #7	R35281	EPA Method 8021B: Volatiles	9/8/2009 1:30:00 PM
0909165-07A	TP #7	R35329	EPA Method 8021B: Volatiles	9/8/2009 1:30:00 PM
0909165-07A	TP #7	R35281	EPA Method 8015B: Gasoline Range	9/8/2009 1:30:00 PM
0909165-07A	TP #7	20075	EPA Method 8015B: Diesel Range	9/8/2009 1:30:00 PM

CLIENT:

Western Refining Southwest, Inc.

Project:

River Terrace 3rd QTR 2009

Lab Order:

0909165

# Work Order Sample Summary

Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date
0909165-07B	TP #7	20078	EPA 6010B: Total Recoverable Metals	9/8/2009 1:30:00 PM
0909165-08A	TP #9	20075	EPA Method 8015B: Diesel Range	9/8/2009 2:00:00 PM
0909165-08A	TP #9	R35281	EPA Method 8015B: Gasoline Range	9/8/2009 2:00:00 PM
0909165-08A	TP #9	R35281	EPA Method 8021B: Volatiles	9/8/2009 2:00:00 PM
0909165-08A	TP #9	R35329	EPA Method 8021B: Volatiles	9/8/2009 2:00:00 PM
0909165-08B	TP #9	20144	EPA 6010B: Total Recoverable Metals	9/8/2009 2:00:00 PM
0909165-09A	FIELD BLANK	R35281	EPA Method 8015B: Gasoline Range	9/8/2009 2:05:00 PM
0909165-09A	FIELD BLANK	R35281	EPA Method 8021B: Volatiles	9/8/2009 2:05:00 PM
0909165-09A	FIELD BLANK	R35329	EPA Method 8021B: Volatiles	9/8/2009 2:05:00 PM
0909165-10A	TRIP BLANK	R35329	EPA Method 8021B: Volatiles	
0909165-10A	TRIP BLANK	R35281	EPA Method 8015B: Gasoline Range	
0909165-10A	TRIP BLANK	R35281	EPA Method 8021B: Volatiles	

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0909165

Client Sample ID: TP #2

Collection Date: 9/8/2009 9:40:00 AM

Project:

River Terrace 3rd QTR 2009

Date Received: 9/9/2009

Lab ID:

0909165-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	GE					Analyst: SCC
Diesel Range Organics (DRO)	4.3	1.0		mg/L	1	9/10/2009 1:24:33 PM
Motor Oll Range Organics (MRO)	ND	5.0		mg/L	1	9/10/2009 1:24:33 PM
Surr: DNOP	116	58-140		%REC	1	9/10/2009 1:24:33 PM
EPA METHOD 8015B: GASOLINE RA	ANGE					Analyst: NSB
Gasoline Range Organics (GRO)	13	0.50		mg/L	10	9/12/2009 1:52:04 AM
Surr: BFB	97.4	55.2-107		%REC	10	9/12/2009 1:52:04 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	25		μg/L	10	9/12/2009 1:52:04 AM
Benzene	650	10		μg/L	10	9/12/2009 1:52:04 AM
Toluene	17	10		µg/L	10	9/12/2009 1:52:04 AM
Ethylbenzene	1500	50		μg/L	50	9/12/2009 1:21:38 AM
Xylenes, Total	3600	100		µg/L	50	9/12/2009 1:21:38 AM
Surr: 4-Bromofluorobenzene	107	65.9-130	٠	%REC	10	9/12/2009 1:52:04 AM
EPA 6010B: TOTAL RECOVERABLE	METALS					Analyst: RAGS
Lead	0.020	0.0050		mg/L	. 1	9/18/2009 1:01:36 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

Not Detected at the Reporting Limit ND

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded Н

MCL Maximum Contaminant Level

Reporting Limit

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0909165

Client Sample ID: TP #1

Collection Date: 9/8/2009 10:00:00 AM

Project:

River Terrace 3rd QTR 2009

Date Received: 9/9/2009

Lab ID:

0909165-02

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	GE				<del></del>	Analyst: SCC
Diesel Range Organics (DRO)	7.8	1.0		mg/L	1	9/10/2009 1:59:59 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/10/2009 1:59:59 PM
Surr: DNOP	107	58-140		%REC	1	9/10/2009 1:59:59 PM
EPA METHOD 8015B: GASOLINE RA	ANGE					Analyst: NSB
Gasoline Range Organics (GRO)	39	5.0		mg/L	100	9/12/2009 2:52:42 AM
Surr: BFB	96.4	55.2-107		%REC	100	9/12/2009 2:52:42 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	<b>N</b> D	250		μg/L	100	9/12/2009 2:52:42 AM
Benzene	810	100		μg/L	100	9/12/2009 2:52:42 AM
Toluene	ND	100		μg/L	100	9/12/2009 2:52:42 AM
Ethylbenzene	3200	100		μg/L .	100	9/12/2009 2:52:42 AM
Xylenes, Total	12000	200		µg/L	100	9/12/2009 2:52:42 AM
Surr: 4-Bromofluorobenzene	. 106	65.9-130		%REC	100	9/12/2 <mark>009 2:52:42 AM</mark>
EPA 6010B: TOTAL RECOVERABLE	METALS					Analyst: RAGS
Lead	0.058	0.0050		mg/L	1	9/18/2009 1:05:40 PM



Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank В

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0909165

0909103

River Terrace 3rd QTR 2009

Project: Lab ID:

0909165-03

Client Sample ID: TP #6

Collection Date: 9/8/2009 10:25:00 AM

Date Received: 9/9/2009

Analyses	Result	PQL	Qual U	J <b>nits</b>	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E	. 34				Analyst: SCC
Diesel Range Organics (DRO)	3.0	1.0	n	n <b>g/L</b>	1	9/10/2009 2:35:20 PM
Motor Oil Range Organics (MRO)	ND	5.0	n	ng/L	1	9/10/2009 2:35:20 PM
Surr: DNOP	114	58-140	9/	4REC	1	9/10/2009 2:35:20 PM
EPA METHOD 8015B: GASOLINE RA	NGE					Analyst: NSB
Gasoline Range Organics (GRO)	12	1.0	n	ng/L	20	9/12/2009 3:22:57 AM
Surr: BFB	98.9	55.2-107	9	6REC	20	9/12/2009 3:22:57 AM
EPA METHOD 8021B: VOLATILES					•	Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	50	μ	ıg/L	20	9/12/2009 3:22:57 AM
Benzene	32	20	μ	ıg/L	20	9/12/2009 3:22:57 AM
Toluene	ND	20	μ	ıg/L	20	9/12/2009 3:22:57 AM
Ethylbenzene	1200	20	μ	ıg/L	20	9/12/2009 3:22:57 AM
Xylenes, Total	3800	40	μ	ıg/L	20	9/12/2009 3:22:57 AM
Surr: 4-Bromofluorobenzene	111	65.9-130	9	%REC	20	9/12/2009 3:22:57 AM
EPA 6010B: TOTAL RECOVERABLE	METALS					Analyst: RAGS
Lead	0.028	0.0050	n	ng/L	1	9/18/2009 1:11:38 PM



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



Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0909165

River Terrace 3rd QTR 2009

Project: Lab ID:

0909165-04

Client Sample ID: TP #8

Collection Date: 9/8/2009 10:45:00 AM

Date Received: 9/9/2009

Analyses	Result	PQL Qu	ial Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	<u>:</u> 9E				Analyst: SCC
Diesel Range Organics (DRO)	4.7	1.0	mg/L	1	9/10/2009 3:11:04 PM
Motor Oil Range Organics (MRO)	ND	. 5.0	mg/L	1 .	9/10/2009 3:11:04 PM
Surr. DNOP	109	58-140	%REC	1	9/10/2009 3:11:04 PM
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	5.7	0.25	mg/L	5	9/12/2009 4:23:29 AM
Surr. BFB	97.4	55.2-107	%REC	5	9/12/2009 4:23:29 AM
EPA METHOD 8021B: VOLATILES		•			Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	13	μg/L	5	9/12/2009 4:23:29 AM
Benzene	5.9	5.0	μg/L	5	9/12/2009 4:23:29 AM
Toluene	ND	5.0	μg/L	5	9/12/2009 4:23:29 AM
Ethylbenzene	220	5.0	μg/L	5	9/12/2009 4:23:29 AM
Xylenes, Total	2000	100 -	μg/L	50	9/12/2009 3:53:11 AM
Surr: 4-Bromofluorobenzene	109	65.9-130	%REC	5	9/12/2009 4:23:29 AM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: RAGS
Lead	0.040	0.0050	mg/L	1	9/18/2009 1:14:47 PM



Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

0909165

Client Sample ID: TP #8FD

Lab Order:

Collection Date: 9/8/2009 10:48:00 AM

Project:

River Terrace 3rd QTR 2009

Date Received: 9/9/2009

Lab ID:

0909165-05

Matrix: AQUEOUS

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG			· · · · · · · · · · · · · · · · · · ·		Analyst: SCC
Diesel Range Organics (DRO)	4.4	1.0	mg/L	1	9/10/2009 3:46:31 PM
Motor Oll Range Organics (MRO)	ND	5.0	mg/L	· 1	9/10/2009 3:46:31 PM
Surr: DNOP	103	58-140	%REC	1	9/10/2009 3:46:31 PM
EPA METHOD 8015B: GASOLINE RA	NGE				Analyst: NSB
Gasoline Range Organics (GRO)	5.5	0.25	mg/L	. 5	9/12/2009 7:25:09 AM
Surr: BFB	99.1	55.2-107	%REC	5	9/12/2009 7:25:09 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	13	μg/L	5	9/12/2009 7:25:09 AM
Benzene	5.9	5.0	μg/L	5	9/12/2009 7:25:09 AM
Toluene	ND	5.0	μg/L	5	9/12/2009 7:25:09 AM
Ethylbenzene	210	5.0	μg/L	5	9/12/2009 7:25:09 AM
Xylenes, Total	1900	100	µg/L	50	9/12/2009 6:54:49 AM
Surr: 4-Bromofluorobenzene	112	65.9-130	%REC	5	9/12/2009 7:25:09 AM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: RAGS
Lead	0.060	0.0050	mg/L	1	9/18/2009 1:17:56 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Estimated value
- Analyte detected below quantitation limits
- Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
  - Reporting Limit

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0909165

Project:

River Terrace 3rd QTR 2009

Lab ID:

0909165-06

Client Sample ID: TP #5

Collection Date: 9/8/2009 1:00:00 PM

Date Received: 9/9/2009

Matrix: AQUEOUS

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	GE				Analyst: SCC
Diesel Range Organics (DRO)	8.0	1.0	mg/L	1	9/10/2009 4:21:56 PM
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	9/10/2009 4:21:56 PM
Surr: DNOP	107	58-140	%REC	1	9/10/2009 4:21:56 PM
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	33	0.50	mg/L	10	9/12/2009 8:55:48 AM
Surr: BFB	105	55.2-107	%REC	10	9/12/2009 8:55:48 AM
EPA METHOD 8021B: VOLATILES					Analyst: <b>NSB</b>
Methyl tert-butyl ether (MTBE)	` ND	25	μg/L	10	9/12/2009 8:55:48 AM
Benzene	ND	5.0	µg/L	10	9/12/2009 8:55:48 AM
Toluene	ND	10	μg/L	10	9/12/2009 8:55:48 AM
Ethylbenzene	1300	100	μg/L	100	9/12/2009 8:25:35 AM
Xylenes, Total	13000	200	µg/L	100	9/12/2009 8:25:35 AM
Surr: 4-Bromofluorobenzene	122	65.9-130	%REC	10	9/12/2009 8:55:48 AM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: RAGS
Lead	0.033	0.0050	mg/L	1	9/18/2009 1:21:01 PM



Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits J

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Page 6 of 10



Date: 11-Dec-09

CLIENT: Lab Order: Western Refining Southwest, Inc.

0909165

River Terrace 3rd QTR 2009

Project: Lab ID: 0909165-07 Client Sample ID: TP #7

Collection Date: 9/8/2009 1:30:00 PM

Date Received: 9/9/2009

Matrix: AQUEOUS

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	GE				Analyst: SCC
Diesel Range Organics (DRO)	ND .	1.0	m <b>g/</b> L	1 .	9/10/2009 4:57:22 PM
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	· 1	9/10/2009 4:57:22 PM
Surr: DNOP	106	58-140	%REC	1	9/10/2009 4:57:22 PM
EPA METHOD 8015B: GASOLINE R	ANGE			•	Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	9/12/2009 9:56:28 AM
Surr: BFB	83.7	55.2-107	%REC	1	9/12/2009 9:56:28 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	9/12/2009 9:56:28 AM
Benzene	ND	1.0	μg/L	1	9/12/2009 9:56:28 AM
Toluene	ND	1.0	μg/L	1	9/12/2009 9:56:28 AM
Ethylbenzene	· ND	1.0	μg/L	1	9/12/2009 9:56:28 AM
Xylenes, Total	ND	2.0	μg/L ·	1	9/12/2009 9:56:28 AM
Surr: 4-Bromofluorobenzene	79.5	65.9-130	%REC	1	9/12/2009 9:56:28 AM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: RAGS
Lead	ND ·	0.0050	mg/L	1	9/18/2009 1:24:06 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

Е Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded Н

MCL Maximum Contaminant Level

Reporting Limit

Page 7 of 10

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0909165

0909165-08

Client Sample ID: TP #9

Collection Date: 9/8/2009 2:00:00 PM

Project: Lab ID:

River Terrace 3rd QTR 2009

Date Received: 9/9/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF .	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	)E	······································			Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	9/10/2009 6:08:14 PM
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	9/10/2009 6:08:14 PM
Surr: DNOP	112	58-140	%REC	1	9/10/2009 6:08:14 PM
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	9/12/2009 10:26:48 AM
Surr: BFB	84.0	55.2-107	%REC	1	9/12/2009 10:26:48 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	µg/∟	1	9/12/2009 10:26:48 AM
Benzene	ND	1.0	μg/L	1	9/12/2009 10:26:48 AM
Toluene	ND	1.0	μg/L	1	9/12/2009 10:26:48 AM
Ethylbenzene	ND	1.0	μg/L	1	9/12/2009 10:26:48 AM
Xylenes, Total	ND	2.0	μg/L	1	9/12/2009 10:26:48 AM
Surr: 4-Bromofluorobenzene	79.7	65.9-130	%REC	1	9/12/2009 10:26:48 AM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: RAGS
Lead	0.0094	0.0050	mg/L	1	10/7/2009 12:03:58 PM



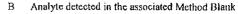
Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

Not Detected at the Reporting Limit ND

Spike recovery outside accepted recovery limits



H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit





Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Client Sample ID: FIELD BLANK

Lab Order:

0909165

Collection Date: 9/8/2009 2:05:00 PM

Project:

River Terrace 3rd QTR 2009

Date Received: 9/9/2009

Lab ID:

0909165-09

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RAN	lGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	9/12/2009 10:57:11 AM
Surr: BFB	91.8	55.2-107	%REC	1	9/12/2009 10:57:11 AM
EPA METHOD 8021B: VOLATILES					Analyst: <b>NSB</b>
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	9/12/2009 10:57:11 AM
Benzene	ND	1.0	μg/L	1	9/12/2009 10:57:11 AM
Toluene	ND	1.0	μg/L	1	9/12/2009 10:57:11 AM
Ethylbenzene	ND	` 1.0	μg/L	1	9/12/2009 10:57:11 AM
Xylenes, Total	ND	2.0	μg/L	1	9/12/2009 10:57:11 AM
Surr: 4-Bromofluorobenzene	89.6	65.9-130	%REC	1	9/12/2009 10:57:11 AM

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Reporting Limit

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0909165

Project:

River Terrace 3rd QTR 2009

Lab ID:

0909165-10

Client Sample ID: TRIP BLANK

**Collection Date:** 

Date Received: 9/9/2009

Matrix: TRIP BLANK

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	9/12/2009 11:27:26 AM
Benzene	ND	1.0	μg/L	1 ,	9/12/2009 11:27:26 AM
Toluene	ND	1.0	μg/L	1	9/12/2009 11:27:26 AM
Ethylbenzene	ND	1.0	µg/L	1	9/12/2009 11:27:26 AM
Xylenes, Total	ND	2.0	µg/L	1	9/12/2009 11:27:26 AM
Surr: 4-Bromofluorobenzene	79.4	65.9-130	%REC	1	9/12/2009 11:27:26 AM



Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

DATES REPORT

# Hall Environmental Analysis Laboratory, Inc.

0909165 Lab Order: Western Refining Southwest, Inc.

River Terrace 3rd QTR 2009 Client:

1 m a a a a a a a a a a a a a a a a a a	Analysis Date	6007/01/6
Mark of the second	Prep Date	6/9/2009
	QC Batch ID	20075
The state of the s	Instrument Run ID QC Batch ID Prep Date Analysis Date	TD(17A) 2_090910,
	Test Name	) AM Aqueous EPA Method 8015B: Diesel Range 1D(17A) 2_090910, 20075 9/9/2009 9/10/2009
	Matrix Test Name	Aqueous
		$\simeq$
roject: River Terrace 3rd QTR 2009	Client Sample ID	09165-01A TP#2 9/8/2009 9:40:
Project:	Sample ID	0909165-01A

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Instrument Run ID OC Batch 1	QC Batch ID	Prep Date	Analysis Date
0909165-01A	TP #2	9/8/2009 9:40:00 AM	Aqueous	EPA Method 8015B: Diesel Range	TD(17A) 2_090910	20075	6/9/2009	6002/01/6
				EPA Method 8015B: Gasoline Range	ZEUS_090911A	R35281		9/12/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090911A	R35281		9/12/2009
				EPA Method 8021B: Volatiles	ZEUS_090911A	R35281		9/12/2009
				EPA Method 8021B: Volatiles	ZEUS_090911A	R35281		9/12/2009
0909165-01B				EPA 6010B: Total Recoverable Metals	ISIS_090918B	20078	6/0/2009	9/18/2009
0909165-02A	TP #1	9/8/2009 10:00:00 AM		EPA Method 8015B: Diesel Range	'ID(17A) 2_090910,	20075	6/6/2006	9/10/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090911A	R35281		9/12/2009
				EPA Method 8021B: Volatiles	ZEUS_090911A	R35281		9/12/2009
0909165-02B				EPA 6010B: Total Recoverable Metals	ISIS_090918B	20078	6/6/2006	9/18/2009
0909165-03A	TP #6	9/8/2009 10:25:00 AM		EPA Method 8015B: Diesel Range	.ID(17A) 2_090910,	20075	6/6/2006	9/10/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090911A	R35281		9/12/2009
				EPA Method 8021B: Volatiles	ZEUS_090911A	R35281		9/12/2009
0909165-03B				EPA 6010B: Total Recoverable Metals	ISIS_090918B	20078	6/6/2006	9/18/2009
0909165-04A	TP#8	9/8/2009 10:45:00 AM		EPA Method 8015B: Diesel Range	'ID(17A) 2_090910,	20075	6007/6/6	9/10/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090911A	R35281		9/12/2009
	,			EPA Method 8015B: Gasoline Range	ZEUS_090911A	R35281		9/12/2009
				EPA Method 8021B. Volatiles	ZEUS_090911A	R35281		9/12/2009
				EPA Method 8021B: Volatiles	ZEUS_090911A	R35281		9/12/2009
0909165-04B				EPA 6010B: Total Recoverable Metals	ISIS_090918B	20078	6002/6/6	9/18/2009
0909165-05A	TP #8FD	9/8/2009 10:48:00 AM		EPA Method 8015B: Diesel Range	'ID(17A) 2_090910,	20075	6/07/6/6	9/10/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090911A	R35281		6/17/2006
				EPA Method 8015B: Gasoline Range	ZEUS_090911A	R35281		6/12/2006

Page 1 of 2

9/16/2009 9/12/2009

R35329 R35281

ZEUS_090916A ZEUS_090911A

EPA Method 8021B: Volatiles EPA Method 8021B: Volatiles



DATES REPORT

# Hall Environmental Analysis Laboratory, Inc.

**Lab Order:** 0909165

Client: Western Refining Southwest, Inc.

Project: River Terrace 3rd QTR 2009

Sample ID	Samule III	Collection Date Mat	Matrix	Test Name	Instrument Run ID	OC Batch ID	Pren Nate	Analysis Date
20000000	The state of the s	Concensus Date	TABLITA	A COLD A CHARACTER AND AN ANALYSIS AND AN ANALYSIS AND AN	A PART AND		arch Dan	control of the control
0909165-05A	TP #8FD	9/8/2009 10:48:00 AM	Aqueous	EPA Method 8021B: Volatiles	ZEUS_090911A	R35281		9/12/2009
0909165-05B		•		EPA 6010B: Total Recoverable Metals	ISIS_090918B	20078	6007/6/6	9/18/2009
0909165-06A	TP #5	9/8/2009 1:00:00 PM		EPA Method 8015B: Diesel Range	'ID(17A) 2_090910,	20075	9/9/2009	9/10/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090911A	R35281		9/12/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090911A	R35281		9/12/2009
				EPA Method 8021B: Volatiles	ZEUS_090911A	R35281		9/12/2009
				EPA Method 8021B: Volatiles	ZEUS_090911A	R35281		9/12/2009
				EPA Method 8021B: Volatiles	ZEUS_090916A	R35329		9/16/2009
0909165-06B				EPA 6010B: Total Recoverable Metals	ISIS_090918B	20078	6/9/2006	9/18/2009
0909165-07A	TP #7	9/8/2009 1:30:00 PM		EPA Method 8015B: Diesel Range	'ID(17A) 2_090910z	20075	9/9/2009	9/10/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090911A	R35281		9/12/2009
				EPA Method 8021B. Volatiles	ZEUS_090911A	R35281		9/12/2009
				EPA Method 8021B: Volatiles	ZEUS_090916A	R35329		9/16/2009
0909165-07B				EPA 6010B: Total Recoverable Metals	ISIS_090918B	20078	6/9/2009	9/18/2009
0909165-08A	TP #9	9/8/2009 2:00:00 PM		EPA Method 8015B: Diesel Range	.ID(17A) 2_090910,	20075	6/6/2006	9/10/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090911A	R35281		9/12/2009
				EPA Method 8021B: Volatiles	ZEUS_090911A	R35281		9/12/2009
		-		EPA Method 8021B: Volatiles	ZEUS_090916A	R35329		6/16/2009
0909165-08B				EPA 6010B. Total Recoverable Metals	ISIS_091007B	20144	9/21/2009	10/7/2009
0909165-09A	FIELD BLANK	9/8/2009 2:05:00 PM		EPA Method 8015B: Gasoline Range	ZEUS_090911A	R35281		9/12/2009
				EPA Method 8021B: Volatiles	ZEUS_090911A	R35281		9/12/2009
				EPA Method 8021B: Volatiles	ZEUS_090916A	R35329		9/16/2009
0909165-10A	TRIP BLANK		Trip Blank	EPA Method 8021B: Volatiles	ZEUS_090916A	R35329		9/17/2009
				EPA Method 8021B: Volatiles	ZEUS_090911A	R35281		9/12/2009



**Date:** 11-Dec-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

Project: River Terrace 3rd QTR 2009

Work Order:

0909165

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec L	owLimit Hig	ghLimit %RPD	RPDLimit Qual
Method: EPA Method 8015B: D	Diesel Range								
Sample ID: MB-20075		MBLK				Batch ID:	20075	Analysis Date:	9/10/2009 11:38:17 ⁻ AM
Diesel Range Organics (DRO)	ND	mg/L	1.0						
Motor Oil Range Organics (MRO)	ND	mg/L	5.0						
Sample ID: LCS-20075		LCS				Batch ID:	20075	Analysis Date:	9/10/2009 12:13:42 PM
Diesel Range Organics (DRO)	5.802	.mg/L	1.0	5	0	116	74	157	
Method: EPA Method 8015B: 0	Basoline Ran	ge				,		•	
Sample ID: 5ML RB		MBLK	۵			Batch ID:	R35281	Analysis Date:	9/11/2009 9:16:49 AM
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Sample ID: 2.5UG GRO LCS		LCS				Batch ID:	R35281	Analysis Date:	9/11/2009 7:48:27 PM
Gasoline Range Organics (GRO)	0.5120	mg/L	0.050	0.5	0	102	80	115	
Method: EPA Method 8021B: V	olatiles						-		
Sample ID: 5ML RB		MBLK				Batch ID:	R35281	Analysis Date:	9/11/2009 9:16:49 AM
Methyl tert-butyl ether (MTBE)	ND	μg/L	2.5						
Benzene	ND	μg/L	1.0						
Toluene	ND	μg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	μg/L	2.0						
Sample ID: 100NG BTEX LCS		LCS				Batch ID:	R35281	Analysis Date:	9/11/2009 6:17:16 PM
Methyl tert-butyl ether (MTBE)	19.27	μg/L	2.5	20	0	96.4	51.2	138	
Benzene	19.87	μg/L	1.0	20	0	99.3	85.9	113	
Toluene	19.02	μg/L	1.0	20	0	95.1	86.4	113	
Ethylbenzene	18.99	µg/L	1.0	20	0.078	94.6	83.5	118	
Xylenes, Total	56.96	μg/L	2.0	60	0	94.9	83.4	122	
Method: EPA 6010B: Total Red	overable Me	tais							
Sample ID: MB-20078		MBLK				Batch ID:	20078	Analysis Date:	9/18/2009 11:27:17 AN
Lead	ND	mg/L	0.0050						
Sample ID: MB-20144		MBLK				Batch ID:	20144	Analysis Date:	10/7/2009 11:58:54 AN
Lead	ND	mg/L	0.0050						
Sample ID: MB-20144		MBLK				Batch ID:	20144	Analysis Date:	10/9/2009 4:01:31 PN
Lead	ND	mg/L	0.0050	-					
Sample ID: LCS-20078		LCS				Batch ID:	20078	Analysis Date:	9/18/2009 11:30:34 AN
Lead	0.4942	mg/L	0.0050	0.5	0	98.8	80	120	
Sample ID: LCS-20144		LCS		•		Batch ID:	20144	Analysis Date:	10/7/2009 12:01:26 PM
Lead	0.4959	mg/L	0.0050	0.5	o	99.2	80	120	
Sample ID: LCS-20144		LCS				Batch ID:	20144	Analysis Date:	10/9/2009 4:04:44 PN

Lead

E Estimated value

J Analyte detected below quantitation limits

0.4733

mg/L

0.0050

0.5

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

94.7

80

120

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 1



## Sample Receipt Checklist

Hent Name WESTERN REFINING SOUT	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Date Receiv	ed:	9/9/2009
Work Order Number 0909165	,	Received to	y: ARS	DA :
Checklist completed by:	Q C Date	Sample ID	labels checked by: -	Initials
Matrix: Carrier na	ame: <u>UPS</u>			
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 labets?	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 🔲		Number of preserved
Water - VOA vials have zero headspace? No VOA vials	submitted 🔲	Yes 🗹	No 🗆	bottles checked for pH:
Water - Preservation labels on bottle and cap match?	Yes 🗹	No 🔲	N/A	7 8
Vater - pH acceptable upon recelpt?	Yes 🗹	No 🗌	N/A	>12 unless noted below.
Container/Temp Blank temperature/?	0.7°	<6° C Accepta		esiow,
COMMENTS:		if given sufficier	it time to cool.	
•				
			*	
			•	
Ollent contacted Date contacted:	<del></del>	Per	son contacted	
Contacted by: Regarding:				
Comments:				
Onmone.				
			14000	
Corrective Action				<del></del>
				The state of the s

	HALL ENVIRONMENTAL	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Sistilization (Analysis)	(þ()	selic Selic	J\ss	5) 83 (1. (1. (1. (1. (1. (1. (1. (1. (1. (1.	# # # # # # # # # # # # # # # # # # #	90 (v) (v) (v) (v) (v) (v) (v) (v) (v) (v)	TM + X   ### ##################################	<u></u>	>	× ×	×	× ×	×	×	×	X	X	XXX	×	Remarks: Pg   of 2			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.	
Turn-Around Time:	Ø Standard □ Rush	River Terrace 34 OR 289			Project Manager:		•	Sample: May (Bab)	などは、これのでは、これのでは、これでは、これでは、これでは、これでは、これでは、これでは、これでは、これ		ner Pre	iybe and # lype	4.VOR Her 1	1-500me HNO3 1	4-10A Hec 3	HNOS	4-10A- HCL 3	1-500ml HND3 3	4-VOA HCL U	1-500-0 HND3 4	400x 4CC 5	1-50ml 4ND3 5	4 VOR. HCL D	U. FONH	\$ \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Date 1		intracted to other accredited laboratories. This serves as notice of this
Record			87413	Phone #: 505 - 632 - 4/6/	-3911	QA/QC Package:	☐ Standard	Accreditation		C EDD (Type)	Date Time Matrix Sample Request ID		2# d/ 02H Hon Waso		10AM TD#		102A TT-#6		104 TP-B		1048 TP-8FD		1Pm TP-5		90809 729p (went that a ho	1	· <del>Mi</del> co	

Air Bubbles (Y or N) analysis Laboratory HALL ENVIRONMENTAL 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. 4901 Hawkins NE - Albuquerque, NM 87109 10+01 X X Fax 505-345-4107 (AOV-imed) 07S8 www.hallenvironmental.com (AOV) 808S8 8081 Pesticides / 8082 PCB's Tel. 505-345-3975 Fax Anions (F,CI,NO₃,NO₂,PO₄,SO₄) RCRA 8 Metals (HA9 to AN9) 0168 EDB (Method 504.1) (1.814 bodteM) H97 (GasiQ\zso) 8015B (Gas\Diesel Remarks: (Vino sao) HTT + 38TM + X3T8 + 4 (1508) River Terrace 3th OR 2009 Project #. Time 60  $\infty$ 0 94 □ Rush Preservative #N03 しつ十 HND3 力 Turn-Around Time Project Manager: Standard Project Name: Type and # Container 4 VOA 4-101-4 1-5002 1-500ml 3-10A Sample Level 4 (Full Validation) Sample Request ID Chain-of-Custody Record Mailing Address: #56 CR 4990 505-632-4/6 email or Fax#:505-633-89/1 4 Q. Client WESTERN RECINING Bloomfield, NM 874/3 Relinfulished by: □ Other Matrix 12 E CO 230 pm QA/QC Package: Time 20 □ EDD (Type) Accreditation Time: □ Standard O NELAP Phone #: Date grafe: good



### COVER LETTER

Friday, December 11, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990 Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: River Terrace 4th QTR-2009

Dear Cindy Hurtado:

Order No.: 0910122

Hall Environmental Analysis Laboratory, Inc. received 11 sample(s) on 10/7/2009 for the analyses presented in the following report.

This report is an addendum to the report dated October 28, 2009. This is an updated report.

No determination of compounds below these (denoted by the ND or < sign) has been made.

Reporting limits are determined by EPA methodology.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

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



Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

**Project:** River Terrace 4th QTR-2009

Lab Order: 09

0910122

## Work Order Sample Summary

		· · · · · · · · · · · · · · · · · · ·		the second secon
Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date
0910122-01A	TP-9	R35744	EPA Method 8015B: Gasoline Range	10/6/2009 9:15:00 AM
0910122-01A	TP-9	R35744	EPA Method 8021B: Volatiles	10/6/2009 9:15:00 AM
0910122-01A	TP-9	20272	EPA Method 8015B: Diesel Range	10/6/2009 9:15:00 AM
0910122-01B	TP-9	20291	EPA 6010B: Total Recoverable Metals	10/6/2009 9:15:00 AM
0910122-02A	TP-8	20272	EPA Method 8015B: Diesel Range	10/6/2009 9:40:00 AM
0910122-02A	TP-8	R35744	EPA Method 8015B: Gasoline Range	10/6/2009 9:40:00 AM
0910122-02A	TP-8	R35744	EPA Method 8015B: Gasoline Range	10/6/2009 9:40:00 AM
0910122-02A	TP-8	R35744	EPA Method 8021B: Volatiles	10/6/2009 9:40:00 AM
0910122-02A	TP-8	R35744	EPA Method 8021B: Volatiles	10/6/2009 9:40:00 AM
0910122-02B	TP-8	20291	EPA 6010B: Total Recoverable Metals	10/6/2009 9:40:00 AM
0910122-03A	TP-6	R35744	EPA Method 8021B: Volatiles	10/6/2009 10:10:00 AM
0910122-03A	TP-6	20272	EPA Method 8015B: Diesel Range	10/6/2009 10:10:00 AM
0910122-03A	TP-6	R35744	EPA Method 8015B: Gasoline Range	10/6/2009 10:10:00 AM
0910122-03B	TP-6	20291	EPA 6010B: Total Recoverable Metals	10/6/2009 10:10:00 AM
0910122-04A	TP-5	R35744	EPA Method 8015B: Gasoline Range	10/6/2009 10:45:00 AM
0910122-04A	TP-5	R35744	EPA Method 8015B: Gasoline Range	10/6/2009 10:45:00 AM
0910122-04A	TP-5	R35744	EPA Method 8021B: Volatiles	10/6/2009 10:45:00 AM
0910122-04A	TP-5	R35744	EPA Method 8021B: Volatiles	10/6/2009 10:45:00 AM
0910122-04A	TP-5	20272	EPA Method 8015B: Diesel Range	10/6/2009 10:45:00 AM
0910122-04B	TP-5	20291	EPA 6010B: Total Recoverable Metals	10/6/2009 10:45:00 AM
0910122-05A	TP-1	20272	EPA Method 8015B: Diesel Range	10/6/2009 11:15:00 AM
0910122-05A	TP-1	R35744	EPA Method 8015B: Gasoline Range	10/6/2009 11:15:00 AM
0910122-05A	TP-1	R35744	EPA Method 8021B: Volatiles	10/6/2009 11:15:00 AM
0910122-05B	TP-1	20291	EPA 6010B: Total Recoverable Metals	10/6/2009 11:15:00 AM
0910122-06A	TP-2	R35744	EPA Method 8015B: Gasoline Range	10/6/2009 12:25:00 PM
0910122-06A	TP-2	20272	EPA Method 8015B: Diesel Range	10/6/2009 12:25:00 PM
0910122-06A	TP-2	R35744	EPA Method 8021B: Volatiles	10/6/2009 12:25:00 PM
0910122-06A	TP-2	R35744	EPA Method 8021B: Volatiles	10/6/2009 12:25:00 PM
0910122-06A	TP-2	R35744	EPA Method 8015B: Gasoline Range	10/6/2009 12:25:00 PM
0910122-06B	TP-2	20291	EPA 6010B: Total Recoverable Metals	10/6/2009 12:25:00 PM
0910122-07A	DW-1	20272	EPA Method 8015B: Diesel Range	10/6/2009 1:30:00 PM
0910122-07A	DW-1	R35744	EPA Method 8015B: Gasoline Range	10/6/2009 1:30:00 PM
0910122-07A	DW-1	R35744	EPA Method 8021B: Volatiles	10/6/2009 1:30:00 PM
0910122-07A	DW-1	R35776	EPA Method 8015B: Gasoline Range	10/6/2009 1:30:00 PM
0910122-07A	DW-1	R35776	EPA Method 8021B; Volatiles	10/6/2009 1:30:00 PM
0910122-07B	DW-1	20279	EPA Method 7470: Mercury	10/6/2009 1:30:00 PM
0910122-07B	DW-1	20291	EPA 6010B: Total Recoverable Metals	10/6/2009 1:30:00 PM
0910122-08A	DW-1FD	R35744	EPA Method 8021B: Volatiles	10/6/2009 1:35:00 PM

CLIENT:

Western Refining Southwest, Inc.

Project:

River Terrace 4th QTR-2009

Lab Order:

0910122

# Work Order Sample Summary

Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date
0910122-08A	DW-1FD	R35776	EPA Method 8015B: Gasoline Range	10/6/2009 1:35:00 PM
0910122-08A	DW-1FD	R35744	EPA Method 8015B: Gasoline Range	10/6/2009 1:35:00 PM
0910122-08A	DW-1FD	20272	EPA Method 8015B: Diesel Range	10/6/2009 1:35:00 PM
0910122-08A	DW-1FD	R35776	EPA Method 8021B: Volatiles	10/6/2009 1:35:00 PM
0910122-0 <b>8</b> B	DW-1FD	20279	EPA Method 7470: Mercury	10/6/2009 1:35:00 PM
0910122-08B	DW-1FD	20291	EPA 6010B: Total Recoverable Metals	10/6/2009 1:35:00 PM
0910122-09A	MW #49	20272	EPA Method 8015B: Diesel Range	10/6/2009 2:30:00 PM
0910122-09A	MW #49	R35744	EPA Method 8015B: Gasoline Range	10/6/2009 2:30:00 PM
0910122-09A	MW #49	R35744	EPA Method 8021B: Volatiles	10/6/2009 2:30:00 PM
0910122-09B	MW #49	20291	EPA 6010B: Total Recoverable Metals	10/6/2009 2:30:00 PM
0910122-10A	TP-7	20272	EPA Method 8015B: Diesel Range	10/6/2009 2:45:00 PM
0910122-10A	TP-7	R35744	EPA Method 8015B: Gasoline Range	10/6/2009 2:45:00 PM
0910122-10A	TP-7	R35744	EPA Method 8021B: Volatiles	10/6/2009 2:45:00 PM
0910122-10B	TP-7	20350	EPA 6010B: Total Recoverable Metals	10/6/2009 2:45:00 PM
0910122-11A	Field Blank	R35744	EPA Method 8021B: Volatiles	10/6/2009 3:00:00 PM
0910122-11A	Field Blank	R35744	EPA Method 8015B: Gasoline Range	10/6/2009 3:00:00 PM

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order: Project:

.0910122

River Terrace 4th QTR-2009

Lab ID:

0910122-01

Client Sample ID: TP-9

Collection Date: 10/6/2009 9:15:00 AM

Date Received: 10/7/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE					Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	10/9/2009 1:59:04 PM
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	10/9/2009 1:59:04 PM
Surr; DNOP	110	58-140	%REC	1	10/9/2009 1:59:04 PM
EPA METHOD 8015B: GASOLINE RAI	NGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	10/15/2009 6:03:41 PM
Surr: BFB	91.7	55.2-107	%REC	1	10/15/2009 6:03:41 PM
EPA METHOD 8021B: VOLATILES		•			Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	10/15/2009 6:03:41 PM
Benzene	ND	1.0	μg/L	1	10/15/2009 6:03:41 PM
Toluene	ND	1.0	μg/L	1	10/15/2009 6:03:41 PM
Ethylbenzene	ND	1.0	μg/L	1	10/15/2009 6:03:41 PM
Xylenes, Total	ND	2.0	μg/L	1	10/15/2009 6:03:41 PM
Surr: 4-Bromofluorobenzene	88.0	65.9-130	%REC	1	10/15/2009 6:03:41 PM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: SNV
Lead	0.015	0.0050	mg/L	1	10/14/2009 1:24:40 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

E · Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 1 of 11

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0910122

Client Sample ID: TP-8

Collection Date: 10/6/2009 9:40:00 AM

River Terrace 4th QTR-2009

Date Received: 10/7/2009

Project: Lab ID:

0910122-02

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E		<u></u>			Analyst: SCC
Diesel Range Organics (DRO)	4.9	1.0		mg/L	1	10/9/2009 2:34:30 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/9/2009 2:34:30 PM
Surr: DNOP	108	58-140		%REC	1	10/9/2009 2:34:30 PM
EPA METHOD 8015B: GASOLINE RA	NGE					Analyst: NSB
Gasoline Range Organics (GRO)	6.2	- 0.25		mg/L	5	10/15/2009 7:04:32 PM
Surr: BFB	111	55.2-107	S	%REC	5	10/15/2009 7:04:32 PM
EPA METHOD 8021B: VOLATILES						Analyst: <b>NS</b> B
Methyl tert-butyl ether (MTEE)	ND	13		µg/L	5	10/15/2009 7:04:32 PM
Benzene	8.1	5.0		µg/L	5	10/15/2009 7:04:32 PM
Toluene	ND	5.0		µg/L	5	10/15/2009 7:04:32 PM
Ethylbenzene	240	5.0		µg/L	5	10/15/2009 7:04:32 PM
Xylenes, Total	2100	100		μg/L	50	10/15/2009 6:34:04 PM
Surr: 4-Bromofluorobenzene	125	65.9-130	•	%REC	5	10/15/2009 7:04:32 PM
EPA 6010B: TOTAL RECOVERABLE	METALS					Analyst: SNV
Lead	0.033	0.0050		mg/L	1	10/14/2009 1:27:14 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

Ē Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

0910122

Client Sample ID: TP-6

Lab Order:

Collection Date: 10/6/2009 10:10:00 AM

Project:

River Terrace 4th QTR-2009

Date Received: 10/7/2009

Lab ID:

0910122-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	GE				Analyst: SCC
Diesel Range Organics (DRO)	3.6	1.0	mg/L	- 1	10/9/2009 3:09:55 PM
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	10/9/2009 3:09:55 PM
Surr: DNOP	110	58-140	%REC	1	10/9/2009 3:09:55 PM
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	9.8	1.0	mg/L	20	10/15/2009 8:05:24 PM
Surr: BFB	106	55.2-107	%REC	20	10/15/2009 8:05:24 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	50	μg/L	20	10/15/2009 8:05:24 PM
Benzene	22	20	μg/L	20	10/15/2009 8:05:24 PM
Toluene	ND	20	µg/L	. 20	10/15/2009 8:05:24 PM
Ethylbenzene	1200	20	μg/L	20	10/15/2009 8:05:24 PM
Xylenes, Total	3200	40	µg/L	20	10/15/2009 8:05:24 PM
Surr: 4-Bromofluorobenzene	118	65.9-130	%REC	20	10/15/2009 8:05:24 PM
EPA 6010B: TOTAL RECOVERABLE	METALS		,	•	Analyst: SNV
Lead .	0.023	0.0050	mg/L	1	10/14/2009 1:29:48 AM

## Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0910122

River Terrace 4th QTR-2009

Project: Lab ID:

0910122-04

Client Sample ID: TP-5

Collection Date: 10/6/2009 10:45:00 AM

Date Received: 10/7/2009

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	BE	• • • • • • • • • • • • • • • • • • • •				Analyst: SCC
Diesel Range Organics (DRO)	7.1	1.0		mg/L	1	10/9/2009 3:45:20 PM
Motor Oll Range Organics (MRO)	ND	5.0		mg/L	1	10/9/2009 3:45:20 PM
Surr: DNOP	116	58-140		%REC	1	10/9/2009 3:45:20 PM
EPA METHOD 8015B: GASOLINE RA	ANGE					Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	40	0.50		mg/L	10	10/15/2009 11:37:43 PM
Surr. BFB	102	55.2-107		%REC	10	10/15/2009 11:37:43 PM
EPA METHOD 8021B: VOLATILES						Analyst: <b>NSB</b>
Methyl tert-butyl ether (MTBE)	ND	25		μg/L	10	10/15/2009 11:37:43 PM
Benzene	ND	5.0		μg/L	10	10/15/2009 11:37:43 PM
Toluene	ND	10		μg/L	10	10/15/2009 11:37:43 PM
Ethylbenzene	1900	100		μg/L	100	10/15/2009 11:07:22 PM
Xylenes, Total	15000	200		μg/L	100	10/15/2009 11:07:22 PM
Surr: 4-Bromofluorobenzene	103	65.9-130		%REC	1 <b>0</b> 0	10/15/2009 11:07:22 PM
EPA 6010B: TOTAL RECOVERABLE	METALS					Analyst: SNV
Lead	0.025	0.0050		mg/L	1	10/14/2009 1:32:20 AM

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 11-Dec-09

CLIENT: Lab Order: Western Refining Southwest, Inc.

0910122

River Terrace 4th QTR-2009

Project: Lab ID:

0910122-05

Client Sample ID: TP-1

Collection Date: 10/6/2009 11:15:00 AM

Date Received: 10/7/2009

Matrix: AQUEOUS

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	SE .				Analyst: SCC
Diesel Range Organics (DRO)	11	1.0	mg/L	1	10/9/2009 4:56:57 PM
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	10/9/2009 4:56:57 PM
Surr. DNOP	119	58-140	%REC	1	10/9/2009 4:56:57 PM
EPA METHOD 8015B: GASOLINE R.	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	44	5.0	mg/L	100	10/16/2009 12:38:26 AM
Surr: BFB	92.9	55.2-107	%REC	100	10/16/2009 12:38:26 AM
EPA METHOD 8021B: VOLATILES		Analyst: NSB			
Methyl tert-butyl ether (MTBE)	ND	250	µg/L	100	10/16/2009 12:38:26 AM
Benzene	620	<b>10</b> 0	µg/L	100	10/16/2009 12:38:26 AM
Toluene	ND	100	μg/L	100	10/16/2009 12:38:26 AM
Ethylbenzene	3400	100	μg/L	100	10/16/2009 12:38:26 AM
Xylenes, Total	15000	200	μg/L	100	10/16/2009 12:38:26 AM
Surr: 4-Bromofluorobenzene	98.5	65.9-130	%REC	100	10/16/2009 12:38:26 AM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: SNV
Lead	0.039	0.0050	mg/L	1	10/14/2009 1:44:11 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

Е Estimated value

Analyte detected below quantitation limits J

Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Biank

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Page 5 of 11

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0910122

. 0710122

River Terrace 4th QTR-2009

Project: Lab ID:

0910122-06

Client Sample ID: TP-2

Collection Date: 10/6/2009 12:25:00 PM

Date Received: 10/7/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	SE					Analyst: SCC
Diesel Range Organics (DRO)	5.0	1.0		mg/L	1	10/9/2009 5:32:39 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/9/2009 5:32:39 PM
Surr: DNOP	119	58-140		%REC	1	10/9/2009 5:32:39 PM
EPA METHOD 8015B: GASOLINE RA	NGE					Analyst: NSB
Gasoline Range Organics (GRO)	16	0.50		mg/L	10	10/16/2009 1:39:09 AM
Surr: BFB	110	55.2-107	S	%REC	10	10/16/2009 1:39:09 AM
EPA METHOD 8021B: VOLATILES						Analyst: <b>NS</b> B
Methyl tert-butyl ether (MTBE)	ND	25		µg/L	10	10/16/2009 1:39:09 AM
Benzene	790	10		μ <b>g</b> /L	10	10/16/2009 1:39:09 AM
Toluene	15	10		μg/L	10	10/16/2009 1:39:09 AM
Ethylbenzene	2100	50		µg/L	50	10/16/2009 1:08:47 AM
Xylenes, Total	4200	. 100		μg/L	50	10/16/2009 1:08:47 AM
Surr: 4-Bromofluorobenzene	105	65.9-130		%REC	50	10/16/2009 1:08:47 AM
EPA 6010B: TOTAL RECOVERABLE	METALS					Analyst: SNV
Lead	0.019	0.0050		mg/L	1	10/14/2009 1:46:49 AM



Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order: 0910122

River Terrace 4th QTR-2009

Project: Lab ID:

0910122-07

Client Sample ID: DW-1

ment Sample ID; DW-1

Collection Date: 10/6/2009 1:30:00 PM

Date Received: 10/7/2009

Matrix: AQUEOUS

Analyses	Result	PQL (	Qual Units	.DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE					Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	10/9/2009 6:08:19 PM
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	10/9/2009 6:08:19 PM
Surr: DNOP	111	58-140	%REC	1	10/9/2009 6:08:19 PM
EPA METHOD 8015B: GASOLINE RANG	E				Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	10/16/2009 2:09:30 PM
Surr: BFB	96.3	55.2-107	%REC	1	10/16/2009 2:09:30 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	µg/L	1	10/16/2009 2:09:30 PM
Benzene	ND	1.0	µg/L	1	10/16/2009 2:09:30 PM
Toluene	ND	1.0	μg/L	1	10/16/2009 2:09:30 PM
Ethylbenzene	ND	1.0	μg/L	1	10/16/2009 2:09:30 PM
Xylenes, Total	ND	2.0	μg/L	1	10/16/2009 2:09:30 PM
Surr: 4-Bromofluorobenzene	96.1	65.9-130	%REC	1	10/16/2009 2:09:30 PM
EPA METHOD 7470: MERCURY					Analyst: MMS
Mercury	ND	0.00020	mg/L	1	10/9/2009 4:08:16 PM
EPA 6010B: TOTAL RECOVERABLE ME	TALS				Analyst: SNV
Lead	0.0057	0.0050	mg/L	1	10/14/2009 1:49:21 AM

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

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0910122

River Terrace 4th QTR-2009

Project: Lab ID:

0910122-08

Client Sample ID: DW-1FD

Collection Date: 10/6/2009 1:35:00 PM

Date Received: 10/7/2009 Matrix: AQUEOUS

Analyses	Result	PQL Qu	ial Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE		<del></del>			Analyst: SCC
Diesel Range Organics (DRO)	ND.	1.0	mg/L	1	10/9/2009 6:44:01 PM
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	. 1	10/9/2009 6:44:01 PM
Surr: DNOP	<b>12</b> 7	58-140	%REC	1	10/9/2009 6:44:01 PM
EPA METHOD 8015B: GASOLINE RANG	3E				Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	10/16/2009 2:39:54 PM
Surr: BFB	99.0	55.2-107	%REC	1	10/16/2009 2:39:54 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTB⊞)	ND	2.5	µg/L	. 1	10/16/2009 2:39:54 PM
Benzene	ND	1.0	μg/L	1	10/16/2009 2:39:54 PM 1
Toluene	ND	1.0	µg/L	1	10/16/2009 2:39:54 PM
Ethylbenzene	ND	1.0	μg/L	1	10/16/2009 2:39:54 PM
Xylenes, Total	ND	2.0	µg/∟	1	10/16/2009 2:39:54 PM
Surr: 4-Bromofluorobenzeine	100	65.9-130	%REC	. 1	10/16/2009 2:39:54 PM
EPA METHOD 7470: MERCURY					Analyst: MMS
Mercury	ND	0.00020	mg/L	1	10/9/2009 4:10:06 PM
EPA 6010B: TOTAL RECOVERABLE MI	ETALS				Analyst: SNV
Lead	0.0061	0.0050	mg/L	1	10/14/2009 1:51:56 AM



- Value exceeds Maximum Contaminant Level
- Е Estimated value
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Reporting Limit

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

Lab ID:

0910122

Project: River Terrace 4th QTR-2009

0910122-09

Client Sample ID: MW #49

Collection Date: 10/6/2009 2:30:00 PM

Date Received: 10/7/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual 1	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	SE				<del>-</del>	Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	r	mg/L	1	10/9/2009 7:19:43 PM
Motor Oil Range Organics (MRO)	ND	5.0	·	mg/L	1	10/9/2009 7:19:43 PM
Surr: DNOP	136	58-140	Ç	%REC	1	10/9/2009 7:19:43 PM
EPA METHOD 8015B: GASOLINE RA	ANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050	r	mg/L	1	10/16/2009 3:40:26 AM
Surr: BFB	96.3	55.2-107	Ç	%REC	1	10/16/2009 3:40:26 AM
EPA METHOD 8021B: VOLATILES						Analyst: <b>NSB</b>
Methyl tert-butyl ether (MTBE)	ND	2.5	1	ug/L	1	10/16/2009 3:40:26 AM
Benzene	ND	1.0	ŀ	µg/L	1	10/16/2009 3:40:26 AM
Toluene	ND	1.0	ļ.	µg/L	1	10/16/2009 3:40:26 AM
Ethylbenzene	ND	1.0	ŀ	µg/L	1	10/16/2009 3:40:26 AM
Xylenes, Total	NÐ	2.0		µg/L	1	10/16/2009 3:40:26 AM
Surr: 4-Bromofluorobenzene	89.7	65.9-130	q	%REC	1	10/16/2009 3:40:26 AM
EPA 6010B: TOTAL RECOVERABLE	METALS					Analyst: SNV
Lead	0.0052	0.0050	ī	mg/L	1	10/14/2009 1:54:31 AM

Qualifiers:

Value exceeds Maximum Contaminant Level-

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0910122

Project:

River Terrace 4th QTR-2009

Lab ID:

0910122-10

Client Sample ID: TP-7

Collection Date: 10/6/2009 2:45:00 PM

Date Received: 10/7/2009

Matrix: AQUEOUS

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	 3E	<del></del>		<del></del>	Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	10/9/2009 7:55:23 PM
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	10/9/2009 7:55:23 PM
Surr: DNOP	128	58-140	%REC	1	10/9/2009 7:55:23 PM
EPA METHOD 8015B: GASOLINE R	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	10/16/2009 4:10:36 AM
Surr. BFB	89.0	55.2-107	%REC	1	10/16/2009 4:10:36 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	µg/L	1	10/16/2009 4:10:36 AM
Benzene	ND	1.0	µg/L	1	10/16/2009 4:10:36 AM
Toluene	ND	1.0	μg/L	1	10/16/2009 4:10:36 AM
Ethylbenzene	ND	1.0	µg/L	1	10/16/2009 4:10:36 AM
Xylenes, Total	ND	2.0	µg/L	1	10/16/2009 4:10:36 AM
Surr: 4-Bromofluorobenzene	<b>8</b> 5.1	65,9-130	%REC	1	10/16/2009 4:10:36 AM
EPA 6010B: TOTAL RECOVERABLE	METALS				Analyst: SNV
Lead	0.0085	0.0050	mg/L	1	10/22/2009 3:46:48 PM



Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order: 0

0910122

Project:

River Terrace 4th OTR-2009

Lab ID:

0910122-11

Client Sample ID: Field Blank

Collection Date: 10/6/2009 3:00:00 PM

Date Received: 10/7/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES				· · · · · · · · · · · · · · · · · · ·	Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	µg/∟	1	10/16/2009 4:40:51 AM
Benzene	ND	1.0	μg/L	. 1	10/16/2009 4:40:51 AM
Toluene	ND	1.0	μg/L	1	10/16/2009 4:40:51 AM
Ethylbenzene	ND	1.0	µg/L	1	10/16/2009 4:40:51 AM
Xylenes, Total	ND	2.0	μg/L	1	10/16/2009 4:40:51 AM
Surr: 4-Bromofluorobenzene	88.2	65.9-1 <b>3</b> 0	%REC	1	10/16/2009 4:40:51 AM

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

# Hall Environmental Analysis Laboratory, Inc.

Western Refining Southwest, Inc. River Terrace 4th QTR-2009 0910122 Lab Order: Project: Client:

desperation of the second second			Shire of the second of the second		der 1992 may 1913 in the lower of the state of the second of the State of	Contraction of the Contraction o	AND THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.	
Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Instrument Run ID	QC Batch ID	Prep Date	Analysis Date
0910122-01A	TP-9	10/6/2009 9:15:00 AM	Aqueous	EPA Method 8015B: Diesel Range	ID(17A) 2_091009,	20272	10/8/2009	10/9/2009
				EPA Method 8015B: Gasoline Range	ZEUS_091015A	R35744		10/15/2009
				EPA Method 8021B: Volatiles	ZEUS_091015A	R35744		10/15/2009
0910122-01B				EPA 6010B: Total Recoverable Metals	ISIS_091014A	16707	10/12/2009	10/14/2009
0910122-02A	TP-8	10/6/2009 9:40:00 AM		EPA Method 8015B: Diesel Range	TD(17A) 2_091009	20272	10/8/2009	10/9/2009
				EPA Method 8015B: Gasoline Range	ZEUS_091015A	R35744		10/15/2009
				EPA Method 8015B: Gasoline Range	ZEUS_091015A	R35744		10/15/2009
				EPA Method 8021B: Volatiles	ZEUS_091015A	R35744		10/15/2009
				EPA Method 8021B: Volatiles	ZEUS_091015A	R35744		10/15/2009
0910122-02B				EPA 6010B: Total Recoverable Metals	ISIS_091014A	20291	10/12/2009	10/14/2009
0910122-03A	TP-6	10/6/2009 10:10:00 AM		EPA Method 8015B: Diesel Range	'ID(17A) 2_091009,	20272	10/8/2009	10/9/2009
				EPA Method 8015B: Gasoline Range	ZEUS_091015A	R35744		10/15/2009
				EPA Method 8021B: Volatiles	ZEUS_091015A	R35744		10/15/2009
0910122-03B				EPA 6010B: Total Recoverable Metals	ISIS_091014A	20291	10/12/2009	10/14/2009
0910122-04A	TP-5	10/6/2009 10:45:00 AM		EPA Method 8015B: Diesel Range	TD(17A) 2_091009,	20272	10/8/2009	10/9/2009
				EPA Method 8015B; Gasoline Range	ZEUS_091015A	R35744		10/15/2009
				EPA Method 8015B: Gasoline Range	ZEUS_091015A	R35744		10/15/2009
				EPA Method 8021B; Volatiles	ZEUS_091015A	R35744		10/15/2009
				EPA Method 8021B: Volatiles	ZEUS_091015A	R35744		10/15/2009
0910122-04B				EPA 6010B: Total Recoverable Metals	ISIS_091014A	20291	10/12/2009	10/14/2009
0910122-05A	TP-1	10/6/2009 11:15:00 AM		EPA Method 8015B: Diesel Range	TD(17A) 2_0910091	20272	10/8/2009	10/9/2009
				EPA Method 8015B: Gasoline Range	ZEUS_091015A	R35744		10/16/2009
				EPA Method 8021B: Volatiles	ZEUS_091015A	R35744		10/16/2009
0910122-05B				EPA 6010B: Total Recoverable Metals	ISIS_091014A	20291	10/12/2009	10/14/2009
0910122-06A	TP-2	10/6/2009 12:25:00 PM		EPA Method 8015B: Diesel Range	TD(17A) 2_091009,	20272	10/8/2009	10/9/2009

Hall Environmental Analysis Laboratory, Inc.

0910122

Lab Order:

Client:	Western Refining Southwest, Inc.	Southwest, Inc.				DATI	DATES REPORT	
Project:	River Terrace 4th QTR-2009	QTR-2009						
Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Instrument Run ID	QC Batch ID Prep Date	Prep Date	Analysis Date
0910122-06A	TP-2	10/6/2009 12:25:00 PM	Aqueous	EPA Method 8015B: Gasoline Range	ZEUS_091015A	R35744	Commence of the second	10/16/2009
				EPA Method 8015B: Gasoline Range	ZEUS_091015A	R35744		10/16/2009
				EPA Method 8021B: Volatiles	ZEUS_091015A	R35744		10/16/2009
				EPA Method 8021B: Volatiles	ZEUS_091015A	R35744		10/16/2009
0910122-06B				EPA 6010B: Total Recoverable Metals	ISIS_091014A	20291	10/12/2009	10/14/2009
0910122-07A	DW-I	10/6/2009 1:30:00 PM		EPA Method 8015B: Diesel Range	'ID(17A) 2_091009,	20272	10/8/2009	10/9/2009
-				EPA Method 8015B: Gasoline Range	ZEUS_091015A	R35744		10/16/2009
				EPA Method 8015B; Gasoline Range	ZEUS_091016A	R35776		10/16/2009
				EPA Method 8021B: Volatil⇔	ZEUS_091015A	R35744		10/16/2009
-				EPA Method 8021B. Volatiles	ZEUS_091016A	R35776		10/16/2009
0910122-07B				EPA 6010B: Total Recoverable Metals	ISIS_091014A	20291	10/12/2009	10/14/2009
				EPA Method 7470: Mercury	NEMO_091009A	20279	10/9/2009	10/9/2009
0910122-08A	DW-1FD	10/6/2009 1:35:00 PM		EPA Method 8015B: Diesel Range	ID(17A) 2_091009,	20272	10/8/2009	10/9/2009
				EPA Method 8015B: Gasoline Range	ZEUS_091015A	R35744	·.	10/16/2009
				EPA Method 8015B; Gasoline Range	ZEUS_091016A	R35776		10/16/2009
				EPA Method 8021B. Volatiles	ZEUS_091016A	R35776		10/16/2009
				EPA Method 8021B: Volatiles	ZEUS_091015A	R35744		10/16/2009
0910122-08B				EPA 6010B: Total Recoverable Metals	ISIS_091014A	20291	10/12/2009	10/14/2009
				EPA Method 7470: Mercury	NEMO_091009A	20279	10/9/2009	10/9/2009
0910122-09A	MW #49	10/6/2009 2:30:00 PM		EPA Method 8015B; Diesel Range	.ID(17A) 2_091009,	20272	10/8/2009	10/9/2009
				EPA Method 8015B: Gasoline Range	ZEUS_091015A	R35744		10/16/2009

Page 2 of 3

10/16/2009

R35744

ZEUS_091015A

EPA Method 8015B: Gasoline Range EPA Method 8015B: Diesel Range

10/6/2009 2:45:00 PM

TP-7

0910122-09B 0910122-10A

TD(17A) 2_091009,

10/9/2009

10/12/2009 10/8/2009

20291 20272

ISIS_091014A

EPA 6010B: Total Recoverable Metals

EPA Method 8021B. Volatiles

10/16/2009 10/14/2009

R35744

ZEUS_091015A

# Hall Environmental Analysis Laboratory, Inc.

Lab Order: 0910122

Western Refining Southwest, Inc.

Client:

Project: River Terrace 4th QTR-2009

Contraction of the Party of the						The second secon	and the second second second	A STATE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.
Sample ID	Client Sample ID	Collection Date	Matrix	Matrix Test Name	Instrument Run ID QC Batch ID Prep Date Analysis Date	QC Batch ID	Prep Date	Analysis Date
			The second second second second second			7	The state of the s	A COLUMN TO THE PROPERTY OF TH
0910122-10A	TP-7	10/6/2009 2:45:00 PM	Aqueous	EPA Method 8021B: Volatiles	ZEUS_091015A	R35744		10/16/2009
001 2210100				EDA 6010B: Total Decomerable Metals	ACC0100 SISI	20350	10/16/2000	10/22/2009
301-7710160				ELA UNIVE. 10th Necoverable interess	D770160 C100	00007	1010101	1007177101
0910122-11A	Field Blank	10/6/2009 3:00:00 PM		EPA Method 8021B: Volatiles	ZEUS_091015A	R35744		10/16/2009

Date: 11-Dec-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

Project:

River Terrace 4th QTR-2009

Work Order:

0910122

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec L	owLimit Hig	ghLimit %RP[	D RPDLimit Qual
Method: EPA Method 8015B; D	iesel Range	)							
Sample ID: MB-20272		MBLK				Batch ID:	20272	Analysis Date:	10/9/2009 10:25:12 AN
Diesel Range Organics (DRO)	ND	mg/L	1.0						
Motor Oil Range Organics (MRO)	ND	mg/L	5.0						
Sample ID: LCS-20272		LCS				Batch ID:	20272	Analysis Date:	10/9/2009 11:00:52 AN
Diesel Range Organics (DRO)	5.166	mg/L	1.0	5	0	103	74 .	157	
Method: EPA Method 8015B: G	asoline Rar	nge	,						
Sample ID: 5ML RB		MBLK				Batch ID:	R35744	Analysis Date:	10/15/2009 9:30:33 AM
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Sample ID: 5ML RB		MBLK				Batch ID:	R35776	Analysis Date:	10/16/2009 11:37:36 AN
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Sample ID: 2.6UG GRO LCS	110	LCS	0.000			Batch ID:	R35744	Analysis Date:	10/15/2009 8:35:45 PM
·	0.5326		0.050	0.5	0	107	80	115	
Gasoline Range Organics (GRO) Sample ID: 2.5UG GRO LCS	0.0320	mg/L <i>LC</i> S	0.050	0.5	U	Batch ID:	R35776	Analysis Date:	10/16/2009 9:47:56 PM
•									10/10/2005 5.47.50 1 10
Gasoline Range Organics (GRO)	0.5056	mg/L	0.050	0.5	0	101	80	115	
Method: EPA Method 8021B: V	olatiles								
Sample ID: 5ML RB		MBLK				Batch ID:	R35744	Analysis Date:	10/15/2009 9:30:33 AM
Methyl tert-butyl ether (MTBE)	ND	μg/L	2.5					•	
Benzene	ND	μg/L	1.0	,					
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	μg/L	2.0						•
Sample ID: 5ML RB		MBLK				Batch ID:	R35776	Analysis Date:	10/16/2009 11:37:36 AN
Methyl tert-butyl ether (MTBE)	ND	μg/L	2.5						
Benzene	ND	μg/L	1.0						
Toluene	ND	μg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	μg/L	2.0						
Sample ID: 100NG BTEX LCS R		LCS				Batch ID:	R35776	Analysis Date:	10/16/2009 5:11:35 PN
Methyl tert-butyl ether (MTBE)	16.41	μg/L	2.5	20	0	82.1	51.2	138	
Benzene	19.81	µg/L	1.0	20	O	99.1	85.9	113	
Toluene	21.13	μg/L	1.0	20	0	106	86.4	113	
Ethylbenzene	21.53	μg/L	1.0	20	0.116	107	83.5	118	
Xylenes, Total	63.71	µg/L	2.0	60	0	106	83.4	122	
Sample ID: 100NG BTEX LCS		LCS				Batch ID:	R35776	Analysis Date:	10/16/2009 10:18:23 PM
Methyl tert-butyl ether (MTBE)	15. <b>5</b> 4	µg/L	2.5	20	0	77.7	51.2	138	
Benzene	19.42	μg/L	1.0	20	٥	97.1	85.9	113	
Toluene	20.61	μg/L	1.0	20	0	103	86.4	113	
Ethylbenzene	20.41	µg/L	1.0	20	0.116	101	83.5	118	
Xylenes, Total	61.22	μg/L	2.0	60	0	102	83.4	122	•

Out	lifier	• 0
Vuc	****	•

E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 1



Date: 11-Dec-09

# QA/QC SUMMARY REPORT

<u> lient:</u>

Western Refining Southwest, Inc.

River Terrace 4th QTR-2009

Work Order:

910122

Analyte	Result	Units	PQL	SPK Va S	PK ref	%Rec Lo	wLimit Hig	ghLimit %RPE	RPDLimit Qual
Method: EPA Method 7	470: Mercury			-		,			
Sample ID: MB-20279		MBLK				Batch ID:	20279	Analysis Date:	10/9/2009 3:12:19 PM
Mercury	ND	mg/L	0.00020						
Sample ID: LCS-20279		LCS				Batch ID:	20279	Analysis Date:	10/9/2009 3:14:05 PM
Mercury	0.004862	mg/L	0.00020	0.005	0	97.2	80	120	•
Sample ID: LCS-20279		LCS				Batch ID:	20279	Analysis Date:	10/9/2009 3:15:53 PM
Mercury	0.004870	mg/L	0.00020	0.005	0	97.4	80	120	
Method: EPA 6010B: To	otal Recoverable Met	als							
Sample ID: MB-20291		MBLK				Batch ID:	20291	Analysis Date:	10/14/2009 1:09:21 AM
_ead	ND	mg/L	0.0050						
Sample ID: MB-20291		MBLK				Batch ID:	20291	Analysis Date:	10/16/2009 12:46:37 PM
_ead	ND	mg/L	0.0050						
Sample ID: MB-20350		MBLK				Batch ID:	20350	Analysis Date:	10/22/2009 2:06:18 PM
Lead	ND	mg/L	0.0050					•	
Sample ID: LCS-20291		LCS				Batch ID:	20291	Analysis Date:	10/14/2009 1:11:54 AM
Lead	.0.4668	mg/L	0.0050	0.5	0	93.4	80	120	·
Sample ID: LCS-20291		LCS				Batch ID:	20291	Analysis Date:	10/16/2009 12:49:47 PM
Lead	0.4767	mg/L	0.0050	0.5	0	95.3	80	120	4
Sample ID: LCS-20350		LCS				Batch ID:	20350	Analysis Date:	10/22/2009 2:09:15 PM
<b>_</b> ad	0.4717	mg/L	0.0050	0.5	D	94.3	80	120	





## Sample Receipt Checklist

Client Name WESTERN REFINING SOUT			Date Receiv	red: .	10/7/2009
Work Order Number 0910122		احرا	Received i	oy: TLS labels checked by:	W
Checklist completed by:	<del></del>	10	19/09		initials
8ignaturé 🔾	1	Dat			
Matrix: Carrier name	: <u>UP</u> \$	Ž			·
Shipping container/cooler in good condition?	Yes		No 🗀	Not Present	
Custody seals intact on shipping container/cooler?	Yes	$\checkmark$	No 🗌	Not Present	Not Shipped
Custody seals intact on sample bottles?	Yes		No 🗀	N/A 🗹	
Chain of oustody present?	Yes		No 🗆		
Chain of custody signed when relinquished and received?	Yes	$\mathbf{Z}$	No 🗆		
Chain of custody agrees with sample labels?	Yes	V	No 🗆		
Samples in proper container/bottle?	Yes	$\checkmark$	No 🗌		
Sample containers intact?	Yes	$\checkmark$	No 🗀		
Sufficient sample volume for indicated test?	aeY	V	No 🗌		
All samples received within holding time?	Yes	V	No 🗀		Number of preserved
Water - VOA vials have zero headspace? No VOA vials sub	milted		Yes 🗹	No 🗀	bottles checked for pH;
Water - Preservation labels on bottle and cap match?	Yes	¥	No 🗌	· N/A 🗆	
Water - pH acceptable upon receipt?	Yes	V	No 🗆	N/A	<2 >12 unless noted
Container/Temp Blank temperature?	2.	9°	<6° C Accepta	ble	below.
COMMENTS:			If given auffloles	nt time to cool.	
•					
	===				
Olient contacted Date contacted:			Per	son contacted	
Contacted by: Regarding:			•		
Comments:			· · · · · · · · · · · · · · · · · · ·		
			<del></del>		
				<del></del>	
				· · · · · · · · · · · · · · · · · · ·	
Corrective Action					

Alr Bubbles (Y or N) ANALYSIS LABORATORY HALL ENVIRONMENTAL 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 indiated on the analytical report. 4901 Hawkins NE - Albuquerque, NM 87109 Fax 505-345-4107 (AOV-Imas) 0758 www.hallenvironmental.com (AOV) 803S8 8081 Pesticides / 8082 PCB's Anions (F,Cl,NO₃,NO₂,PO₄,SO₄) RCRA 8 Metals Tel. 505-345-3975 (HA9 to AN9) 0188 EDB (Method 504.1) Remarks: Pg / st (PH Method 8015B (Gas/Diesel) MTBE + TPH (Gas only) (C) Time 10 0 M  $\Rightarrow$ 7 Rier Ferlage (1240 TR 2009 Pate Preservative □ Rush \$00°+ 4003 COMH # 1303 HCL 7774 100x # ADOS 7 ナント なって 大 Turn-Around Time: Project Manager: Project Name: Standard Standard Type and # 1-Spm Container -5am 1-Signed 4-108-1-50m 4-104 4-UBA 4.994 4-164 4-10A Project #: Soon Received by -Soom Sampler Level 4 (Full Validation) Sample Request ID Chain-of-Custody Record Client Western Refunds Southwise IN. 6-04 Mailing Address: #50 Road \$999 N e  $\alpha$ 116-889-505 ر 5 7 1 × 10 × SB5-632-416) Relinguished by: Relinquished by □ Other Bloom Feld Bloom tield Matrix 至 Time 11154 2356 email or Fax#: 1010A QA/QC Package: 9 KM 3300 るな □ EDD (Type 940 Accreditation E E ☐ Standard O NELAP Phone #: Date 10 30 CE 10.36.00 Date:

(N to Y) selddu8 1IA analysis Laboratory HALL ENVIRONMENTAL 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. 040 4901 Hawkins NE - Albuquerque, NM 87109 Fax 505-345-4107 (AOV-lme2) 0728 www.hallenvironmental.com (AOV) 808S8 8081 Pesticides / 8082 PCB's Anlons (F,CI,NO3,NO2,PO4,SO4) RCRA 8 Metals Marka Tel. 505-345-3975 (HA9 to AN9) 0158 EDB (Method 504.1) (P.814 bodieM) H97 (Gas/Diesel) 83108 bodieM H91 > Remarks: MTBE + TPH (Gas only) (1508) + 38TM + X3T8 9 ã 57 (%) 77 (> O 0 Preservative □ Rush HND3 FONH 707 しつみ 461 HC L 41003 HCC 150x Type Tum-Around Time: Project Manager: A Standard Project Name: 4-104 4-1/04 Type and # Container 1-500A 24005-1 3-104 1-530 d -Sus-4-104 4.104 Received by: 874/3 Project# Sampler Level 4 (Full Validation) Sample Request ID - MO Chain-of-Custody Record 人儿 400 Till Blank 11 65-6501-505 4.4 505-632-416 X X Shom Felo Bloom tield Mailing Address: #50 Rock Relinquished py □ Other Matrix 3 Time りなって QA/QC Package: 1300 棚 email or Fax#: 33 □ EDD (Type) 3 B.C. Accreditation Time: □ Standard O NELAP Phone #: Page-09 Client Po-1009 Date Date:



### COVER LETTER

Monday, March 16, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990 Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: River Terrace 1st QTR 2009- VS

Dear Cindy Hurtado:

Order No.: 0903096

Hall Environmental Analysis Laboratory, Inc. received 6 sample(s) on 3/6/2009 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. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager Nancy McDuffie, Laboratory Manager

NM Lab # NM9425 AZ license # AZ0682 ORELAP Lab # NM100001

Texas Lab# T104704424-08-TX



Date: 16-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Project:

River Terrace 1st QTR 2009- VS

Lab Order:

0903096

Work Order Sample Summary

Lab Sample 1D	Client Sample ID	Batch ID	Test Name	Collection Date
0903096-01A	TP-3	R32717	EPA Method 8015B: Gasoline Range	3/5/2009 9:30:00 AM
0903096-01A	TP-3	R32717	EPA Method 8021B: Volatiles	3/5/2009 9:30:00 AM
0903096-02A	TP-3 Dupe	R32717	EPA Method 8015B: Gasoline Range	3/5/2009 9:32:00 AM
0903096-02A	TP-3 Dupe	R32717	EPA Method 8021B: Volatiles	3/5/2009 9:32:00 AM
0903096-03A	TP-10	R32717	EPA Method 8015B: Gasoline Range	3/5/2009 9:55:00 AM
0903096-03A	TP-10	R32717	EPA Method 8015B: Gasoline Range	3/5/2009 9:55:00 AM
0903096-03A	TP-10	R32717	EPA Method 8021B: Volatiles	3/5/2009 9:55:00 AM
0903096-03A	TP-10	R32717	EPA Method 8021B: Volatiles	3/5/2009 9:55:00 AM
0903096-04A	TP-11	R32717	EPA Method 8015B: Gasoline Range	3/5/2009 10:15:00 AM
0903096-04A	TP-11	R32717	EPA Method 8021B: Volatiles	3/5/2009 10:15:00 AM
0903096-05A	TP-13	R32717	EPA Method 8015B: Gasoline Range	3/5/2009 10:35:00 AM
0903096-05A	TP-13	R32717	EPA Method 8021B: Volatiles	3/5/2009 10:35:00 AM
0903096-06A	TP-12	R32717	EPA Method 8015B: Gasoline Range	3/5/2009 11:00:00 AM
0903096-06A	TP-12	R32717	EPA Method 8021B: Volatiles	3/5/2009 11:00:00 AM

Date: 16-Mar-09

CLIENT:

Western Refining Southwest, Inc.

0903096

Lab Order:

River Terrace 1st QTR 2009- VS

Project: Lab ID:

0903096-01

Client Sample ID: TP-3

Collection Date: 3/5/2009 9:30:00 AM

Date Received: 3/6/2009

Matrix: AIR

Analyses	Result	PQL (	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	NGE	<del></del>			Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0	μg/L	1	3/10/2009 12:05:45 PM
Surr: BFB	88.9	76.8-150	%REC	1	3/10/2009 12:05:45 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Benzene	ND	0.10	μ <b>g/</b> L	1	3/10/2009 12:05:45 PM
Toluene	ND	0.10	μg/L	1	3/10/2009 12:05:45 PM
Ethylbenzene	ND	0.10	μg/L	1	3/10/2009 12:05:45 PM
Xylenes, Total	ND	0.30	μg/L	1	3/10/2009 12:05:45 PM
Surr: 4-Bromofluorobenzene	80.2	70.2-105	%REC	1	3/10/2009 12:05:45 PM



- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
  - RL Reporting Limit

Date: 16-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Client Sample ID: TP-3 Dupe

Lab Order:

0903096

Collection Date: 3/5/2009 9:32:00 AM

Project:

River Terrace 1st QTR 2009- VS

Date Received: 3/6/2009

Lab ID:

0903096-02

Matrix: AIR

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE R	ANGE				Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0	. µg/L	1	3/10/2009 12:36:29 PM
Surr: BFB	89.2	76.8-150	%REC	1	3/10/2009 12:36:29 PM
EPA METHOD 8021B: VOLATILES	·				Analyst: DAM
Benzene	ND	0.10	µg/L	1	3/10/2009 12:36:29 PM
Toluene	ND	0.10	μg/L	1	3/10/2009 12:36:29 PM
Ethylbenzene	ND	0.10	μg/L	·1	3/10/2009 12:36:29 PM
Xylenes, Total	ND	0.30	μg/L	1	3/10/2009 12:36:29 PM
Surr: 4-Bromofluorobenzene	80.4	70.2-105	%REC	1	3/10/2009 12:36:29 PM

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

Page 2 of 6

Date: 16-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Client Sample ID: TP-10

Lab Order:

0903096

Collection Date: 3/5/2009 9:55:00 AM

Project:

River Terrace 1st QTR 2009- VS

Date Received: 3/6/2009

Lab ID:

0903096-03

Matrix: AIR

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE R	ANGE				Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0	μg/L	1	3/10/2009 3:40:24 PM
Surr: BFB	95.5	76.8-150	%REC	1	3/10/2009 3:40:24 PM
EPA METHOD 8021B; VOLATILES					Analyst: DAM
Benzene	ND	0.10	µg/L	1	3/10/2009 3:40:24 PM
Toluene	ND	0.10	μg/L	1	3/10/2009 3:40:24 PM
Ethylbenzene	ND	0.10	μg/L	1	3/10/2009 3:40:24 PM
Xylenes, Total	ND	0.30	μg/L	1	3/10/2009 3:40:24 PM
Surr: 4-Bromofluorobenzene	88.9	70.2-105	%REC	1	3/10/2009 3:40:24 PM



Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

В Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 3 of 6

Date: 16-Mar-09

CLIENT: Lab Order:

Project:

Lab ID:

Western Refining Southwest, Inc.

0903096-04

0903096

River Terrace 1st QTR 2009- VS

Client Sample ID: TP-11

Collection Date: 3/5/2009 10:15:00 AM

Date Received: 3/6/2009

Matrix: AIR

Analyses	Result	PQL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0	µg/L	. 1	3/10/2009 1:37:54 PM
Surr: BFB	. 92.1	76.8-150	%REC	1	3/10/2009 1:37:54 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Benzene	ND	0.10	μg/L	1	3/10/2009 1:37:54 PM
Toluene	. ND	0.10	µg/L	. 1	3/10/2009 1:37:54 PM
Ethylbenzene	ND	0.10	µg/L	1	3/10/2009 1:37:54 PM
Xylenes, Total	ND	0.30	µg/L	. 1	3/10/2009 1:37:54 PM
Surr: 4-Bromofluorobenzene	84.4	70.2-105	%REC	1	3/10/2009 1:37:54 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

Ε Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank В

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 4 of 6

Date: 16-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0903096

Project:

River Terrace 1st QTR 2009- VS

Lab ID:

0903096-05

Client Sample ID: TP-13

Collection Date: 3/5/2009 10:35:00 AM

Date Received: 3/6/2009

Matrix: AIR

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE R	ANGE				Analyst: DAM
Gasoline Range Organics (GRO)	· ND	5.0	μg/L	1	3/10/2009 2:08:28 PM
Surr: BFB	89.3	76.8-150	%REC	1	3/10/2009 2:08:28 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Benzene	ND	0.10	μg/L	1	3/10/2009 2:08:28 PM
Toluene	ND	0.10	μg/L	1	3/10/2009 2:08:28 PM
Ethylbenzene	ND	0.10	· μg/L	1	3/10/2009 2:08:28 PM
Xylenes, Total	ND	0.30	µg/L '	1	3/10/2009 2:08:28 PM
Surr: 4-Bromofluorobenzene	81.4	70.2-105	%REC	1	3/10/2009 2:08:28 PM



Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 1.6-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0903096

Client Sample ID: TP-12

Collection Date: 3/5/2009 11:00:00 AM

Project: Lab ID: River Terrace 1st QTR 2009- VS

Date Received: 3/6/2009

Matrix: AIR 0903096-06

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	NGE	·			Analyst: DAM
Gasoline Range Organics (GRO)	, ND	5.0	µg/L	1	3/10/2009 2:39:04 PM
Surr: BFB	85.4	76.8-150	%REC	1	3/10/2009 2:39:04 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Benzene	ND	0.10	μg/L	1	3/10/2009 2:39:04 PM
Toluene	ND	0.10	μg/L	1	3/10/2009 2:39:04 PM
Ethylbenzene	ND	0.10	µg/L	1	3/10/2009 2:39:04 PM
Xylenes, Total	ND	0.30	μg/L	1	3/10/2009 2:39:04 PM
Surr: 4-Bromofluorobenzene	76.7	70.2-105	%REC	1	3/10/2009 2:39:04 PM

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits J
- Not Detected at the Reporting Limit ND
- S Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank В
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 6 of 6

# Hall Environmental Analysis Laboratory, Inc.

Lab Order: Client:

0903096 Western Refining Southwest, Inc. River Terrace 1st QTR 2009- VS

Project:

Sample ID	Client Sample ID	Collection Date	Matrix	Matrix Test Name Instrument Run ID QC Batch ID Prep Date Analysis Date.	Instrument Run ID	Instrument Run ID QC Batch ID Prep Date	Analysis Date
0903096-01A	TP-3	3/5/2009 9:30:00 AM	Air	EPA Method 8015B: Gasoline Range	IRISTAR_090310A	R32717	3/10/2009
				EPA Method 8021B: Volatiles	TRISTAR 090310A	R32717	3/10/2009
0903096-02A	TP-3 Dupe	3/5/2009 9:32:00 AM		EPA Method 8015B: Gasoline Range	TRISTAR_090310A	R32717	3/10/2009
				EPA Method 8021B: Volatiles	TRISTAR_090310A	R32717	3/10/2009
0903096-03A	TP-10	3/5/2009 9:55:00 AM		EPA Method 8015B: Gasoline Range	TRISTAR_090310A	R32717	3/10/2009
				EPA Method 8015B: Gasoline Range	TRISTAR_090310A	R32717	3/10/2009
				EPA Method 8021B: Volatiles	TRISTAR_090310A	R32717	3/10/2009
				EPA Method 8021B: Volatiles	TRISTAR_090310A	R32717	3/10/2009
0903096-04A	TP-11	3/5/2009 10:15:00 AM		EPA Method 8015B: Gasoline Range	TRISTAR_090310A	R32717	3/10/2009
				EPA Method 8021B: Volatiles	IRISTAR_090310A	R32717	3/10/2009
0903096-05A	TP-13	3/5/2009 10:35:00 AM		EPA Method 8015B: Gasoline Range	IRISTAR_090310A	R32717	3/10/2009
				EPA Method 8021B: Volatiles	TRISTAR_090310A	R32717	3/10/2009
0903096-06A	TP-12	3/5/2009 11:00:00 AM		EPA Method 8015B; Gasoline Range	TRISTAR_090310A	R32717	3/10/2009
				EPA Method 8021B: Volatiles	TRISTAR_090310A	R32717	3/10/2009



### Date: 16-Mar-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

Project:

River Terrace 1st QTR 2009- VS

Work Order:

0903096

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD RPI	DLimit Qual
Method: EPA Method 8016B: G	asoline Ran	ge						
Sample ID: b1		MBLK			Batch II	D: <b>R3271</b> 7	Analysis Date:	3/10/2009 9:31:21 AM
Gasoline Range Organics (GRO)	ND	mg/L	0.050					
Sample ID: 2.5UG GRO LCS		LCS	•		Batch II	D: <b>R32717</b>	Analysis Date:	3/10/2009 5:42:54 PM
Gasoline Range Organics (GRO)	0.5360	mg/L	0.050	107	80	115		
Method: EPA Method 8021B: V	'olatiles		4					
Sample ID: b 1		MBLK			Batch II	D: <b>R32717</b>	Analysis Date:	3/10/2009 9:31:21 AM
Benzene	ND	μg/L	1.0				•	
Toluene	ND .	μg/L	1.0					
Ethylbenzene	ND	μg/L	1.0					
Xylenes, Total	ND	μg/L	2.0					
Sample ID: 100NG BTEX LCS		LCS			Batch II	D: <b>R32717</b>	Analysis Date:	3/10/2009 6:13:23 PM
Benzene	20.24	μg/L	1.0	101	85.9	113		
Toluene	20.64	μg/L	1.0	103	86.4	113		,
Ethylbenzene	20.74	μg/L	1.0	104	83.5	118		
Xylenes, Total	61.44	μg/L	2.0	102	83.4	122		

Qualifiers:

E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 1

## Sample Receipt Checklist

ient Name WESTERN REFINING SOUT			·	Date Receive	d:		3/6/2009	
Vork Order Number 0903096				Received by	r: TLS			
Checklist completed by:		3	W	Sample ID I	abels checked	by:	Initials	
Matrix:	Carrier name:	<u>UP</u> S						
				🗂				
Shipping container/cooler in good condition?		Yes		No 🗀	Not Present			
Custody seals intact on shipping container/coo	ter?	Yes		No □	Not Present		Not Shipped	
Custody seals intact on sample bottles?		Yes		No 🗌	N/A	V	•	
Chain of custody present?		Yes		No 🗌				
Chain of custody signed when relinquished and	received?	Yes	V	No L				
Chain of custody agrees with sample labels?		Yes	V	No 🗆				
Samples in proper container/bottle?		Yes	V	No 🗌				
Sample containers intact?		Yes	V	No 🗆				
Sufficient sample volume for indicated test?		Yes	$\checkmark$	No 🗆				
All samples received within holding time?	•	Yes	V	No 🗀				
v Water - VOA vials have zero headspace?	No VOA vials subm	nitted	Y	Yes 🗌	No 🗌			
'Vater - Preservation labels on bottle and cap n	natch?	Yes		No 🗆	N/A			
/ater - pH acceptable upon receipt?		Yes		No 🗀	N/A 🗹			
Container/Temp Blank temperature?				<6° C Acceptab				
COMMENTS:	·			If given sufficien	t time to cool.			
								_ = = :
Client contacted	Date contacted:			Pers	on contacted			
Contacted by:	Regarding:							
Comments: Par Circly S	iamples w	الما	_0	ollected	වා ථ	5	T33/6/	195
					····	J		
Corrective Action								
		:						· · · · · · · · · · · · · · · · · · ·
·								

	AND	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	AnalysisiRequesti	( [†] O	<u>ार</u> । ० (हा	(25.0 (25.0 (25.0)	(f. f. (h. (h. (so) (h. (h. (h. (h. (h. (h. (h. (h. (h. (h.	+ : + : Aq \ Aq \ ee	BBT bo bod or or liste A, IC A)	ontre letinal Alve Alve Alve (P, C (OV)	H W (N	######################################	X	×	,×		,					Remarks:			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.
Tum-Around Time:	y Standard □ Rush	Project Name:	River Perrace / 2772-2009-15	Project #:		Project Manager:			Sampler: (1, pd / B2b		Sample Westing the state of the		Type and # Type Type		1-Tedus		87	7	5	e				Time	3/0/5	Received by The Time	ontracted to other accredited laboratories. This serves as notice of the
Chain-of-Custody Record	Client Western Refining (Binfl)		Mailing Address: #50 CR 4990	-Bloomfield, NM 87413	Phone #: 505-632 - 4/6/	email or Fax#: 505 - 632 - 371/	QA/QC Package:	☐ Standard	Accreditation		☐ EDD (Type)		Date Time Matrix Sample Request ID	3500 Ble De	Softly 930A VARVE TP-3	134 TP.32.00	95SA TP-10	1654 70-11	10354 770-13	11Mm TP-12			<	Time: Relindul	E	Date: I'me: Keinquished by:	If necessary, samples submitted to Hall Environmental may be sub a



### COVER LETTER

Monday, March 16, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: River Terrace 1st QTR 2009- VS

Dear Cindy Hurtado:

Order No.: 0903077

Hall Environmental Analysis Laboratory, Inc. received 10 sample(s) on 3/5/2009 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. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Euriness Manager Nancy McDuffie, Laboratory Manager

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



Date: 16-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Project:

River Terrace 1st QTR 2009- VS

Lab Order:

0903077

# Work Order Sample Summary

Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date
0903077-01A	TP-2	R32684	EPA Method 8015B: Gasoline Range	3/4/2009 8:30:00 AM
0903077-01A	TP-2	R32684	EPA Method 8021B: Volatiles	3/4/2009 8:30:00 AM
0903077-01A	TP-2	R32684	EPA Method 8021B: Volatiles	3/4/2009 8:30:00 AM
0903077-01A	TP-2	R32684	EPA Method 8015B: Gasoline Range	3/4/2009 8:30:00 AM
0903077-02A	TP-1	R32684	EPA Method 8015B: Gasoline Range	3/4/2009 8:50:00 AM
0903077-02A	TP-1	R32684	EPA Method 8021B: Volatiles	3/4/2009 8:50:00 AM
0903077-02A	TP-1	R32698	EPA Method 8021B: Volatiles	3/4/2009 8:50:00 AM
0903077-02A	TP-1	R32698	EPA Method 8015B: Gasoline Range	3/4/2009 8:50:00 AM
0903077-03A	TP-6	R32684	EPA Method 8015B: Gasoline Range	3/4/2009 9:15:00 AM
0903077-03A	<b>T</b> P-6	R32717	EPA Method 8015B: Gasoline Range	3/4/2009 9:15:00 AM
0903077-03A	TP-6	R32717	EPA Method 8021B: Volatiles	3/4/2009 9:15:00 AM
0903077-03A	TP-6	R32717	EPA Method 8021B: Volatiles	3/4/2009 9:15:00 AM
0903077-03A	TP-6	R32698	EPA Method 8015B: Gasoline Range	3/4/2009 9:15:00 AM
0903077-03A	TP-6	R32698	EPA Method 8015B: Gasoline Range	3/4/2009 9:15:00 AM
0903077-03A	TP-6	R32698	EPA Method 8021B: Volatiles	3/4/2009 9:15:00 AM
0903077-03A	TP-6	R32684	EPA Method 8021B: Volatiles	3/4/2009 9:15:00 AM
0903077-03A	TP-6	R32717	EPA Method 8015B: Gasoline Range	3/4/2009 9:15:00 AM
0903077-03A	TP-6	R32698	EPA Method 8021B: Volatiles	3/4/2009 9:15:00 AM
0903077-04A	TP-5	R32684	EPA Method 8015B: Gasoline Range	3/4/2009 9:30:00 AM
0903077-04A	TP-5	R32684	EPA Method 8021B: Volatiles	3/4/2009 9:30:00 AM
0903077-04A	TP-5	R32684	EPA Method 8021B: Volatiles	3/4/2009 9:30:00 AM
0903077-04A	TP-5	R32684	EPA Method 8015B: Gasoline Range	3/4/2009 9:30:00 AM
0903077-05A	DW #1	R32684	EPA Method 8015B: Gasoline Range	3/4/2009 9:50:00 AM
0903077-05A	DW #1	R32684	EPA Method 8021B: Volatiles	3/4/2009 9:50:00 AM
0903077-06A	TP-8	R32684	EPA Method 8015B: Gasoline Range	3/4/2009 10:20:00 AM
0903077-06A	TP-8	R32684	EPA Method 8021B: Volatiles	3/4/2009 10:20:00 AM
0903077-07A	MW #49	R32684	EPA Method 8021B: Volatiles	3/4/2009 10:40:00 AM
0903077-07A	MW #49	R32698	EPA Method 8021B: Volatiles	3/4/2009 10:40:00 AM
0903077-07A	MW #49	R32684	EPA Method 8015B: Gasoline Range	3/4/2009 10:40:00 AM
0903077-07A	MW #49	R32698	EPA Method 8015B: Gasoline Range	3/4/2009 10:40:00 AM
0903077-08A	TP-7	R32698	EPA Method 8021B: Volatiles	3/4/2009 11:05:00 AM
0903077-08A	TP-7	R32698	EPA Method 8015B: Gasoline Range	3/4/2009 11:05:00 AM
0903077-09A	Field Blank	R32698	EPA Method 8021B: Volatiles	3/4/2009 11:15:00 AM
0903077-09A	Field Blank	R32698	EPA Method 8015B: Gasoline Range	3/4/2009 11:15:00 AM
0903077-10A	TP-9	R32698	EPA Method 8015B: Gasoline Range	3/4/2009 11:20:00 AM
0903077-10A	TP-9	R32698	EPA Method 8021B: Volatiles	3/4/2009 11:20:00 AM
0903077-10A	TP-9	R32698	EPA Method 8021B: Volatiles	3/4/2009 11:20:00 AM
0903077-10A	TP-9	R32698	EPA Method 8015B: Gasoline Range	3/4/2009 11:20:00 AM

Date: 16-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0903077

River Terrace 1st QTR 2009- VS

Project: Lab ID:

0903077-01

Client Sample ID: TP-2

Collection Date: 3/4/2009 8:30:00 AM

Date Received: 3/5/2009

Matrix: AIR

Analyses	Result	PQL (	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RAN	(GE				Analyst: DAM
Gasoline Range Organics (GRO)	370	25	µg/L	5	3/6/2009 10:53:32 AM
Surr: BFB	138	76.8-150	%REC	5	3/6/2009 10:53:32 AM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Benzene	ND	0.50	µg/L	5	3/6/2009 10:53:32 AM
Toluene	ND	0.50	μg/L	5	3/6/2009 10:53:32 AM
Ethylbenzene	1.1	0.50	μg/L	5	3/6/2009 10:53:32 AM
Xylenes, Total	48	3.0	μg/Ł	10	3/6/2009 11:55:12 AM
Surr: 4-Bromofluorobenzene	92.5	70.2-105	%REC	5	3/6/2009 10:53:32 AM



Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

Not Detected at the Reporting Limit ND

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank В

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 1 of 10

Date: 16-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

Project:

Lab ID:

0903077

River Terrace 1st QTR 2009- VS

0903077-02

Client Sample ID: TP-1

Collection Date: 3/4/2009 8:50:00 AM

Date Received: 3/5/2009

Matrix: AIR

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	NGE				· · · · · · · · · · · · · · · · · · ·	Analyst: DAM
Gasoline Range Organics (GRO)	85	5.0		µg/L	1	3/9/2009 11:27:34 AM
Surr: BFB	97.2	76.8-150		%REC	1	3/9/2009 11:27:34 AM
EPA METHOD 8021B; VOLATILES						Analyst: DAM
Benzene	0.92	0.10		µg/L	1	3/9/2009 11:27:34 AM
Toluene	ND	0.10		μg/L	1	3/9/2009 11:27:34 AM
Ethylbenzene	3.8	0.10		µg/L	1	3/9/2009 11:27:34 AM
Xylenes, Total	24	1.5		μg/L	5	3/6/2009 11:24:20 AM
Surr: 4-Bromofluorobenzene	91.4	70.2-105		%REC	1	3/9/2009 11:27:34 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Reporting Limit

Page 2 of 10

Date: 16-Mar-09

CLIENT: Lab Order: Western Refining Southwest, Inc.

0903077

River Terrace 1st QTR 2009- VS

Project: Lab ID:

0903077-03

Client Sample ID: TP-6

Collection Date: 3/4/2009 9:15:00 AM

Date Received: 3/5/2009

Matrix: AIR

Analyses	Result	PQL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE R	ANGE	<del>,</del>			Analyst: DAM
Gasoline Range Organics (GRO)	620	5.0	μg/L	1	3/6/2009 12:25:59 PM
Surr: BFB	103	76.8-150	%REC	1	3/6/2009 12:25:59 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Benzene	1.7	0.10	µg/L	1	3/6/2009 12:25:59 PM
Toluene	ND	0.10	µg/L	1	3/6/2009 12:25:59 PM
Ethylbenzene	29	10	µg/L	100	3/9/2009 4:33:20 PM
Xylenes, Total	110	30	μg/L	100	3/9/2009 4:33:20 PM
Surr: 4-Bromofluorobenzene	82.7	70.2-105	%REC	100	3/9/2009 4:33:20 PM



Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 3 of 10

Date: 16-Mar-09

CLIENT:

Western Refining Southwest, Inc.

0903077

Client Sample ID: TP-5

Lab Order:

Collection Date: 3/4/2009 9:30:00 AM

Project:

River Terrace 1st QTR 2009- VS

Date Received: 3/5/2009

Lab ID:

0903077-04

Matrix: AIR

Analyses	Result	PQL (	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	NGE	·	<del></del> "		Analyst: DAM
Gasoline Range Organics (GRO)	7.8	5.0	μg/L	1	3/6/2009 1:58:32 PM
Surr: BFB	91.0	76.8-150	%REC	1	3/6/2009 1:58:32 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Benzene	ND	0.10	μg/L	1	3/6/2009 1:58:32 PM
Toluene	ND	0.10	μg/L	1	3/6/2009 1:58:32 PM
Ethylbenzene	0.50	0.10	μg/L	1,	3/6/2009 1:58:32 PM
Xylenes, Total	2.4	0.30	µg/L	1	3/6/2009 1:58:32 PM
Surr: 4-Bromofluorobenzene	83.8	70.2-105	%REC	1	3/6/2009 1:58:32 PM

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Value exceeds Maximum Contaminant Level

Page 4 of 10



Estimated value E

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

В Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Date: 16-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0903077

Client Sample ID: DW #1

Collection Date: 3/4/2009 9:50:00 AM

Project:

River Terrace 1st QTR 2009- VS

Date Received: 3/5/2009

Lab ID:

0903077-05

Matrix: AIR

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	NGE	****	<del></del>		Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0	μg/L	1	3/6/2009 2:59:50 PM
Surr: BFB	83.1	76.8-150	%REC	1	3/6/2009 2:59:50 PM
EPA METHOD 8021B: VOLATILES					· Analyst: DAM
Benzene	ND	0.10	μg/L	1	3/6/2009 2:59:50 PM
Toluene	ND	0.10	μg/L	1	3/6/2009 2:59:50 PM
Ethylbenzene	ND	0.10	µg/L	1	3/6/2009 2:59:50 PM
Xylenes, Total	ND	0.30	μg/L	1	3/6/2009 2:59:50 PM
Surr: 4-Bromofluorobenzene	72.9	70.2-105	%REC	. 1	3/6/2009 2:59:50 PM



Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

Not Detected at the Reporting Limit ND

Spike recovery outside accepted recovery limits

В Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit RL

Page 5 of 10

Date: 16-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Client Sample ID: TP-8

Lab Order:

0903077

Collection Date: 3/4/2009 10:20:00 AM

Project:

River Terrace 1st QTR 2009- VS

Date Received: 3/5/2009

Lab 1D:

0903077-06

Matrix: AIR

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	NGE			<del></del>	Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0	μg/L	1	3/6/2009 3:30:40 PM
Sum: BFB	92.1	76.8-150	%REC	, 1	3/6/2009 3:30:40 PM
EPA METHOD 8021B: VOLATILES	•				Analyst: DAM
Benzene	ND	0.10	µg/L	1	3/6/2009 3:30:40 PM
Toluene	ND	0.10	μg/L	1	3/6/2009 3:30:40 PM
Ethylbenzene	0.10	0.10	μg/L	1	3/6/2009 3:30:40 PM
Xylenes, Total	0.58	0.30	μg/L	1	3/6/2009 3:30:40 PM
Surr: 4-Bromofluorobenzene	84.1	70.2-105	%REC	1	3/6/2009 3:30:40 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 6 of 10

Date: 16-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order: 0903077

River Terrace 1st QTR 2009- VS

Project: Lab ID:

0903077-07

Client Sample ID: MW #49

Collection Date: 3/4/2009 10:40:00 AM

Date Received: 3/5/2009

Matrix: AIR

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	NGE			<del></del>	Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0	µg/L	1	3/9/2009 1:59:36 PM
Surr: BFB	87.8	76.8-150	%REC	1	3/9/2009 1:59:36 PM
EPA METHOD 8021B; VOLATILES		,			Analyst: DAM
Benzene	ND	0.10	μg/L	1	3/9/2009 1:59:36 PM
Toluene	ND	0.10	μg/L	1	3/9/2009 1:59:36 PM
Ethylbenzene	ND	0.10	μg/L	1	3/9/2009 1:59:36 PM
Xylenes, Total	ND	0.30	μg/L	1	3/9/2009 1:59:36 PM
Surr: 4-Bromofluorobenzene	78.9	70.2-105	%REC	1	3/9/2009 1:59:36 PM



Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits J

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Page 7 of 10

Date: 16-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Client Sample ID: TP-7

Lab Order:

0903077

Collection Date: 3/4/2009 11:05:00 AM

Project:

River Terrace 1st QTR 2009- VS

Date Received: 3/5/2009

Lab ID:

0903077-08

Matrix: AIR

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8016B: GASOLINE RA	NGE				Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0	µg/L	. 1	3/9/2009 2:30:21 PM
Surr: BFB	90.5	76.8-150	%REC	1	3/9/2009 2:30:21 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Веплепе	ND	0.10	μg/L	7	3/9/2009 2:30:21 PM
Toluene	ND	0.10	μg/L	1	3/9/2009 2:30:21 PM
Ethylbenzene	ND	0.10	µg/L	1	3/9/2009 2:30:21 PM
Xylenes, Total	ND	0.30	μg/L	1	3/9/2009 2:30:21 PM
Surr: 4-Bromofluorobenzene	81.9	70.2-105	%REC	1.	3/9/2009 2:30:21 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

Not Detected at the Reporting Limit ND

Spike recovery outside accepted recovery limits

В Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded Н

MCL Maximum Contaminant Level

Reporting Limit

Page 8 of 10

Date: 16-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

Client Sample ID: Field Blank

0903077

Collection Date: 3/4/2009 11:15:00 AM

Project:

River Terrace 1st QTR 2009- VS

Date Received: 3/5/2009

Lab ID:

0903077-09

Matrix: AIR

Analyses	Result	PQL (	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0	µg/L	1	3/9/2009 3:01:05 PM
Sum: BFB	89.0	76.8-150	%REC	1	3/9/2009 3:01:05 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Benzene	ND	0.10	μ <b>g/L</b>	1	3/9/2009 3:01:05 PM
Toluene	ND	0.10	μg/L	1	3/9/2009 3:01:05 PM
Ethylbenzene	ND ND	0.10	μg/L	1	3/9/2009 3:01:05 PM
Xylenes, Total	ND	0.30	μ <b>g</b> /L	1	3/9/2009 3:01:05 PM
Surr: 4-Bromofluorobenzene	80.1	70.2-105	%REC	1	3/9/2009 3:01:05 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

В Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 9 of 10

Date: 16-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0903077

River Terrace 1st QTR 2009- VS

Project: Lab ID:

0903077-10

Client Sample ID: TP-9

Collection Date: 3/4/2009 11:20:00 AM

Date Received: 3/5/2009

Matrix: AIR

Analyses	Result	PQL (	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	ANGE			<del></del>	Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0	μg/L	1	3/9/2009 5:04:04 PM
Surr: BFB	88.5	76.8-150	%REC	1	3/9/2009 5:04:04 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Benzene	ND	0.10	μg/L	1	3/9/2009 5:04:04 PM
Toluene	ND	0.10	µg/∟	. 1	3/9/2009 5:04:04 PM
Ethylbenzene	ND	0.10	µg/L	11	3/9/2009 5:04:04 PM
Xylenes, Total	ND	0.30	µg/L	1	3/9/2009 5:04:04 PM
Surr: 4-Bromofluorobenzene	78.5	70.2-105	%REC	.1	3/9/2009 5:04:04 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Page 10 of 10

DATES REPORT

# Han Environmental Analysis Laboratory, Inc.

0903077 Lab Order: Western Refining Southwest, Inc. River Terrace 1st QTR 2009- VS

Client:

Project:	River Terrace 1st QTR 2009- VS	JR 2009- VS						
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Sample ID	Client Sample ID	Collection Date	Matrix	Matrix Test Name	Instrument Run ID QC Batch ID Prep Date Analysis Date	QC Batch ID	Prep Date	Analysis Date
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0903077-01A	TP-2	3/4/2009 8-20-00 AM	Δïr	EDA Method 2015 B. Gasoline Pance	TRISTAR NONSOGA B23684	D23684		3/6/2009

PA   TP-2   34/2009 8:30:00 AM   Air   EPA Method 80158: Gasoline Range   TRISTAR, 199306A	Sample ID	Client Sample ID	Collection Date Matrix	rix Test Name	Instrument Run ID	QC Batch ID Prep Date	Analysis Date
Pay Method 8013B: Gasoline Range   PISTAR, 009306A	0903077-01A	TP-2			TRISTAR_090306A	R32684	3/6/2009
The continue of the continue				EPA Method 8015B: Gasoline Range	TRISTAR_090306A	R32684	3/6/2009
TP-1   3442009 8:50:00 AM   EPA Method 80:18: Gasoline Range   TRISTAR_090306A				EPA Method 8021B; Volatiles	TRISTAR_090306A	R32684	3/6/2009
TP-1         34/2009 8:50:00 AM         EPA Method 8015B: Gasoline Range         RISITAR_090306A           FA Method 8015B: Gasoline Range         FRSTAR_090306A         EPA Method 8012B: Volatiles         FRSTAR_090306A           TP-6         3/4/2009 9:15:00 AM         EPA Method 8015B: Gasoline Range         RISITAR_090306A           FPA Method 8015B: Gasoline Range         RISITAR_090310A         EPA Method 8015B: Gasoline Range         RISITAR_090310A           FPA Method 8015B: Gasoline Range         RISITAR_090310A         EPA Method 8015B: Gasoline Range         RISITAR_090310A           FPA Method 8015B: Gasoline Range         RISITAR_090310A         EPA Method 8015B: Gasoline Range         RISITAR_090310A           FPA Method 8015B: Gasoline Range         RISITAR_090310A         EPA Method 8021B: Volatiles         RISITAR_090310A           TP-5         3/4/2009 9:30:00 AM         EPA Method 8021B: Volatiles         RISITAR_090310A           TP-8         3/4/2009 9:30:00 AM         EPA Method 8021B: Volatiles         RISITAR_090306A           FPA Method 8021B: Volatiles         RISITAR_090306A         EPA Method 8021B: Volatiles         RISITAR_090306A           FPA Method 8021B: Volatiles         RISITAR_090306A         EPA Method 8021B: Volatiles         RISITAR_090306A           FPA Method 8021B: Volatiles         RISITAR_090306A         EPA Method 8021B: Volatiles         RIS				EPA Method 8021B: Volatiles	TRISTAR_090306A	R32684	3/6/2009
PPA Method 8021B: Orlatiles   TRISTAR_090306A	0903077-02A	TP-1	3/4/2009 8:50:00 AM	EPA Method 8015B: Gasoline Range	TRISTAR_090306A	R32684	3/6/2009
Part				EPA Method 8015B: Gasoline Range	TRISTAR_090309A	R32698	3/9/2009
TP-6   34/2009 9.15:00 AM				EPA Method 8021B: Volatiles	TRISTAR_090306A	R32684	3/6/2009
TP-6   3/4/2009 9.15:00 AM   EPA Method 8015B: Gasoline Range   TRISTAR_090306A				EPA Method 8021B: Volatiles	TRISTAR_090309A	R32698	3/9/2009
EPA Method 8015B: Gasoline Range         ITRISTAR_090310A           EPA Method 8015B: Gasoline Range         ITRISTAR_090310A           EPA Method 8015B: Gasoline Range         ITRISTAR_090309A           EPA Method 8015B: Gasoline Range         ITRISTAR_090309A           EPA Method 8021B: Volatiles         ITRISTAR_090309A           EPA Method 8021B: Volatiles         ITRISTAR_090309A           EPA Method 8021B: Volatiles         ITRISTAR_090310A           EPA Method 8021B: Volatiles         ITRISTAR_090306A           EPA Method 8021B: Volatiles <t< td=""><td>0903077-03A</td><td>TP-6</td><td>3/4/2009 9:15:00 AM</td><td>EPA Method 8015B: Gasoline Range</td><td>TRISTAR_090306A</td><td>R32684</td><td>3/6/2009</td></t<>	0903077-03A	TP-6	3/4/2009 9:15:00 AM	EPA Method 8015B: Gasoline Range	TRISTAR_090306A	R32684	3/6/2009
EPA Method 8015B: Gasoline Range         IRISTAR_090310A           EPA Method 8015B: Gasoline Range         IRISTAR_090309A           EPA Method 8015B: Gasoline Range         IRISTAR_090309A           EPA Method 8012B: Volatiles         IRISTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090309A           EPA Method 8021B: Volatiles         IRISTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090310A           EPA Method 8021B: Volatiles         IRISTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090306A           EPA Method 8015B: Gasoline Range         IRISTAR_090306A           EPA Method 8015B: Casoline Range         IRISTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090306A				EPA Method 8015B: Gasoline Range	TRISTAR_090310A	R32717	3/10/2009
EPA Method 8015B: Gasoline Range         RUSTAR_090309A           EPA Method 8015B: Gasoline Range         ITUSTAR_090306A           EPA Method 8021B: Volatiles         IRUSTAR_090306A           EPA Method 8021B: Volatiles         IRUSTAR_090306A           EPA Method 8021B: Volatiles         IRUSTAR_090309A           TP-5         3/4/2009 9:30:00 AM         EPA Method 8021B: Volatiles         IRUSTAR_090310A           TP-5         3/4/2009 9:30:00 AM         EPA Method 801B: Gasoline Range         IRUSTAR_090306A           EPA Method 801B: Gasoline Range         IRUSTAR_090306A         EPA Method 801B: Gasoline Range         IRUSTAR_090306A           EPA Method 801B: Gasoline Range         EPA Method 801B: Gasoline Range         IRUSTAR_090306A         EPA Method 801B: Gasoline Range         IRUSTAR_090306A           TP-8         3/4/2009 9:50:00 AM         EPA Method 801B: Gasoline Range         IRUSTAR_090306A           TP-8         3/4/2009 10:20:00 AM         EPA Method 801B: Gasoline Range         IRUSTAR_090306A           EPA Method 801B: Gasoline Range         IRUSTAR_090306A         EPA Method 801B: Gasoline Range         IRUSTAR_090306A				EPA Method 8015B: Gasoline Range	IRISTAR_090310A	R32717	3/10/2009
TP-5         EPA Method 8021B: Volatiles         IRUSTAR_090309A           EPA Method 8021B: Volatiles         IRUSTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090309A           EPA Method 8021B: Volatiles         IRISTAR_090309A           EPA Method 8021B: Volatiles         IRISTAR_090310A           EPA Method 8021B: Volatiles         IRISTAR_090310A           EPA Method 8021B: Volatiles         IRISTAR_090310A           EPA Method 8021B: Volatiles         IRISTAR_090306A           EPA Method 8015B: Gasoline Range         IRISTAR_090306A           EPA Method 8015B: Gasoline Range         IRISTAR_090306A           EPA Method 8015B: Volatiles         IRISTAR_090306A           EPA Method 8015B: Gasoline Range         IRISTAR_090306A				EPA Method 8015B: Gasoline Range	TRISTAR_090309A	R32698	3/9/2009
FPA Method 8021B: Volatiles         IRISTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090309A           EPA Method 8021B: Volatiles         IRISTAR_090309A           IP-5         3/4/2009 9:30:00 AM         EPA Method 8021B: Volatiles         IRISTAR_090310A           IP-5         3/4/2009 9:30:00 AM         EPA Method 8021B: Volatiles         IRISTAR_090306A           EPA Method 8015B: Gasoline Range         IRISTAR_090306A         EPA Method 8015B: Gasoline Range         IRISTAR_090306A           DW #1         3/4/2009 9:50:00 AM         EPA Method 8015B: Volatiles         IRISTAR_090306A           EPA Method 8015B: Gasoline Range         IRISTAR_090306A         EPA Method 8015B: Volatiles         IRISTAR_090306A           EPA Method 8015B: Volatiles         IRISTAR_090306A         EPA Method 8015B: Gasoline Range         IRISTAR_090306A           EPA Method 8015B: Volatiles         IRISTAR_090306A         EPA Method 8015B: Gasoline Range         IRISTAR_090306A				EPA Method 8015B; Gasoline Range	TRISTAR_090309A	R32698	3/9/2009
EPA Method 8021B: Volatiles         TRISTAR_090309A           EPA Method 8021B: Volatiles         TRISTAR_090309A           EPA Method 8021B: Volatiles         TRISTAR_090310A           TP-5         3/4/2009 9:30:00 AM         EPA Method 8021B: Volatiles         TRISTAR_090310A           EPA Method 8015B: Gasoline Range         TRISTAR_090306A         EPA Method 8015B: Gasoline Range         TRISTAR_090306A           EPA Method 8021B: Volatiles         TRISTAR_090306A         EPA Method 8021B: Volatiles         TRISTAR_090306A           DW #1         3/4/2009 9:50:00 AM         EPA Method 8021B: Volatiles         TRISTAR_090306A           TP-8         3/4/2009 10:20:00 AM         EPA Method 8021B: Volatiles         TRISTAR_090306A           EPA Method 8021B: Gasoline Range         TRISTAR_090306A           EPA Method 8021B: Gasoline Range         TRISTAR_090306A				EPA Method 8021B: Volatiles	TRISTAR_090306A	R32684	3/6/2009
FPA Method 8021B: Volatiles         IRISTAR_090310A           TP-5         3/4/2009 9:30:00 AM         EPA Method 8021B: Volatiles         IRISTAR_090310A           TP-5         3/4/2009 9:30:00 AM         EPA Method 8015B: Gasoline Range         IRISTAR_090306A           EPA Method 8015B: Olatiles         IRISTAR_090306A         EPA Method 8015B: Volatiles         IRISTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090306A         EPA Method 8021B: Volatiles         IRISTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090306A         EPA Method 8015B: Gasoline Range         IRISTAR_090306A           TP-8         3/4/2009 9:50:00 AM         EPA Method 8015B: Volatiles         IRISTAR_090306A           TP-8         3/4/2009 10:20:00 AM         EPA Method 8015B: Gasoline Range         IRISTAR_090306A				EPA Method 8021B: Volatiles	TRISTAR_090309A	R32698	3/9/2009
TP-5         3/4/2009 9:30:00 AM         EPA Method 8021B: Volatiles         IRISTAR_090310A           TP-5         3/4/2009 9:30:00 AM         EPA Method 8015B: Gasoline Range         IRISTAR_090306A           EPA Method 8015B: Gasoline Range         IRISTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090306A				EPA Method 8021B: Volatiles	TRISTAR_090309A	R32698	3/9/2009
TP-5         3/42009 9:30:00 AM         EPA Method 8015B: Gasoline Range         IRISTAR_090310A           TP-5         3/42009 9:30:00 AM         EPA Method 8015B: Gasoline Range         IRISTAR_090306A           EPA Method 8015B: Olatiles         IRISTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090306A				EPA Method 8021B: Volatiles	IRISTAR_090310A	R32717	3/10/2009
TP-5         3/4/2009 9:30:00 AM         EPA Method 8015B: Gasoline Range         IRISTAR_090306A           EPA Method 8015B: Gasoline Range         IRISTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090306A				EPA Method 8021B: Volatiles	IRISTAR_090310A	R32717	3/10/2009
EPA Method 8015B: Gasoline Range         IRISTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090306A           EPA Method 8015B: Gasoline Range         IRISTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090306A           EPA Method 8021B: Gasoline Range         IRISTAR_090306A	0903077-04A	TP-5	3/4/2009 9:30:00 AM	EPA Method 8015B: Gasoline Range	TRISTAR_090306A	R32684	3/6/2009
DW #1         3/4/2009 9:50:00 AM         EPA Method 8021B: Volatiles         IRISTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090306A           EPA Method 8015B: Gasoline Range         IRISTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090306A           TP-8         3/4/2009 10:20:00 AM         EPA Method 8015B: Gasoline Range         IRISTAR_090306A				EPA Method 8015B: Gasoline Range	TRISTAR_090306A	R32684	3/6/2009
DW #1         3/4/2009 9:50:00 AM         EPA Method 8015B: Gasoline Range         IRISTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090306A           TP-8         3/4/2009 10:20:00 AM         EPA Method 8015B: Gasoline Range         IRISTAR_090306A				EPA Method 8021B: Volatiles	IRISTAR_090306A	R32684	3/6/2009
DW #1         3/4/2009 9:50:00 AM         EPA Method 8015B: Gasoline Range         IRISTAR_090306A           EPA Method 8021B: Volatiles         IRISTAR_090306A           TP-8         3/4/2009 10:20:00 AM         EPA Method 8015B: Gasoline Range         IRISTAR_090306A				EPA Method 8021B: Volatiles	IRISTAR_090306A	R32684	3/6/2009
EPA Method 8021B: Volatiles IRISTAR_090306A 1P-8 3/4/2009 10.20.00 AM EPA Method 8015B: Gasoline Range IRISTAR_090306A	0903077-05A	DW#1	3/4/2009 9:50:00 AM	EPA Method 8015B: Gasoline Range	TRISTAR_090306A	R32684	3/6/2009
TP-8 3/4/2009 10:20:00 AM EPA Method 8015B: Gasoline Range IRISTAR_090306A				EPA Method 8021B. Volatiles	TRISTAR_090306A	R32684	3/6/2009
	0903077-06A	TP-8	3/4/2009 10:20:00 AM	EPA Method 8015B: Gasoline Range	TRISTAR_090306A	R32684	3/6/2009

DATES REPORT

# Hall Environmental Analysis Laboratory, Inc.

Western Refining Southwest, Inc.

0903077

Lab Order: Client:

Project	River Terrace 1st OTR 2009- VS	OTR 2009- VS					
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Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Instrument Run ID QC Batch ID	QC Batch ID Prep Date	Analysis Date
0903077-06A	TP-8	$\overline{}$	Air	EPA Method 8021B: Volatiles	IRISTAR_090306A	R32684	3/6/2009
0903077-07A	MW #49	3/4/2009 10:40:00 AM		EPA Method 8015B: Gasoline Range.	TRISTAR_090309A	R32698	3/9/2009
				EPA Method 8015B: Gasoline Range	TRISTAR_090306A	R32684	3/6/2009
				EPA Method 8021B: Volatiles	TRISTAR_090306A	R32684	3/6/2009
				EPA Method 8021B: Volatiles	IRISTAR_090309A	R32698	3/9/2009 .
0903077-08A	TP-7	3/4/2009 11:05:00 AM		EPA Method 8015B: Gasoline Range	IRISTAR_090309A	R32698	3/9/2009
				EPA Method 8021B: Volatiles	TRISTAR_090309A	R32698	3/9/2009
0903077-09A	Field Blank	3/4/2009 11:15:00 AM		EPA Method 8015B: Gasoline Range	TRISTAR_090309A	R32698	3/9/2009
				EPA Method 8021B: Volatiles	TRISTAR_090309A	R32698	3/9/2009
0903077-10A	TP-9	3/4/2009 11:20:00 AM		EPA Method 8015B: Gasoline Range	TRISTAR_090309A	. R32698 .	3/9/2009
				EPA Method 8015B: Gasoline Range	TRISTAR_090309A	R32698	3/9/2009
				EPA Method 8021B: Volatiles	TRISTAR_090309A	R32698	3/9/2009
				EPA Method 8021B: Volatiles	TRISTAR_090309A	R32698	3/9/2009

Date: 16-Mar-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

ect:

River Terrace 1st OTR 2009- VS

Work Order:

ect: River Terrac	e 1st QTR	2009- VS					Woi	'k Order: 0903077
Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD R	PDLimit Qual
Method: EPA Method 8015B; G	asoline Rar							
Sample ID: b1		MBLK			Batch I	D: <b>R32684</b>	Analysis Date:	3/6/2009 8:20:12 AN
Gasoline Range Organics (GRO)	ND	mg/L	0.050					
Sample ID: 2.5UG GRO LCS		LCS			Batch i	D: R32684	Analysis Date:	3/6/2009 4:32:19 PN
Gasoline Range Organics (GRO)	0.5460	mg/L	0.050	109	80	115		
Method: EPA Method 8021B; V	olatiles							
Sample ID: b 1		MBLK			Batch I	D: <b>R32684</b>	Analysis Date:	3/6/2009 8:20:12 AN
Benzene	ND	µg/L	1.0					
Toluene	ΝD	μg/L	1.0		•			
Ethylbenzene	ND	μg/L	1.0					
Xylenes, Total	ND	µg/L	2.0					
Sample ID: 100NG BTEX LCS		LCS			Batch I	D: <b>R32684</b>	Analysis Date:	3/6/2009 5:03:09 PM
Benzene	20.09	μg/L	1.0	100	85.9	113		
Toluene	20.75	μg/L	1.0	104	86.4	113		
Ethylbenzene	20.64	µg/L	1.0	103	<b>83</b> .5	118		
Xylenes, Total	61.54	μg/L	2.0	103	83.4	122		
Method: EPA Method 8015B: G	asoline Ran	ge						
Sample ID: B1		MBLK			Batch II	D: <b>R32698</b>	Analysis Date:	3/9/2009 8:41:50 AM
Gasoline Range Organics (GRO)	ND	mg/L	0.050		•			
Sample ID: 2.5UG GRO LCS		LCS			Batch II	D: <b>R32698</b>	Analysis Date:	3/9/2009 5:34:56 PM
oline Range Organics (GRO)	0.5340	mg/L	0.050	107	80	115		
wethod: EPA Method 8021B: Vo	otatiles							
Sample ID: B1		<b>M</b> BLK			Batch II	D: <b>R32698</b>	Analysis Date:	3/9/2009 8:41:50 AM
Benzene	ND	µg/L	1.0					
Toluene	ND	μg/L	1.0					
Ethylbenzene	ND	μg/L	1.0					
Kylenes, Total	ND	μg/L	2.0					
Sample ID: 100NG BTEX LCS		LCS			Batch II	D: <b>R32698</b>	Analysis Date:	3/9/2009 6:05:35 PM
3enzene	20.35	μg/L	1.0	102	85.9	113		
Foluene	20.60	µg/L	1.0	103	86.4	113		
Sthylbenzene	20.92	µg/L	1.0	105	83.5	118		
Kylenes, Total	62.02	μg/L	2.0	103	83.4	122		

Qu	alifie	rs



Estimated value

Analyte detected below quantitation limits

RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 1

Date: 16-Mar-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

Project:

River Terrace 1st QTR 2009- VS

Work Order:

0903077

Analyte	Result	Units	PQL	%Rec	LowLimit Hi	ghLimit	%RPD RP	DLimit Qual
Method: EPA Method 8015B; G	iasoline Ran	ge						
Sample ID: b1		MBLK			Batch ID:	R32717	Analysis Date:	3/10/2009 9:31:21 AM
Gasoline Range Organics (GRO)	ND	mg/L	0.050					
Sample ID: 2.5UG GRO LCS		LCS			Batch ID:	R32717	Analysis Date:	3/10/2009 5:42:54 PM
Gasoline Range Organics (GRO)	0.5360	mg/L	0.050	107	80	115		
Method: EPA Method 8021B: V	olatiles							
Sample ID: b1		MBLK			Batch ID:	R32717	Analysis Date:	3/10/2009 9:31:21 AM
Benzene	ND	μg/L	1.0		•			
Toluene	ND	μg/L	1.0					
Ethylbenzene	ND	μg/L	1.0					
Xylenes, Total	ND	µg/L	2.0					
Sample ID: 100NG BTEX LCS		LCS			Batch ID:	R32717	Analysis Date:	3/10/2009 6:13:23 PM
Benzene	20.24	μg/L	1.0	101	<b>8</b> 5.9	113		
Toluene	20.64	μg/L	1.0	103	86.4	113		",
Ethylbenzene	20.74	μg/L	1.0	104	83.5	118		
Xylenes, Total	61.44	µg/L	2.0	102	83.4	122		



E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 2

## Sample Receipt Checklist

at Name WESTERN REFINING SOUT				Date Received	d:		3/5/2009	
Work Order Number 0903077				Received by	TLS		منته	
Checklist completed by:		3	)   5	Sample ID la	bels checked	by:	Initials	
Metrix:	Carrier name;	<u>UPS</u>						
Shipping container/cooler in good condition?		Yes	V	No 🗆	Not Present			
Custody seals intact on shipping container/cod	oler?	Yes	$\checkmark$	No 🗌	Not Present		Not Shipped	
Custody seals intact on sample bottles?		Yes		No 🗆	N/A	¥		
Chain of custody present?		Yes	$\overline{\mathbf{V}}$	No 🗌				
Chain of custody signed when relinquished an	d received?	Yes	$\overline{\mathbf{v}}$	No 🗌				
Chain of custody agrees with sample labels?		Yes	V	No 🗌				
Samples in proper container/bottle?		Yes	$\mathbf{Z}$	No 🗌				
Sample containers intact?		Yes	$\checkmark$	No 🗀				
Sufficient sample volume for indicated test?		Yes	V	No 🗆				
All samples received within holding time?		Yes	$\checkmark$	No 🗆				
Water - VOA vials have zero headspace?	No VOA vials submi	tted	$\checkmark$	Yes 🗌	No 🗌			
ater - Preservation labels on bottle and cap	match?	Yes		No 🗆	N/A 🔽			
-vater - pH acceptable upon receipt?		Yes		No 🗆	N/A 🗹			
Container/Temp Blank temperature?				<6° C Acceptabl				
COMMENTS:			i	f given sufficient	time to cool.			
						=		
		•						
City of any standard	Data contacts di			<b>9</b>				
Client contacted	Date contacted:	····		Perso	on contacted			<del>-</del>
Contacted by:	Regarding:		<del></del>	· · · · · · · · · · · · · · · · · · ·		<del></del>		
Comments:								
Corrective Action								
	_					_		

Client: Western Fell wins Blees in All Bridge   Time   Project Name   Project Nam
Ustody Record  Raygo  Raygo  Raygo  Raygo  Raygo  Raygo  Request ID  Sample Request ID  TP-1  TP-1  TP-6  TP-6  TP-6  TP-6  TP-7  TP-7  TP-7  TP-7  TP-7  TP-7  TP-9  Www tyg  TP-7
ain-of-Custody Recorning Blanking Recorning Blanking Recorning Blanking Recorning Blanking Reques age:    Peb
In-of-Cu lifess: #50 -632 x#: 505-632 x#: 505-632 x#: 505-632 x#: 505-632 x#: 505-632 x#: Fremquisher control of the control o



## **COVER LETTER**

Monday, May 04, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990 Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: River Terrace 2nd QTR 2009 VS

Dear Cindy Hurtado:

Order No.: 0904342

Hall Environmental Analysis Laboratory, Inc. received 10 sample(s) on 4/22/2009 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. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager Nancy McDuffie, Laboratory Manager

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



Date: 04-May-09

CLIENT: Western Refining Southwest, Inc.

Project: River Terrace 2nd QTR 2009 VS

**Lab Order:** 0904342

Work	Order	Sample	Summary
,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	~	~~~~~	~ ***

(*************************************				1. T. 1
Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date
0904342-01A	TP-7	R33381	EPA Method 8021B: Volatiles	4/21/2009 8:15:00 AM
0904342-01A	TP-7	R33381	EPA Method 8015B: Gasoline Range	4/21/2009 8:15:00 AM
0904342-02A	TP-8	R33381	EPA Method 8015B: Gasoline Range	4/21/2009 8:40:00 AM
0904342-02A	TP-8	R33381	EPA Method 8021B: Volatiles	4/21/2009 8:40:00 AM
0904342-03A	MW #49	R33381	EPA Method 8015B: Gasoline Range	4/21/2009 9:00:00 AM
0904342-03A	MW #49	R33381	EPA Method 8021B: Volatiles	4/21/2009 9:00:00 AM
0904342-04A	DW #1	R33399	EPA Method 8015B: Gasoline Range	4/21/2009 9:45:00 AM
0904342-04A	DW #1	R33399	EPA Method 8021B: Volatiles	4/21/2009 9:45:00 AM
0904342-05A	TP-6	R33434	EPA Method 8021B: Volatiles	4/21/2009 10:30:00 AM
0904342-05A	TP-6	R33399	EPA Method 8015B; Gasoline Range	4/21/2009 10:30:00 AM
0904342-05A	TP-6	R33399	EPA Method 8015B: Gasoline Range	4/21/2009 10:30:00 AM
0904342-05A	TP-6	R33399	EPA Method 8021B: Volatiles	4/21/2009 10:30:00 AM
0904342-05A	TP-6	R33434	EPA Method 8015B: Gasoline Range	4/21/2009 10:30:00 AM
0904342-05A	TP-6	R33399	EPA Method 8021B: Volatiles	4/21/2009 10:30:00 AM
0904342-06A	Field Blank	R33399	EPA Method 8015B: Gasoline Range	4/21/2009 10:45:00 AM
0904342-06A	Field Blank	R33399	EPA Method 8021B: Volatiles	4/21/2009 10:45:00 AM
0904342-07A	TP-5	R33399	EPA Method 8015B: Gasoline Range	4/21/2009 11:00:00 AM
0904342-07A	TP-5	R33399	EPA Method 8021B: Volatiles	4/21/2009 11:00:00 AM
0904342-08A	TP-9	R33399	EPA Method 8015B: Gasoline Range	4/21/2009 12:35:00 PM
0904342-08A	TP-9	R33399	EPA Method 8021B: Volatiles	4/21/2009 12:35:00 PM
0904342-09A	TP-1	R33399	EPA Method 8015B: Gasoline Range	4/21/2009 1:10:00 PM
0904342-09A	TP-1	R33399	EPA Method 8021B: Volatiles	4/21/2009 1:10:00 PM
0904342-10A	TP-2	R33399	EPA Method 8021B: Volatiles	- 4/21/2009 1:30:00 PM
0904342-10A	TP-2	R33399	EPA Method 8015B: Gasoline Range	4/21/2009 1:30:00 PM
0904342-10A	TP-2	R33399	EPA Method 8015B: Gasoline Range	4/21/2009 1:30:00 PM
0904342-10A	TP-2	R33399	EPA Method 8021B: Volatiles	4/21/2009 1:30:00 PM

Date: 04-May-09

CLIENT:

Western Refining Southwest, Inc.

Project:

River Terrace 2nd QTR 2009 VS

Lab Order:

0904342

CASE NARRATIVE

Analytical Comments for METHOD 8015BGRO, SAMPLE TP-2: dilution necessary for sample x10 for BTEX, Hydrocarbons saturated PID detector at x1.

Date: 04-May-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904342

River Terrace 2nd QTR 2009 VS

Project: Lab ID:

0904342-01

Client Sample ID: TP-7

Collection Date: 4/21/2009 8:15:00 AM

Date Received: 4/22/2009

Matrix: AIR

Analyses	Result	PQL (	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RAN	NGE				Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0	μg/L	1	4/23/2009 4:06:07 PM
Surr: BFB	93.0	76.8-150	%REC	1	4/23/2009 4:06:07 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Benzene	ND	0.10	μg/L	1	4/23/2009 4:06:07 PM
Toluene	ND	0.10	μg/L	1	4/23/2009 4:06:07 PM
Ethylbenzene	ND	0.10	μ <b>g</b> /L	1	4/23/2009 4:08:07 PM
Xylenes, Total	ND	0.30	µg/L	1	4/23/2009 4:06:07 PM
Surr: 4-Bromofluorobenzene	103	70.2-105	%REC	1	4/23/2009 4:06:07 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

Estimated value E

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

В Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Page 1 of 10

Date: 04-May-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904342

Project:

River Terrace 2nd QTR 2009 VS

Lab ID:

0904342-02

Client Sample ID: TP-8

Collection Date: 4/21/2009 8:40:00 AM

Date Received: 4/22/2009

Matrix: AIR

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RAI	NGE				Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0	μg/L	1	4/23/2009 4:36:47 PM
Surr: BFB	85.6	76.8-150	%REC	1	4/23/2009 4:36:47 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Benzene	ND	0.10	μg/L	1	4/23/2009 4:36:47 PM
Toluene	ND	0.10	µg/L	1	4/23/2009 4:36:47 PM
Ethylbenzene	ND	0.10	µg/L	1	4/23/2009 4:36:47 PM
Xylenes, Total	ND	0.30	μg/L	1	4/23/2009 4:36:47 PM
Surr: 4-Bromofluorobenzene	92.8	70.2-105	%REC	1	4/23/2009 4:36:47 PM

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

Date: 04-May-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904342

Project:

River Terrace 2nd QTR 2009 VS

Lab ID:

0904342-03

Client Sample ID: MW #49

Collection Date: 4/21/2009 9:00:00 AM

Date Received: 4/22/2009

Matrix: AIR

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE R	ANGE				Analyst: DAM
Gasoline Range Organics (GRO)	, ND	5.0	µg/L	1	4/23/2009 5:07:18 PM
Surr: BFB	83.7	76.8-150	%REC	1	4/23/2009 5:07:18 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Benzene	ND	0.10	μg/L	1	4/23/2009 5:07:18 PM
Toluene	ND	0.10	μg/L	1	4/23/2009 5:07:18 PM
Ethylbenzene	ND	0.10	μg/L	1	4/23/2009 5:07:18 PM
Xylenes, Total	ND	0.30	μg/L	1	4/23/2009 5:07:18 PM
Surr: 4-Bromofluorobenzene	90.3	70.2-105	%REC	1	4/23/2009 5:07:18 PM

Page 3 of 10

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 04-May-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904342

Project:

River Terrace 2nd QTR 2009 VS

Lab ID:

0904342-04

Client Sample ID: DW #1

Collection Date: 4/21/2009 9:45:00 AM

Date Received: 4/22/2009

Matrix: AIR

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0	μg/L	1	4/24/2009 12:18:52 PM
Surr: BFB	91.8	76.8-150	%REC	1	4/24/2009 12:18:52 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Benzene	ND	0.10	µg/L	1	4/24/2009 12:18:52 PM
Toluene	ND	0.10	μg/L	1	4/24/2009 12:18:52 PM
Ethylbenzene	ND	0.10	µg/L	1	4/24/2009 12:18:52 PM
Xylenes, Total	ND	0.30	μg/L	1	4/24/2009 12:18:52 PM
Surr: 4-Bromofluorobenzene	101	70.2-105	%REC	1	4/24/2009 12:18:52 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 4 of 10

Date: 04-May-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904342

River Terrace 2nd QTR 2009 VS

Project: Lab ID:

0904342-05

Client Sample ID: TP-6

Collection Date: 4/21/2009 10:30:00 AM

Date Received: 4/22/2009

Matrix: AIR

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RAN	IGE					Analyst: DAM
Gasoline Range Organics (GRO)	48	5.0		µg/L	1	4/27/2009 12:23:31 PM
Surr: BFB	101	76.8-150		%REC	. 1 .	4/27/2009 12:23:31 PM
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Benzene	ND	0.10		μ <b>g/L</b>	1	4/27/2009 12:23:31 PM
Toluene	ND	0.10		µg/L	1	4/27/2009 12:23;31 PM
Ethylbenzene	5.2	0.10		μg/L	1	4/27/2009 12:23:31 PM
Xylenes, Total	19	3.0		μg/L	10	4/24/2009 4:22:45 PM
Surr: 4-Bromofluorobenzene	117	70.2-105	s	%REC	1	4/27/2009 12:23:31 PM

Qualifiers:

Page 5 of 10

Value exceeds Maximum Contaminant Level

Ε Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

В Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Date: 04-May-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904342

Project:

River Terrace 2nd QTR 2009 VS

Lab ID:

0904342-06

Client Sample ID: Field Blank

Collection Date: 4/21/2009 10:45:00 AM

Date Received: 4/22/2009

Matrix: AIR

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	NGE	,			Analyst: DAM
Gasoline Range Organics (GRO)	· ND	5.0	µg/L	1	4/24/2009 1:49:54 PM
Surr: BFB	93.1	76.8-150	%REC	1	4/24/2009 1:49:54 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Benzene	ND	0.10	µg/L	.1	4/24/2009 1:49:54 PM
Toluene	ND	0.10	µg/L	1	4/24/2009 1:49:54 PM
Ethylbenzene	ND	0.10	μg/L	1	4/24/2009 1:49:54 PM
Xylenes, Total	ND	0.30	μg/L	1	4/24/2009 1:49:54 PM
Surr: 4-Bromofluorobenzene	104	70.2-105	%REC	1	4/24/2009 1:49:54 PM

Page 6 of 10

Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits J

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

В Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded Н

MCL Maximum Contaminant Level

Reporting Limit

Date: 04-May-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904342

River Terrace 2nd QTR 2009 VS

Project: Lab ID:

0904342-07

Client Sample ID: TP-5

Collection Date: 4/21/2009 11:00:00 AM

Date Received: 4/22/2009

Matrix: AIR

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	NGE			,		Analyst: <b>DAM</b>
Gasoline Range Organics (GRO)	18	5.0		µg/L	1	4/24/2009 2:21:14 PM
Surr: BFB	<b>10</b> 0	76.8-150		%REC	1	4/24/2009 2:21:14 PM
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Benzene	ND	0.10		μg/L	1	4/24/2009 2:21:14 PM
Toluene	ND	0.10		μg/L	1	4/24/2009 2:21:14 PM
Ethylbenzene	2.0	0.10		µg/L	1	4/24/2009 2:21:14 PM
Xylenes, Total	7.6	0.30		μg/L	1	4/24/2009 2:21:14 PM
Surr: 4-Bromofluorobenzene	114	70.2-105	s	%REC	1	4/24/2009 2:21:14 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits J

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank В

Holding times for preparation or analysis exceeded Н

MCL Maximum Contaminant Level

RL Reporting Limit

Page 7 of 10

Date: 04-May-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

Lab ID:

0904342

Project:

River Terrace 2nd QTR 2009 VS

0904342-08

Client Sample ID: TP-9

Collection Date: 4/21/2009 12:35:00 PM

Date Received: 4/22/2009

Matrix: AIR

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	ANGE	· · · · · · · · · · · · · · · · · · ·			Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0	μg/L	1	4/24/2009 2:51:33 PM
Surr: BFB	93.4	76.8-150	%REC	1	4/24/2009 2:51:33 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Benzene	ND	0.10	µg/L	· 1	4/24/2009 2:51:33 PM
Toluene	ND	0.10	µg/L	1	4/24/2009 2:51:33 PM
Ethylbenzene	ND	0.10	µg/L	1	4/24/2009 2:51:33 PM
Xylenes, Total	ND	0.30	μg/L	4	4/24/2009 2:51:33 PM
Surr: 4-Bromofluorobenzene	103	70.2-105	%REC	1	4/24/2009 2:51:33 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 8 of 10

Date: 04-May-09

CLIENT:

Western Refining Southwest, Inc.

River Terrace 2nd QTR 2009 VS

Lab Order:

Project:

Lab ID:

0904342

0904342-09

Client Sample ID: TP-1

Collection Date: 4/21/2009 1:10:00 PM

Date Received: 4/22/2009

Matrix: AIR

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	NGE					Analyst: DAM
Gasoline Range Organics (GRO)	330	250		μg/L	50	4/24/2009 3;21:47 PM
Surr: BFB	96.9	76.8-150		%REC	50	4/24/2009 3:21:47 PM
EPA METHOD 8021B: VOLATILES			•			Analyst: DAM
Benzene	5.1	5.0		μg/L	50	4/24/2009 3:21:47 PM
Toluene	ND	5.0		μg/L	50	4/24/2009 3:21:47 PM
Ethylbenzene	16	5.0		μg/L	. 50	4/24/2009 3:21:47 PM
Xylenes, Total	100	15		μg/L	50	4/24/2009 3:21:47 PM
Surr: 4-Bromofluorobenzene	109	70.2-105	S	%REC	50	4/24/2009 3:21:47 PM



Value exceeds Maximum Contaminant Level

Page 9 of 10

E Estimated value

Analyte detected below quantitation limits J

NDNot Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Date: 04-May-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904342

Project:

River Terrace 2nd QTR 2009 VS

Lab ID:

0904342-10

Client Sample ID: TP-2

Collection Date: 4/21/2009 1:30:00 PM

Date Received: 4/22/2009

Matrix: AIR

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	NGE					Analyst: DAM
Gasoline Range Organics (GRO)	290	5.0		µg/L	1	4/24/2009 4:53:18 PM
Surr: BFB	212	76.8-150	S	%REC	. 1	4/24/2009 4:53:18 PM
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Benzene	ND	1.0		μg/L	10	4/24/2009 3:52:17 PM
Toluene	ND	1.0		μg/L	10	4/24/2009 3:52:17 PM
Ethylbenzene	, ND	1.0		µg/L	10	4/24/2009 3:52:17 PM
Xylenes, Total	15	3.0		µg/L	10	4/24/2009 3:52:17 PM
Surr: 4-Bromofluorobenzene	116	70.2-105	S	%REC	10	4/24/2009 3:52:17 PM

Qualifiers:

Page 10 of 10

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

DATES REPORT

# Hall Environmental Analysis Laboratory, Inc.

Western Refining Southwest, Inc.

0904342

Lab Order: Client:

Text Name	i ogene.						
PAY Action 6 00136 Gazoline Range   TRSTAR_09042A R3381   PAY Action 8021B Volatiles   TRSTAR_09042A R3389   PAY Action 8021B Volatiles   TRSTAR_09042A R3389	Sample ID		Collection Date		Instrument Run ID		Analysis Date
Pay Method 8012B Concline Range   Pay	0904342-01A	TP-7			TRISTAR_090423A	R33381	4/23/2009
9004342-02A         TP-8         4/21/2009 8-4/400 AM         EPA Method 8013B. Gesoline Range         IRSTAR_09042A         R33381           9004342-03A         MVW 449         4/21/2009 9-00:00 AM         EPA Method 8013B. Gesoline Range         IRSTAR_09042A         R33381           9004342-03A         DW #1         4/21/2009 9-45:00 AM         EPA Method 8013B. Gesoline Range         IRSTAR_09042A         R33381           9004342-05A         DW #1         4/21/2009 9-45:00 AM         EPA Method 8013B. Volatiles         IRSTAR_09042A         R33399           9004342-05A         TP-6         4/21/2009 10:30:00 AM         EPA Method 8013B. Volatiles         IRSTAR_09042A         R33399           9004342-05A         TP-6         4/21/2009 10:30:00 AM         EPA Method 8013B. Ceachine Range         IRSTAR_09042A         R33399           9004342-05A         Field Blank         4/21/2009 10:45:00 AM         EPA Method 8013B. Volatiles         IRSTAR_09042A         R33399           9004342-05A         Field Blank         4/21/2009 10:45:00 AM         EPA Method 8013B. Volatiles         IRSTAR_09042A         R33399           9004342-07A         TF-5         4/21/2009 11:00:00 AM         EPA Method 8013B. Ceachine Range         IRSTAR_09042A         R33399           9004342-07A         TF-1         4/21/2009 11:00:00 AM         EPA Method 8				EPA Method 8021B: Volatiles	IRISTAR_090423A	R33381	4/23/2009
PA Method 8021B: Volatiles   TRSTAR_009022A R33381     PA Method 8021B: Volatiles   TRSTAR_009023A R33381     PA Method 8021B: Volatiles   TRSTAR_00902A R33393     PA Method 8021B: Volatiles   TRSTAR_80902A R	0904342-02A	TP-8	4/21/2009 8:40:00 AM	EPA Method 8015B: Gasoline Range	IRISTAR_090423A	R33381	4/23/2009
0904342-03A         MVW #49         4212009 9-00-00 AM         EPA Method 8015B. Casoline Range         IRSITAR_8090423A         R33381           0904342-03A         DW #1         4.212009 9-45:00 AM         EPA Method 8015B. Casoline Range         IRSITAR_809042A         R33399           0904342-03A         TP-6         4.212009 10-30:00 AM         EPA Method 8015B. Casoline Range         IRSITAR_809042A         R33399           0904342-03A         TP-6         4.212009 10-30:00 AM         EPA Method 8015B. Casoline Range         IRSITAR_809042A         R33399           0904342-05A         TP-6         4.212009 10-30:00 AM         EPA Method 8015B. Casoline Range         IRSITAR_809042A         R33399           0904342-05A         Field Blunk         4.212009 10-45:00 AM         EPA Method 8015B. Volatilise         IRSITAR_809042A         R33399           0904342-05A         TF-5         4.212009 11-00:00 AM         EPA Method 8012B. Volatilise         IRSITAR_809042A         R33399           0904342-05A         TF-5         4.212009 11-00:00 AM         EPA Method 8012B. Casoline Range         IRSITAR_809042A         R33399           0904342-05A         TF-5         4.212009 11-00:00 AM         EPA Method 8012B. Casoline Range         IRSITAR_809042A         R33399           0904342-09A         TF-5         4.212009 11-30:00 PM <t< td=""><td></td><td></td><td></td><td>EPA Method 8021B: Volatiles</td><td>IRISTAR_090423A</td><td>R33381</td><td>4/23/2009</td></t<>				EPA Method 8021B: Volatiles	IRISTAR_090423A	R33381	4/23/2009
Pay 41   Pay 41   Pay 42112009 945600 AM   EPA Method 8013B; Otsoline Range   TRSTAR_090424A R33399   EPA Method 8013B; Volatiles   TRSTAR_090424A R33399   TRSTAR_090424A R3	0904342-03A	MW #49	4/21/2009 9:00:00 AM	EPA Method 8015B: Gasoline Range	IRISTAR_090423A	R33381	4/23/2009
0904342-04A DW #1 471/2009 945.00 AM EPA Method 80118: Ostalites Range RAJTAR, 090424A R33399 0904342-06A TP-6 421/2009 1030.00 AM EPA Method 80118: Ostalite Range RAJTAR, 090424A R33399 0904342-06A Tied Blank 421/2009 1030.00 AM EPA Method 80118: Ostalite Range RAJTAR, 090424A R33399 0904342-06A Field Blank 421/2009 11.00.00 AM EPA Method 80118: Ostalite Range RAJTAR, 090424A R33399 0904342-06A Field Blank 421/2009 11.00.00 AM EPA Method 80118: Ostalite Range RAJTAR, 090424A R33399 0904342-06A TP-3 421/2009 11.00.00 AM EPA Method 80118: Ostalite Range RAJTAR, 090424A R33399 0904342-06A TP-3 421/2009 11.00.00 AM EPA Method 80118: Ostalite Range RAJTAR, 090424A R33399 0904342-06A TP-3 421/2009 11.00.00 AM EPA Method 80118: Ostalite Range RAJTAR, 090424A R33399 0904342-06A TP-3 421/2009 11.00.00 AM EPA Method 80118: Ostalite Range RAJTAR, 090424A R33399 0904342-06A TP-1 421/2009 11.00.00 AM EPA Method 80118: Ostalite Range RAJTAR, 090424A R33399 0904342-06A TP-1 421/2009 11.00.00 PM EPA Method 80118: Ostalite Range RAJTAR, 090424A R33399 0904342-06A TP-2 421/2009 11.00.00 PM EPA Method 80118: Ostalite Range RAJTAR, 090424A R33399 0904342-06A TP-2 421/2009 11.00.00 PM EPA Method 80118: Ostalite Range RAJTAR, 090424A R33399				EPA Method 8021B: Volatiles	TRISTAR_090423A	R33381	4/23/2009
PA Method 8021B; Volatiles   PA Method 8012B; Volatiles   PA Method 8012B; Volatiles   PA Method 8015B; Gasoline Range   PA Method 8015B; Osbodia PA Ristra Page   PA Method 8015B; Volatiles   PA Method	0904342-04A	DW #1	4/21/2009 9:45:00 AM	EPA Method 8015B: Gasoline Range	TRISTAR_090424A	R33399	4/24/2009
9004342-05A         TP-6         421/2009 10:30:00 AM         EPA Method 80 ISB: Gasoline Range         IRISTAR_09042A         R33399           PA Method 80 ISB: Gasoline Range         IRISTAR_09042A         R33399           EPA Method 80 ISB: Gasoline Range         IRISTAR_09042A         R33399           EPA Method 80 ISB: Gasoline Range         IRISTAR_09042A         R33399           G904342-05A         Field Blank         421/2009 10:45:00 AM         EPA Method 80 IB: Volatiles         IRISTAR_09042A         R33399           G904342-07A         TP-5         421/2009 11:00:00 AM         EPA Method 80 IB: Volatiles         IRISTAR_09042A         R33399           G904342-07A         TP-5         421/2009 11:00:00 AM         EPA Method 80 IB: Volatiles         IRISTAR_09042A         R33399           G904342-07A         TP-5         421/2009 11:00:00 AM         EPA Method 80 IB: Volatiles         IRISTAR_09042A         R33399           G904342-07A         TP-5         421/2009 1:00:00 PM         EPA Method 80 IB: Volatiles         IRISTAR_09042A         R33399           G904342-10A         TP-5         421/2009 1:00:00 PM         EPA Method 80 IB: Volatiles         IRISTAR_09042A         R33399           G904342-10A         TP-2         421/2009 1:30:00 PM         EPA Method 80 IB: Sacoline Range         IRISTAR_09042A         R3				EPA Method 8021B: Volatiles	TRISTAR_090424A	R33399	4/24/2009
EPA Method 8015B: Gasoline Range ITASTAR_09042A4 R33399  EPA Method 8015B: Casoline Range ITASTAR_09042A7 R33399  EPA Method 8021B: Volatiles ITASTAR_09042A4 R33399  EPA Method 8015B: Casoline Range ITASTAR_09042A4 R33399	0904342-05A	TP-6	4/21/2009 10:30:00 AM	EPA Method 8015B: Gasoline Range	TRISTAR_090424A	R33399	4/24/2009
PA Method 8015B: Gasoline Range   PRISTAR_090427A   R33434	٠			EPA Method 8015B: Gasoline Range	IRISTAR_090424A	R33399	4/24/2009
Field Blank				EPA Method 8015B: Gasoline Range	TRISTAR_090427A	R33434	4/27/2009
Field Blank         4/21/2009 10:45:00 AM         EPA Method 8021B: Volatiles         ITASTAR_090424A         R33399           Field Blank         4/21/2009 10:45:00 AM         EPA Method 8015B: Gasoline Range         ITASTAR_090424A         R33399           IP-5         4/21/2009 11:00:00 AM         EPA Method 8015B: Gasoline Range         ITASTAR_090424A         R33399           IP-5         4/21/2009 11:00:00 AM         EPA Method 8015B: Gasoline Range         ITASTAR_090424A         R33399           IP-1         4/21/2009 1:00:00 PM         EPA Method 8012B: Volatiles         ITASTAR_090424A         R33399           IP-1         4/21/2009 1:00:00 PM         EPA Method 8012B: Volatiles         ITASTAR_090424A         R33399           IP-2         4/21/2009 1:30:00 PM         EPA Method 8012B: Volatiles         ITASTAR_090424A         R33399           IP-2         4/21/2009 1:30:00 PM         EPA Method 8012B: Volatiles         ITASTAR_090424A         R33399           IP-2         4/21/2009 1:30:00 PM         EPA Method 8012B: Gasoline Range         ITASTAR_090424A         R33399           EPA Method 8012B: Volatiles         ITASTAR_090424A         R33399				EPA Method 8021B; Volatiles	TRISTAR_090427A	R33434	4/27/2009
Field Blank         4/21/2009 10:45:00 AM         EPA Method 8021B: Volatiles         IRISTAR_090424A         R33399           Field Blank         4/21/2009 10:45:00 AM         EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399           TP-5         4/21/2009 11:00:00 AM         EPA Method 8021B: Volatiles         IRISTAR_090424A         R33399           TP-9         4/21/2009 12:35:00 PM         EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399           TP-1         4/21/2009 1:10:00 PM         EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399           TP-2         4/21/2009 1:30:00 PM         EPA Method 8021B: Volatiles         IRISTAR_090424A         R33399           TP-2         4/21/2009 1:30:00 PM         EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399           TP-3         4/21/2009 1:30:00 PM         EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399           EPA Method 8015B: Odasoline Range         IRISTAR_090424A         R33399				EPA Method 8021B: Volatiles	TRISTAR_090424A	R33399	4/24/2009
Field Blank         4/21/2009 10:45:00 AM         EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399           TP-5         4/21/2009 11:00:00 AM         EPA Method 8021B: Volatiles         IRISTAR_090424A         R33399           TP-9         4/21/2009 12:35:00 PM         EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399           TP-1         4/21/2009 12:35:00 PM         EPA Method 8015B: Volatiles         IRISTAR_090424A         R33399           TP-1         4/21/2009 1:10:00 PM         EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399           TP-2         4/21/2009 1:30:00 PM         EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399           TP-2         4/21/2009 1:30:00 PM         EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399           EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399           EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399	-			EPA Method 8021B: Volatiles	TRISTAR_090424A	R33399	4/24/2009
TP-5	0904342-06A	Field Blank	4/21/2009 10:45:00 AM	EPA Method 8015B: Gasoline Range	TRISTAR_090424A	R33399	4/24/2009
TP-5         4/21/2009 11:00:00 AM         EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399           TP-9         4/21/2009 12:35:00 PM         EPA Method 8021B: Volatiles         IRISTAR_090424A         R33399           TP-1         4/21/2009 1:10:00 PM         EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399           TP-2         4/21/2009 1:30:00 PM         EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399           TP-2         4/21/2009 1:30:00 PM         EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399           TP-3         4/21/2009 1:30:00 PM         EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399           EPA Method 8015B: Volatiles         IRISTAR_090424A         R33399				EPA Method 8021B: Volatiles	TRISTAR_090424A	R33399	4/24/2009
TP-9         4/21/2009 12:35:00 PM         EPA Method 8013B: Gasoline Range         IRISTAR_090424A         R33399           TP-1         4/21/2009 1:10:00 PM         EPA Method 8013B: Volatiles         IRISTAR_090424A         R33399           TP-1         4/21/2009 1:10:00 PM         EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399           TP-2         4/21/2009 1:30:00 PM         EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399           EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399           EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399	0904342-07A	TP-5	4/21/2009 11:00:00 AM	EPA Method 8015B: Gasoline Range	IRISTAR_090424A	R33399	4/24/2009
TP-9         4/21/2009 12:35:00 PM         EPA Method 8013B: Casoline Range         TRISTAR_090424A         R33399           TP-1         4/21/2009 1:10:00 PM         EPA Method 8013B: Gasoline Range         TRISTAR_090424A         R33399           TP-2         4/21/2009 1:30:00 PM         EPA Method 8015B: Gasoline Range         TRISTAR_090424A         R33399           TP-2         4/21/2009 1:30:00 PM         EPA Method 8015B: Gasoline Range         TRISTAR_090424A         R33399           EPA Method 8015B: Oscoline Range         TRISTAR_090424A         R33399           EPA Method 8015B: Volatiles         TRISTAR_090424A         R33399				EPA Method 8021B: Volatiles	TRISTAR_090424A	R33399	4/24/2009
TP-1         4/21/2009 1:10:00 PM         EPA Method 8015B: Gasoline Range         TRISTAR_090424A         R33399           TP-2         4/21/2009 1:30:00 PM         EPA Method 8015B: Gasoline Range         TRISTAR_090424A         R33399           TP-2         4/21/2009 1:30:00 PM         EPA Method 8015B: Gasoline Range         TRISTAR_090424A         R33399           EPA Method 8015B: Gasoline Range         TRISTAR_090424A         R33399           EPA Method 8021B: Volatiles         TRISTAR_090424A         R33399	0904342-08A	TP-9	4/21/2009 12:35:00 PM	EPA Method 8015B: Gasoline Range	IRISTAR_090424A	R33399	4/24/2009
TP-1         4/21/2009 1:10:00 PM         EPA Method 8015B: Gasoline Range         TRISTAR_090424A         R33399           TP-2         4/21/2009 1:30:00 PM         EPA Method 8015B: Gasoline Range         TRISTAR_090424A         R33399           EPA Method 8015B: Gasoline Range         TRISTAR_090424A         R33399           EPA Method 8015B: Volatiles         TRISTAR_090424A         R33399				EPA Method 8021B; Volatiles	TRISTAR_090424A	R33399	4/24/2009
EPA Method 8021B: Volatiles         TRISTAR_090424A         R33399           TP-2         4/21/2009 1:30:00 PM         EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399           EPA Method 8021B: Volatiles         IRISTAR_090424A         R33399	0904342-09A	TP-1	4/21/2009 1:10:00 PM	EPA Method 8015B: Gasoline Range	TRISTAR_090424A	R33399	4/24/2009
TP-2         4/21/2009 1:30:00 PM         EPA Method 8015B: Gasoline Range         IRISTAR_090424A         R33399           EPA Method 8015B: Oasoline Range         IRISTAR_090424A         R33399           EPA Method 8021B: Volatiles         IRISTAR_090424A         R33399				EPA Method 8021B: Volatiles	TRISTAR_090424A	R33399	4/24/2009
IRISTAR_090424A R33399 IRISTAR_090424A R33399	0904342-10A	TP-2	4/21/2009 1:30:00 PM	EPA Method 8015B: Gasoline Range	TRISTAR_090424A	R33399	4/24/2009
IRISTAR 090424A R33399				EPA Method 8015B: Gasoline Range	TRISTAR_090424A	R33399	4/24/2009
				EPA Method 8021B: Volatiles	IRISTAR_090424A	R33399	4/24/2009

Page 1 of 2

DATES REPORT

# Han Environmental Analysis Laboratory, Inc.

0904342 Lab Order: Western Refining Southwest, Inc.

River Terrace 2nd QTR 2009 VS Client:

	The state of the s	Instrument Run W QC Batch W Frep Date Analysis Date	Air EPA Method 8021B: Volatiles TRISTAR_090424A R33399 4/24/2009
	The state of the s	I est ivame	EPA Method 8021B: Volatiles
	74-4-4-	MAGTIX	Air
QTR 2009 VS	Collection Date	Conection Date	4/21/2009 1:30:00 PM
River Terrace 2nd QTR 2009 VS	nanging in the second contraction of the sec	Cileut Sample ID	TP-2
Project:	Sounds TO	Sample ID	0904342-10A

Date: 04-May-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

Project:

River Terrace 2nd QTR 2009 VS

Work Order:

0904342

Analyte Result  Method: EPA Method 8015B: Gasoline Ran Sample ID: 0904310-05A DUP  Gasoline Range Organics (GRO) ND Surr: BFB 1857  Method: EPA Method 8015B: Gasoline Ran Sample ID: b 1  Gasoline Range Organics (GRO) ND Surr: BFB 18.96	DUP µg/L µg/L	PQL 5.0 0	%Rec 92.9	LowLimit Batch	HighLimit D: R33381	%RPD Analysis Da	RPDL	imit Qual 4/23/2009 3:04:42 PM
Sample ID: 0904310-05A DUP  Gasoline Range Organics (GRO) ND Surr: BFB 1857  Method: EPA Method 8015B: Gasoline Ran Sample ID: b 1  Gasoline Range Organics (GRO) ND	DUP µg/L µg/L		92.9	Batch	D: <b>R33381</b>		ate: -	4/23/2009 3:04:42 PM
Gasoline Range Organics (GRO) ND Surr: BFB 1857  Method: EPA Method 8015B: Gasoline Ran Sample ID: b 1  Gasoline Range Organics (GRO) ND	µg/L µg/L ge		92.9	Batch	D: <b>R33381</b>		ate: -	4/23/2009 3:04:42 PM
Surr: BFB 1857  Method: EPA Method 8016B: Gasoline Ran Sample ID: b 1  Gasoline Range Organics (GRO) ND	µg/L ge		92.9					
Method: EPA Method 8015B: Gasoline Ran Sample ID: b 1 Gasoline Range Organics (GRO) ND	ge	0	92.9		1	0	24.6	
Sample ID: b 1 Gasoline Range Organics (GRO) ND	-			76.8	150	0	0	
Sample ID: b 1 Gasoline Range Organics (GRO) ND	-							•
	INITIAL			Batch	D: <b>R33381</b>	Analysis Da	ate:	4/23/2009 9:57:46 AM
Surr: BFB 18.96	mg/L	0.050						
	mg/L	0	94.8	59.9	122			•
Sample ID: 2.5UG GRO LCS	LCS			Batch	D: <b>R33381</b>	Analysis Da	ate:	4/23/2009 5:38:01 PM
Gasoline Range Organics (GRO) 0.4960	mg/L	0.050	99.2	80	115			
Surr: BFB 19.68	mg/L	0	98.4	59.9	122			· · · · · · · · · · · · · · · · · · ·
Method: EPA Method 8021B: Volatiles								
Sample ID: 0904310-05A DUP	DUP			Batch I	D: <b>R33381</b>	Analysis Da	ate:	4/23/2009 3:04:42 PM
Benzene ND	μg/L	0.10				0	18.3	
Toluene ND	μg/L	0.10			,	0	35	
Ethylbenzene ND	μg/L	0.10				0	41.8	•
Xylenes, Total ND	μg/L	0.30		•		0	45.4	
Surr: 4-Bromofluorobenzene 2.065	μg/L	0	103	70.2	105	0	0	
Method: EPA Method 8021B: Volatiles								
Sample ID: b1	MBLK			Batch I	D: <b>R33381</b>	Analysis Da	ate:	4/23/2009 9:57:46 AM
Benzene ND	μg/L	1.0						•
Toluene ND	μg/L	1.0						
Ethylbenzene ND	µg/L	1.0			•			
Xylenes, Total ND	μg/L	2.0						
Surr: 4-Bromofluorobenzene 21.44	μg/L	. 0	107	65.9	130			
Sample ID: 100NG BTEX LCS	LCS			Batch I	D: <b>R33381</b>	Analysis Da	ate:	4/23/2009 6:09:06 PM
Benzene 21.50	μg/Ľ	1.0	108	85.9	113			
Toluene 22.27	µg/Ļ	1.0	111	86.4	113			
Ethylbenzene 22.86	μg/L	1.0	114	83.5	118			
Xylenes, Total 65.81	μg/L	2.0	110	83.4	122			
Surr: 4-Bromofluorobenzene 22.92	µg/L	0	115	65.9	130			

Qua	lifiers

E Estimated value

J Analyte detected below quantitation limits

RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 1

Date: 04-May-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

ject:

River Terrace 2nd QTR 2009 VS

Work Order:

0904342

Analyte	Result	Units	PQL	%Rec	LowLimit 1	-lighLimit	%RPD	RPDLimit Qual
Method: EPA Method 8015B: G	asoline Rar	ige						
Sample ID: 0904342-04A DUP		DUP			Batch ID	R33399	Analysis Dat	e: 4/24/2009 12:49:15 PN
Gasoline Range Organics (GRO)	ND	μg/L	5.0				. 0	24.6
Surr: BFB	1807	μg/L	0	90.3	76.8	150	0	0
Method: EPA Method 8015B: G	asoline Rar	ıge				•		
Sample ID: b1		MBLK			Batch ID	: R33399	Analysis Date	a: 4/24/2009 9:44:55 AN
Gasoline Range Organics (GRO)	ND	mg/L	0.050					
Surr: BFB	18.50	mg/L	0	92.5	59.9	122		
Sample ID: 2.5UG GRO LCS		LCS			Batch ID	: R33399	Analysis Date	e; 4/24/2009 5:23:49 PN
Gasoline Range Organics (GRO)	0.5180	mg/L	0.050	104	80	115		
Surr: BFB	:20.51	mg/L	0	103	59.9	122		
Method: EPA Method 8021B: V	olatiles		•					
Sample ID: 0904342-04A DUP	•	DUP			Batch ID	: R33399	Analysis Date	e: 4/24/2009 12:49:15 PN
Benzene .	ND	μg/L	0.10			•	0	18.3
Toluene	ND	μg/L	0.10				0	35
Ethylbenzene	ND	μg/L	0.10				0	41.8
Kylenes, Total	ND .	µg/L	0.30				0	45.4
Surr: 4-Bromofluorobenzene	2.003	µg/L	0	100	70.2	105	0.	0
Wethod: EPA Method 8021B: Vo	olatiles							
ample ID: b1		MBLK	,		Batch ID	R33399	Analysis Date	e: 4/24/2009 9:44:55 AM
zene	ND .	μg/L	1.0					•
Juene	ND	μg/L	1.0					
Ethylbenzene	ND	μg/L	1.0					
(ylenes, Total	ND	μg/L	2.0					
Surr: 4-Bromöfluorobenzene	20.46	μg/L	0	102	65.9	130		
Sample ID: 100NG BTEX LCS		LCS			Batch ID	R33399	Analysis Date	e: 4/24/2009 5:55:02 PM
Benzene	21.71	μg/L	1.0	109	85.9	113		
foluene	21.94	μg/L	1.0	110	86.4	113		
Ethylbenzene	22.50	μg/L	1.0	113	83.5	118		
(ylenes, Total	65.47	μg/L	2.0	109	83.4	122		•
Surr: 4-Bromofluorobenzene	23.01	μg/L	D	115	65.9	130		

### Qualifiers:



Estimated value

Analyte detected below quantitation limits

RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 2

Date: 04-May-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

Project:

River Terrace 2nd QTR 2009 VS

Work Order:

0904342

						· · · · · · · · · · · · · · · · · · ·		0,01312
Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit Qual
Method: EPA Method 8016B: 0	Gasoline Rar	ige						
Sample ID: 0904342-05A DUP		DUP			Batch i	D: <b>R33434</b>	Analysis Da	te: 4/27/2009 12:54:21 PM
Gasoline Range Organics (GRO)	45.60	μg/L	5.0			·	5.54	24.6
Surr: BFB	2009	µg/L	. 0	100	76.8	150	0	0
Method: EPA Method 8015B: 0	Sasoline Ran	nge				•		
Sample ID: b 1	* .	MBLK			Batch I	): <b>R33434</b>	Analysis Da	te: 4/27/2009 9:45:51 AN
Gasoline Range Organics (GRO)	ND	mg/L	0.050		•		•	•
Sun: BFB	16.93	mg/L	0	84.7	59.9	122		
Sample ID: 2.5UG GRO LCS	,	LCS			Batch II	): R33434	Analysis Da	te: 4/27/2009 7:05:06 PM
Gasoline Range Organics (GRO)	0.4960	mg/L	0.050	99.2	80	115		
Surr: BFB	19.24	mg/L	0	96.2	59.9	122		
Method: EPA Method 8021B: V	olatiles							
Sample ID: 0904342-05A DUP	•	DUP			Batch ID	R33434	Analysis Da	te: 4/27/2009 12:54:21 PM
Benzene	ND	µg/L	0.10				0	18.3
Toluene	ND	µg/L	0.10			-	0	35
Ethylbenzene	4.895	µg/L	0.10			ı	5.10	41.8
Xylenes, Total	16.47	μg/L	0.30				0.0898	45.4
Surr: 4-Bromofluorobenzene	2.320	µg/Ľ	0	116	70.2	105	.0	0 S
Method: EPA Method 8021B: V	olatiles							
Sample ID: b1	*	MBLK			Batch ID	): R33434	Analysis Da	te: 4/27/2009 9:45:51 AM
Benzene	ND	µg/L	1.0					
Toluene	ND	μg/L	1.0					
Ethylbenzene	ND	μg/L	1.0					
Xylenes, Total	ND	µg/L	2.0					
Surr: 4-Bromofluorobenzene	18.26	μg/L	0	91.3	65.9	130		•
Sample ID: 100NG BTEX LCS		LCS			Batch ID	): R33434	Analysis Da	te: 4/27/2009 7:35:40 PM
Benzene	20.76	μg/L	1.0	104	85.9	113		
Toluene	20.88	µg/L	1.0	104	86.4	113		
Ethylbenzene	21.14	µg/L	1.0	106	83.5	118		
Xylenes, Total	61.18	µg/L	2.0	102	83.4	122		
Surr: 4-Bromofluorobenzene	21.12	µg/L	0	106	65.9	130		



E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits





### Sample Receipt Checklist

ent Name WESTERN REFINING SOUT	·		O.p. O	Date R	eceived	:		4/22/2009	
Work Order Number 0904342				Recei	ved by:	ARS		. A ı	
$\bigwedge$	1		. 1 1	Samp	le ID lat	els checked	by:	$\omega$	
Checklist completed by:	W		L 22	09_	<del></del>			Initials	
Signature			Date .						
Matrix:	Carrier name:	<u>UPS</u>							
Shipping container/cooler in good condition?	·	Yes	V	No 🗌	]	Not Present			
Custody seals intact on shipping container/cod	oler?	Yes	$\checkmark$	No 🗌	] .	Not Present		Not Shipped	
Custody seals intact on sample bottles?		Yes		No 🗌	)	N/A	$\checkmark$		
Chain of custody present?		Yes	$\checkmark$	No 🗆	]				
Chain of custody signed when relinquished an	d received?	Yes [.]	$\checkmark$	No 🗆	]				
Chain of custody agrees with sample labels?		Yes	V	No 🗌	]	,			
Samples in proper container/bottle?		Yes	V	No 🗌	)				
Sample containers intact?		Yes	V	No 🗆	]				
Sufficient sample volume for indicated test?		Yes	V	No 🗆	İ				
All samples received within holding time?	•	Yes	✓	No 🗌	j				
Water - VOA vials have zero headspace?	No VOA vials submit	lted	$\mathbf{Z}$	Yes 🗌		No 🗆			
later - Preservation labels on bottle and cap i	match?	Yes		No 🗌		N/A 🗹			
Nater - pH acceptable upon receipt?	,	Yes		No 🗌		N/A 🗹			
Container/Temp Blank temperature?				<6° C Acc					
COMMENTS:				If given suf	fficient t	ime to cool.			
					===				
Client contacted	Date contacted:				Deren	n contacted			
Chan contacted	Date Contacted.				F 61501	TO COMBOLEC			-
Contacted by:	Regarding:					<u> </u>			
Comments:									
		<u> </u>							
Corrective Action									



## COVER LETTER

Wednesday, April 29, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990 Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: River Terrace 2ND QTR 2009 VS

Dear Cindy Hurtado:

Order No.: 0904310

Hall Environmental Analysis Laboratory, Inc. received 6 sample(s) on 4/21/2009 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. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Pusiness Manager

Nancy McDuffie, Laboratory Manager

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



Date: 29-Apr-09

CLIENT:

Western Refining Southwest, Inc.

Project:

River Terrace 2ND QTR 2009 VS

Lab Order: 0904310

Work	Order	Sample	<b>Summary</b>
------	-------	--------	----------------

Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date
0904310-01A	TP-13	R33381	EPA Method 8021B: Volatiles	4/20/2009 12:40:00 PM
0904310-01A	TP-13	R33381	EPA Method 8015B: Gasoline Range	4/20/2009 12:40:00 PM
0904310-02A	TP-12	R33381	EPA Method 8021B: Volatiles	4/20/2009 1:05:00 PM
0904310-02A	TP-12	R33381	EPA Method 8015B: Gasoline Range	4/20/2009 1:05:00 PM
0904310-03A	TP-11	R33381	EPA Method 8021B: Volatiles	4/20/2009 1:25:00 PM
0904310-03A	TP-11	R33381	EPA Method 8015B: Gasoline Range	4/20/2009 1:25:00 PM
0904310-04A	TP-11FD	R33381	EPA Method 8021B: Volatiles	4/20/2009 1:27:00 PM
0904310-04A	TP-11FD	R33381	EPA Method 8015B: Gasoline Range	4/20/2009 1:27:00 PM
0904310-05A	TP-10	R33381	EPA Method 8021B: Volatiles	4/20/2009 1:50:00 PM
0904310-05A	TP-10	R33381	EPA Method 8015B: Gasoline Range	4/20/2009 1:50:00 PM
0904310-06A	TP-3	R33381	EPA Method 8021B: Volatiles	4/20/2009 2:10:00 PM
0904310-06A	TP-3	R33381	EPA Method 8015B: Gasoline Range	4/20/2009 2:10:00 PM

Date: 29-Apr-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904310

Project:

River Terrace 2ND QTR 2009 VS

Lab ID:

0904310-01

Client Sample ID: TP-13

Collection Date: 4/20/2009 12:40:00 PM

Date Received: 4/21/2009

Matrix: AIR

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	ANGE		<del></del>		Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0	µg/L	1	4/23/2009 12:31:33 PM
Surr: BFB	90.6	76.8-150	%REC	1	4/23/2009 12:31:33 PM
EPA METHOD 8021B: VOLATILES					Analyst: <b>DAM</b>
Benzene	ND	0.10	µg/L	1	4/23/2009 12:31:33 PM
Toluene	ND	0.10	μg/L	1	4/23/2009 12:31:33 PM
Ethylbenzene	ND	0.10	μ <b>g</b> /L	1	4/23/2009 12:31:33 PM
Xylenes, Total	ND	0.30	μg/L	1	4/23/2009 12:31:33 PM
Surr: 4-Bromofluorobenzene	· 101	70.2-105	%REC	1	4/23/2009 12:31:33 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 1 of 6

Date: 29-Apr-09.

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904310

River Terrace 2ND QTR 2009 VS

Project: Lab ID:

0904310-02

Client Sample ID: TP-12

Collection Date: 4/20/2009 1:05:00 PM

Date Received: 4/21/2009

Matrix: AIR

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RAI	NGE					Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0		µg/L	1	4/23/2009 1:02:16 PM
Surr: BFB	96.4	76.8-150		%REC	1	4/23/2009 1:02:16 PM
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Benzene	ND	0.10		µg/L	1	4/23/2009 1:02:16 PM
Toluene	ND	0.10		µg/L	1	4/23/2009 1:02:16 PM
Ethylbenzene	ND	0.10		μg/L	1	4/23/2009 1:02:16 PM
Xylenes, Total	. ND	0.30		µg/L	1	4/23/2009 1:02:16 PM
Surr: 4-Bromofluorobenzene	109	70.2-105	S	%REC	1	4/23/2009 1:02:16 PM

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

Date: 29-Apr-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904310

0,0.131

River Terrace 2ND QTR 2009 VS

Project: Lab ID:

0904310-03

Client Sample ID: TP-11

Collection Date: 4/20/2009 1:25:00 PM

Date Received: 4/21/2009

Matrix: AIR

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RAI	NGE					Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0		μg/L	1	4/23/2009 1:32:52 PM
Surr: BFB	98.8	76.8-150		%REC	[*] 1	4/23/2009 1:32:52 PM
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Benzene	ND	0.10		µg/L	1	4/23/2009 1:32:52 PM
Toluene	ND	0.10		µg/L	1	4/23/2009 1:32:52 PM
Ethylbenzene	ND	0.10		μg/L	1	4/23/2009 1:32:52 PM
Xylenes, Total	ND	0.30		µg/L	1	4/23/2009 1:32:52 PM
Surr: 4-Bromofluorobenzene	112	70.2-105	s	%REC	1	4/23/2009 1:32:52 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 3 of 6

Date: 29-Apr-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904310

River Terrace 2ND QTR 2009 VS

Project: Lab ID:

0904310-04

Client Sample ID: TP-11FD

Collection Date: 4/20/2009 1:27:00 PM

Date Received: 4/21/2009

Matrix: AIR

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	NGE			<del>-</del>		Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0		μġ/L	1	4/23/2009 2:03:26 PM
Surr: BFB	97.8	76.8-150		%REC	1	4/23/2009 2:03:26 PM
EPA METHOD 8021B: VOLATILES				4		Analyst: DAM
Benzene	ND	0.10		µg/L	1	4/23/2009 2:03:26 PM
Toluene	ND	0.10		µg/L	1	4/23/2009 2:03:26 PM
Ethylbenzene	ND	0.10		μg/L	1	4/23/2009 2:03:26 PM
Xylenes, Total	ND	0.30		μg/L	1	4/23/2009 2:03:26 PM
Surr: 4-Bromofluorobenzene	. 107	70.2-105	s	%REC	. 1	4/23/2009 2:03:26 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 4 of 6



Date: 29-Apr-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904310

0904310-05

Client Sample ID: TP-10

Collection Date: 4/20/2009 1:50:00 PM

Project: Lab ID: River Terrace 2ND QTR 2009 VS

**Date Received: 4/21/2009** 

Matrix: AIR

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0	µg/L	1	4/23/2009 2:33:57 PM
Surr: BFB	89.0	76.8-150	%REC	1	4/23/2009 2:33:57 PM
EPA METHOD 8021B: VOLATILES	,				Analyst: DAM
Benzene	ND	0.10	µg/∟	1 .	4/23/2009 2:33:57 PM
Toluene	ND	0.10	μg/L	1	4/23/2009 2:33:57 PM
Ethylbenzene	ND	0.10	μg/L	1	4/23/2009 2:33:57 PM
Xylenes, Total	ND	0.30	µg/L	1	4/23/2009 2:33:57 PM
Surr: 4-Bromofluorobenzene	98.5	70.2-105	%REC	1	4/23/2009 2:33:57 PM



Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 29-Apr-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904310

Project:

River Terrace 2ND QTR 2009 VS

Lab ID:

0904310-06

Client Sample ID: TP-3

Collection Date: 4/20/2009 2:10:00 PM

Date Received: 4/21/2009

Matrix: AIR

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	NGE	· · · · · · · · · · · · · · · · · · ·			 ********	Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0		μg/L	1 .	4/23/2009 3:35:23 PM
Surr: BFB	95.6	76.8-150		%REC	1	4/23/2009 3:35:23 PM
EPA METHOD 8021B; VOLATILES						Analyst: DAM
Benzene	ND	0.10		μg/L	1	4/23/2009 3:35:23 PM
Toluene	ND	0.10		μg/L	1	4/23/2009 3:35:23 PM
Ethylbenzene	ND	0.10		μg/L	1	4/23/2009 3:35:23 PM
Xylenes, Total	ND	0.30		μg/L	1	4/23/2009 3:35:23 PM
Surr: 4-Bromofluorobenzene	106	70.2-105	S	%REC	1	4/23/2009 3:35:23 PM

Qualifiers:

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

Page 6 of 6

Lab Order: 0904310
Client: Western Refin

Western Refining Southwest, Inc.

DATES REPORT

29-Apr-09

River Terrace 2ND QTR 2009 VS

Project:

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Instrument Run W	Instrument Run ID QC Batch ID Prep Date	Analysis Date
0904310-01A	TP-13	4/20/2009 12:40:00 PM	Air	EPA Method 8015B: Gasoline Range	IRISTAR_090423A	R33381	4/23/2009
				EPA Method 8021B; Volatiles	TRISTAR 090423A	R33381	4/23/2009
0904310-02A	TP-12	4/20/2009 1:05:00 PM		EPA Method 8015B: Gasoline Range	TRISTAR_090423A	R33381	4/23/2009
				EPA Method 8021B: Volatiles	TRISTAR_090423A	R33381	4/23/2009
0904310-03A	TP-11	4/20/2009 1:25:00 PM		EPA Method 8015B: Gasoline Range	TRISTAR_090423A	R33381	4/23/2009
				EPA Method 8021B: Volatiles	TRISTAR_090423A	R33381	4/23/2009
0904310-04A	TP-11FD	4/20/2009 1:27:00 PM		EPA Method 8015B: Gasoline Range	TRISTAR_090423A	R33381	4/23/2009
				EPA Method 8021B: Volatiles	TRISTAR_090423A	R33381	4/23/2009
0904310-05A	TP-10	4/20/2009 1:50:00 PM		EPA Method 8015B: Gasoline Range	TRISTAR_090423A	R33381	4/23/2009
,				EPA Method 8021B: Volatiles	TRISTAR_090423A	R33381	4/23/2009
∞ 0904310-06A	TP-3	4/20/2009 2:10:00 PM		EPA Method 8015B: Gasoline Range	TRISTAR_090423A	.R33381	4/23/2009

4/23/2009

TRISTAR_090423A R33381

EPA Method 8021B: Volatiles

Date: 29-Apr-09

# QA/QC SUMMARY REPORT

Client: Project: Western Refining Southwest, Inc. River Terrace 2ND QTR 2009 VS

Work Order:

0904310

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPD	Limit Qual
Method: EPA Method 8016B: G	Basoline Rar	ge	,		· · · ·	b			
Sample ID: 0904310-05A DUP		DUP			Batch	ID: <b>R33381</b>	Analysis D	Pate:	4/23/2009 3:04:42 F
Gasoline Range Organics (GRO)	ND	μg/L	5,0				0	24.6	3
Surr: BFB	1857	μg/L	0	92.9	76.8	150	0	0	
Method: EPA Method 8016B: G	asoline Ran	ge							• •
Sample ID: b1		MBLK			Batch	ID: R33381	Analysis D	Pate:	4/23/2009 9:57:46 /
Gasoline Range Organics (GRO)	ND	mg/L	0.050						•
Surr: BFB	18.96	mg/L	. 0	94.8	59.9	122			,
Sample ID: 2.5UG GRO LCS		LCS			Batch*	ID: R33381	Analysis D	ate:	4/23/2009 5:38:01 F
Gasoline Range Organics (GRO)	0.4960	mg/L	0.050	99.2	80	115			•
Surr: BFB	19.68	mg/L	0	98.4	59.9	122			
Method: EPA Method 8021B: V	olatiles								
Sample ID: 0904310-05A DUP		DUP			Batch	ID: <b>R33381</b>	Analysis D	ate:	4/23/2009 3:04:42 F
Benzene	ND	µg/L	0.10				0	18.3	<b>,</b>
Toluene	ND	μg/L	0.10				0	35	
Ethylbenzene	ND	µg/L	0.10				0 .	41.8	1
Xylenes, Total	ND	μg/L	0.30				0	45.4	ļ.
Surr: 4-Bromofluorobenzene	2.065	μg/L	0	103	70.2	105	0	0	
Method: EPA Method 8021B: V	olatiles								
Sample ID: b1		MBLK			Batch	D: <b>R33381</b>	Analysis D	ate:	4/23/2009 9:57:46 /
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0	•					
Ethylbenzene	· ND	µg/L	1.0		,				٠
Xylenes, Total	ND	µg/L	2.0						
Surr: 4-Bromofluorobenzene	21.44	µg/L	0	107	65.9	130			
Sample ID: 100NG BTEX LCS		LCS			Batch	D: <b>R33381</b>	Analysis D	ate:	4/23/2009 6:09:06 F
Benzene	21.50	µg/L	1.0	108	85.9	113			•
Toluene	22.27	μg/L	1.0	111	86.4	113			
Ethylbenzene	22.86	μg/L	1.0	114	83.5	118			
Kylenes, Total	65.81	µg/L	2.0	110	83.4	122			
Surr: 4-Bromofluorobenzene	22.92	μg/L	0	115	65.9	130			

Qua	tifi	ers:

- E Estimated value
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Page 1

### Sample Receipt Checklist Client Name WESTERN REFINING SOUT 4/21/2009 Date Received: Work Order Number 0904310 Received by: TLS Sample ID labels checked by: Checklist completed by: UPS Matrix: Carrier name: Not Present No 🗌 Shipping container/cooler in good condition? Yes 🗹 No 🖂 Not Present Yes 🗹 Not Shipped Custody seals intact on shipping container/cooler? V Custody seals intact on sample bottles? Yes 🗌 No 🔲 N/A Yes 🗹 No 🗆 Chain of custody present? Yes 🗹 No 🗌 Chain of custody signed when relinquished and received? No 🗌 Chain of custody agrees with sample labels? Yes 🗹 Yes 🗹 No 🗌 Samples in proper container/bottle? Yes 🛂 No 🗆 Sample containers intact? No 🗌 Sufficient sample volume for indicated test? Yes 🗸 No 🗆 Yes 🗹 All samples received within holding time? Yes No 🗆 No VOA vials submitted Water - VOA vials have zero headspace? N/A Yes 🗌 No 🗌 Water - Preservation labels on bottle and cap match? Yes 🗀 No 🗆 N/A ☑ Water - pH acceptable upon receipt? Container/Temp Blank temperature? <6° C Acceptable If given sufficient time to cool. COMMENTS: Client contacted Person contacted Date contacted: Contacted by: Regarding: Comments: Corrective Action

Chain-of-Custody Record	Turn-Around Time:				
Client: Western Refining	A Standard C Rush	ANAI VSTS I ABODATODY			
		www.ballenvironmental.com			
Mailing Address: # 50 CR 4990	Rive Terro as Mil 2009 US	4901 Hawkins NE - Albuquerque, NM 87109			
Bloomfield, NN 87413	f.				
5-632		Analysis			
email or Fax#: 505-633-391/	Project Manager:	(lee			
QA/QC Package:		o st			
☐ Standard ⑤ Level 4 (Full Validation)		Od,			
Accreditation the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of th		DBG(1,1) (1,1) (1,1) (1,1) (1,1) (1,1) (1,1) (1,1)			
ł		/ si FO S S S S S S S S S S S S S S S S S S			
□ EDD (Type)	Sample Temps // Walter // Sample Temps	8 E = 0			
Date Time Matrix Sample Request ID	Container Preservative HEAL NO.	TEX + METES + METES + METES + METES   Method   TPH (Method	4209 1240 Wpor 7P13	1-Tedlar	
	2	×			
125- 17-11	3	×			
1276 TPIIFD	<u>+</u>	×			
150 75/10	V.	× ×			
210   78-3	3	×			
Date: Time: Relinglished by:	Received by: Date Time $4/2$ $6/2$ $6/2$	Remarks:			
	Received W. Date Time				
If necessary, samples submitted to Hall Environmental may be subcontracted to ot	bcontracted to other accredited laboratories. This serves as notice of this	this possibility. Any sub-contracted data will be clearly notated on the analytic poort.			



### COVER LETTER

Thursday, October 01, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990 Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: River Terrace 3rd QTR 2009 VS

Dear Cindy Hurtado:

Order No.: 0909170

Hall Environmental Analysis Laboratory, Inc. received 9 sample(s) on 9/9/2009 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. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

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



Date: 01-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Project:

River Terrace 3rd QTR 2009 VS

**Lab Order:** 0909170

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date
0909170-01A	TP #2	R35281	EPA Method 8015B: Gasoline Range	9/8/2009 9:30:00 AM
0909170-01A	TP #2	R35281	EPA Method 8021B: Volatiles	9/8/2009 9:30:00 AM
0909170-01A	TP #2	R35281	EPA Method 8021B: Volatiles	9/8/2009 9:30:00 AM
0909170-01A	TP #2	R35281	EPA Method 8015B: Gasoline Range	9/8/2009 9:30:00 AM
0909170-02A	TP #1	R35281	EPA Method 8015B: Gasoline Range	9/8/2009 9:50:00 AM
0909170-02A	TP #1	R35281	EPA Method 8015B: Gasoline Range	9/8/2009 9:50:00 AM
0909170-02A	TP #1	R35281	EPA Method 8021B: Volatiles	9/8/2009 9:50:00 AM
0909170-02A	TP #1	R35281	EPA Method 8021B: Volatiles	9/8/2009 9:50:00 AM
0909170-03A	TP #6	R35281	EPA Method 8015B: Gasoline Range	9/8/2009 10:15:00 AM
0909170-03A	TP #6	R35281	EPA Method 8021B: Volatiles	9/8/2009 10:15:00 AM
0909170-04A	TP #8	R35281	EPA Method 8021B: Volatiles	9/8/2009 10:35:00 AM
0909170-04A	TP #8	R35281	EPA Method 8015B: Gasoline Range	9/8/2009 10:35:00 AM
0909170-04A	TP #8	R35281	EPA Method 8021B: Volatiles	9/8/2009 10:35:00 AM
0909170-04A	TP #8	R35281	EPA Method 8015B: Gasoline Range	9/8/2009 10:35:00 AM
0909170-05A	TP #8FD	R35359	EPA Method 8015B: Gasoline Range	9/8/2009 10:38:00 AM
0909170-05A	TP #8FD	R35359	EPA Method 8015B: Gasoline Range	9/8/2009 10:38:00 AM
0909170-05A	TP #8FD	R35359	EPA Method 8021B: Volatiles	9/8/2009 10:38:00 AM
0909170-05A	TP #8FD	R35359	EPA Method 8021B: Volatiles	9/8/2009 10:38:00 AM
0909170-06A	TP #5	R35359	EPA Method 8015B: Gasoline Range	9/8/2009 12:55:00 PM
0909170-06A	TP #5	R35359	EPA Method 8021B: Volatiles	9/8/2009 12:55:00 PM
0909170-07A	TP #7	R35359	EPA Method 8015B: Gasoline Range	9/8/2009 1:20:00 PM
0909170-07A	TP #7	R35359	EPA Method 8021B: Volatiles	9/8/2009 1:20:00 PM
0909170-08A	TP #9	R35359	EPA Method 8015B: Gasoline Range	9/8/2009 1:45:00 PM
0909170-08A	TP #9	R35359	EPA Method 8021B: Volatiles	9/8/2009 1:45:00 PM
0909170-09A	FIELD BLANK	R35359	EPA Method 802 IB: Volatiles	9/8/2009 1:50:00 PM
0909170-09A	FIELD BLANK	R35359	EPA Method 8015B: Gasoline Range	9/8/2009 1:50:00 PM

Date: 01-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Project:

River Terrace 3rd QTR 2009 VS

Lab Order:

0909170

CASE NARRATIVE

[&]quot;S" flags denote that the surrogate recovery was elevated due to matrix interferences.

Date: 01-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0909170

Project:

River Terrace 3rd QTR 2009 VS

Lab ID:

0909170-01

Client Sample ID: TP #2

Collection Date: 9/8/2009 9:30:00 AM

Date Received: 9/9/2009

Matrix: AIR

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	µg/L	1 .	9/11/2009 1:48:41 PM
Surr: BFB	88.0	76.8-150	%REC	1	9/11/2009 1:48:41 PM
EPA METHOD 8021B: VOLATILES		·			Analyst: NSB
Benzene	ND	0.10	μg/L	1	9/11/2009 1:48:41 PM
Toluene	ND	0.10	μg/L	. 1	9/11/2009 1:48:41 PM
Ethylbenzene	ND	0.10	µg/L	1	9/11/2009 1:48:41 PM
Xylenes, Total	ND	0.30	μg/L	1	9/11/2009 1:48:41 PM
Surr: 4-Bromofluorobenzene	90.7	70.2-105	%REC	1	9/11/2009 1:48:41 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation fimits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 1 of 9

Date: 01-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order: Project:

Lab ID:

0909170

River Terrace 3rd QTR 2009 VS

0909170-02

Client Sample ID: TP #1

Collection Date: 9/8/2009 9:50:00 AM

Date Received: 9/9/2009

Matrix: AIR

Analyses	Result	PQL ·Q	ual Units	DF	Date Analyzed
PA METHOD 8015B: GASOLINE RA	NGE		<del></del>		Analyst: NSB
Gasoline Range Organics (GRO)	67	5.0	μg/L	1	9/11/2009 2:18:00 PM
Surr: BFB	106	76.8-150	%REC	1.	9/11/2009 2:18:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Велгепе	0.62	0.10	μ <b>g</b> /L	1	9/11/2009 2:18:00 PM
Toluene	0.12	0.10	μg/L	1	9/11/2009 2:18:00 PM
Ethylbenzene	- 0.94	0.10	μg/L	1	9/11/2009 2:18:00 PM
Xyienes, Total	3.3	0.30	μg/L	1	9/11/2009 2:18:00 PM
Surr: 4-Bromofluorobenzene	96.7	70.2-105	%REC	1	9/11/2009 2:18:00 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

В Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

.RL Reporting Limit

Page 2 of 9

Date: 01-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Client Sample ID: TP #6

Lab Order:

0909170

Project:

Collection Date: 9/8/2009 10:15:00 AM

Lab ID:

River Terrace 3rd QTR 2009 VS

Date Received: 9/9/2009

0909170-03

Matrix: AIR

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	43	5.0	μg/L	1	9/11/2009 2:47:18 PM
Surr: BFB	95.5	76.8-150	%REC	1	9/11/2009 2:47:18 PM
EPA METHOD 8021B: VOLATILES				•	Analyst: NSB
Benzene	ND	0.10	μg/L	1	9/11/2009 2:47:18 PM
Toluene	ND	0.10	µg/L	1	9/11/2009 2:47:18 PM
Ethylbenzene	4.4	0.10	µg/L	1	9/11/2009 2:47:18 PM
Xylenes, Total	8.0	0.30	μg/L	1	9/11/2009 2:47:18 PM
Surr: 4-Bromofluorobenzene	101	70.2-105	%REC	1	9/11/2009 2:47:18 PM

Qualifiers:

Page 3 of 9

Value exceeds Maximum Contaminant Level

Estimated value E

Analyte detected below quantitation limits

Not Detected at the Reporting Limit ND

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded Н

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 01-Oct-09

CLIENT:

Western Refining Southwest, Inc.

River Terrace 3rd QTR 2009 VS

Lab Order:

0909170

Collection Date: 9/8/2009 10:35:00 AM

Client Sample ID: TP #8

Date Received: 9/9/2009

Matrix: AIR

Project: Lab ID:

0909170-04

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	NGE					Analyst: NSB
Gasoline Range Organics (GRO)	180	5.0		µg/L	1	9/11/2009 3:18:37 PM
Surr: BFB	117	76.8-150		%REC	1	9/11/2009 3:18:37 PM
EPA METHOD 8021B: VOLATILES				•		Analyst: NSB
Benzene	0.27	0.10		µg/L	1	9/11/2009 3:18:37 PM
Toluene	ND	0.10		µg/L	1	9/11/2009 3:18:37 PM
Ethylbenzene	7.0	0.10		µg/L	1	9/11/2009 3:18:37 PM
Xylenes, Total	35	1.5		µg/L	5	9/11/2009 4:46:12 PM
Surr: 4-Bromofluorobenzene	111	70.2-105	s	%REC	1	9/11/2009 3:18:37 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded H

MCL Maximum Contaminant Level

RL Reporting Limit

Page 4 of 9

Date: 01-Oct-09

CLIENT: Lab Order: Western Refining Southwest, Inc.

0909170

River Terrace 3rd QTR 2009 VS

Project: Lab ID:

0909170-05

Client Sample ID: TP #8FD

Collection Date: 9/8/2009 10:38:00 AM

Date Received: 9/9/2009

Matrix: AIR

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	NGE	********			<del> </del>	Analyst: NSB
Gasoline Range Organics (GRO)	120	5.0		µg/L	1	9/18/2009 12:44:50 PM
Surr: BFB	96.9	76.8-150		%REC	1	9/18/2009 12:44:50 PM
EPA METHOD 8021B: VOLATILES	,					Analyst: <b>NSB</b>
Benzene	0.17	0.10		µg/L	1	9/18/2009 12:44:50 PM
Toluene	ND	0.10		µg/L	1	9/18/2009 12:44:50 PM
Ethylbenzene	4.8 \	0.10		μg/L	1	9/18/2009 12:44:50 PM
Xylenes, Total	23	1.5		μg/L	5	9/18/2009 11:55:37 AM
Surr: 4-Bromofluorobenzene	110	70.2-105	s	%REC	1	9/18/2009 12:44:50 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded Н

MCL Maximum Contaminant Level

Reporting Limit

Page 5 of 9

Date: 01-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order: Project:

Lab ID:

0909170

0909170-06

River Terrace 3rd QTR 2009 VS

Collection Date: 9/8/2009 12:55:00 PM

Date Received: 9/9/2009

Client Sample ID: TP #5

Matrix: AIR

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RAN	GE			<del> </del>	***********	Anaiyst: NSE
Gasoline Range Organics (GRO)	730	50		μg/L	10	9/18/2009 1:14:33 PM
Surr: BFB	94.2	76.8-150		%REC	. 10	9/18/2009 1:14:33 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSE
Benzene	ND	1.0		µg/L	10	9/18/2009 1:14:33 PM
Toluene	ND	1.0		μg/L	10	9/18/2009 1:14:33 PM
Ethylbenzene	42	1.0		μg/L	10	9/18/2009 1:14:33 PM
Xylenes, Total	180	3.0		μg/L	10	9/18/2009 1:14:33 PM
Surr: 4-Bromofluorobenzene	107	70.2-105	S	%REC	10	9/18/2009 1:14:33 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

Е Estimated value

Analyte detected below quantitation limits

Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 6 of 9

Date: 01-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

Client Sample ID: TP #7

0909170

Collection Date: 9/8/2009 1:20:00 PM

Project:

River Terrace 3rd QTR 2009 VS

Date Received: 9/9/2009

Lab ID:

0909170-07

Matrix: AIR

Analyses	Result	PQL	Qual Unit	s DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	15	5.0	µg/L	1	9/18/2009 1:43:56 PM
Surr: BFB	90.8	76.8-150	%RE	C 1	9/18/2009 1:43:56 PM
EPA METHOD 8021B: VOLATILES				•	Analyst: NSB
Велгепе	ND	0.10	µg/L	1	9/18/2009 1:43:56 PM
Toluene	ND	0.10	μg/L	1	9/18/2009 1:43:56 PM
Ethylbenzene	0.16	0.10	µg/L	1	9/18/2009 1:43:56 PM
Xylenes, Total	0.78	0.30	μg/L	1	9/18/2009 1:43:56 PM
Surr: 4-Bromofluorobenzene	101	70.2-105	%RE	C 1	9/18/2009 1:43:56 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

Ε Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Page 7 of 9

Date: 01-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0909170

0909170-08

Client Sample ID: TP #9

Collection Date: 9/8/2009 1:45:00 PM

Project: Lab ID:

River Terrace 3rd QTR 2009 VS

Date Received: 9/9/2009

Matrix: AIR

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	NGE			<del></del>	Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	μg/L	1	9/18/2009 2:13:24 PM
Surr: BFB	91.7	76.8-150	%REC	1	9/18/2009 2:13:24 PM
EPA METHOD 8021B: VOLATILES			•		Analyst: NSB
Benzene	ND	0.10	μg/L	1	9/18/2009 2:13:24 PM
Toluene	ND	0.10	μg/L	1	9/18/2009 2:13:24 PM
Ethylbenzene	0.11	0.10	μg/L	1	9/18/2009 2:13:24 PM
Xylenes, Total	0.55	0.30	μg/L	1	9/18/2009 2:13:24 PM
Surr: 4-Bromofluorobenzene	102	70.2-105	%REC	1	9/18/2009 2:13:24 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 01-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Client Sample ID: FIELD BLANK

Lab Order:

0909170

Collection Date: 9/8/2009 1:50:00 PM

Project:

River Terrace 3rd QTR 2009 VS

Date Received: 9/9/2009

Lab ID:

0909170-09

Matrix: AIR

Analyses	Result	PQL (	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RAI	NGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	µg/L	1	9/18/2009 2:43:54 PM
Surr: BFB	86.6	76.8-150	%REC	1	9/18/2009 2:43:54 PM
EPA METHOD 8021B: VOLATILES					- Analyst: <b>NS</b> B
Benzene	ND	0.10	μg/L	1	9/18/2009 2:43:54 PM
Toluene	ND	0.10	μg/L	1	9/18/2009 2:43:54 PM
Ethylbenzene	ND	0.10	µg/L	1	9/18/2009 2:43:54 PM
Xylenes, Total	ND	0.30	μg/L	1 .	9/18/2009 2:43:54 PM
Surr: 4-Bromofluorobenzene	95.2	70.2-105	%REC	1	9/18/2009 2:43:54 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- Not Detected at the Reporting Limit ND
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 9 of 9

DATES REPORT

# han Environmental Analysis Laboratory, Inc.

0909170 Lab Order: Client:

Western Refining Southwest, Inc.

River Terrace 3rd QTR 2009 VS

Project:

Sample ID	Client Sample ID	Sample ID Client Sample ID Collection Date Matrix Test Name	Matrix	a series services	Instrument Run ID	Instrument Run ID QC Batch ID Prep Date Analysis Date	Analysis Date
0909170-01A	TP #2	9/8/2009 9:30:00 AM	Air	EPA Method 8015B: Gasoline Range	ZEUS_090911A	R35281	9/11/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090911A	R35281	9/11/2009
				EPA Method 8021B: Volatiles	ZEUS_090911A	R35281	9/11/2009
				EPA Method 8021B: Volatiles	ZEUS_090911A	R35281	9/11/2009
0909170-02A	TP#1	9/8/2009 9:50:00 AM		EPA Method 8015B: Gasoline Range	ZEUS_090911A	R35281	9/11/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090911A	R35281	9/11/2009
				EPA Method 8021B: Volatiles	ZEUS_090911A	R35281	9/11/2009
				EPA Method 8021B: Volatiles	ZEUS_090911A	R35281	9/11/2009
0909170-03A	9# d1	9/8/2009 10:15:00 AM		EPA Method 8015B: Gasoline Range	ZEUS_090911A	R35281	9/11/2009
				EPA Method 8021B: Volatiles	ZEUS_090911A	R35281	9/11/2009
N 0909170-04A	TP #8	9/8/2009 10:35:00 AM		EPA Method 8015B: Gasoline Range	ZEUS_090911A	R35281	9/11/2009
·				EPA Method 8015B: Gasoline Range	ZEUS_090911A	R35281	9/11/2009
				EPA Method 8021B: Volatiles	ZEUS_090911A	R35281	9/11/2009
				EPA Method 8021B. Volatiles	ZEUS_090911A	R35281	9/11/2009
0909170-05A	TP #8FD	9/8/2009 10:38:00 AM		EPA Method 8015B: Gasoline Range	ZEUS_090918A	R35359	9/18/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090918A	R35359	9/18/2009
				EPA Method 8021B: Volatiles	ZEUS_090918A	R35359	9/18/2009
				EPA Method 8021B: Volatiles	ZEUS_090918A	R35359	9/18/2009
0909170-06A	TP #5	9/8/2009 12:55:00 PM		EPA Method 8015B: Gasoline Range	ZEUS_090918A	R35359	9/18/2009
				EPA Method 8021B: Volatiles	ZEUS_090918A	R35359	6/18/2009
0909170-07A	TP#7	9/8/2009 1:20:00 PM		EPA Method 8015B: Gasoline Range	ZEUS_090918A	R35359	9/18/2009
				EPA Method 8021B: Volatiles	ZEUS_090918A	R35359	9/18/2009
0909170-08A	TP #9	9/8/2009 1:45:00 PM		EPA Method 8015B: Gasoline Range	ZEUS_090918A	R35359	9/18/2009
				EPA Method 8021B: Volatiles	ZEUS_090918A	R35359	9/18/2009
0909170-09A	FIELD BLANK	9/8/2009 1:50:00 PM		EPA Method 8015B: Gasoline Range	ZEUS_090918A	R35359	9/18/2009

0909170 Lab Order: Client:

Western Refining Southwest, Inc.

River Terrace 3rd QTR 2009 VS Project:

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DATES REPORT

01-04-09

Date: 01-Oct-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

oject: River Terrace 3rd QTR 2009 VS

Work Order:

0909170

and to										014011	0707170
Analyte	Result	Units	PQL	SPK Va S	SPK ref	%Rec L	owLimit Hi	ghLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: 0	Sasoline Rar	nge									
Sample ID: 0909170-04A DUP		DUP				Batch ID:	R35281	Analy	sis Date:	9/11/2009	3:47:47 PN
Gasoline Range Organics (GRO)	174.0	µg/L	5.0						3.18	24.6	
Surr: BFB	2299	μg/L	0	2000	0	115	76.8	150	0	0	
Sample ID: 0909214-01A DUP		DUP				Batch ID:	R35359	Analys	sis Date:	9/18/2009	3:45:20 PM
Gasoline Range Organics (GRO)	ND	μg/L	5.0			-		•	0	24.6	
Surr: BFB	1823	μg/L	0	2000	0	91.1	76.8	150	. 0	0	
Method: EPA Method 8021B: V	/niatiles										
Sample ID: 0909170-04A DUP	olutilos.	DUP				Batch ID:	R35281	Analys	sis Date:	9/11/2009	3:47:47 PM
Велгеле	0.2602	μg/L	0.10						3.47	18.3	
Toluene	ND	μg/L	0.10						0	35	
Ethylbenzene	6.722	µg/∟	0.10						3.40	41.8	
Xylenes, Total	30.98	µg/L	0.30						3.08	45.4	E
Surr: 4-Bromofluorobenzene	2.163	μg/L	0	2	0	108	70.2	105	0	0	S
Sample ID: 0909214-01A DUP		DUP				Batch ID:	R35359	Analys	sis Date:	9/18/2009	3:45:20 PM
Benzene	ND	μg/L	0.10						0	18.3	
Toluene	ND	µg/L	0.10						- O	35	
Ethylbenzene	ND	μg/L	0.10						0	41.8	
Xylenes, Total	ND	µg/L	0.30						0	45.4	
Surr: 4-Bromofluorobenzene	1.995	µg/L	0	2	0	99.8	70.2	105	0	0	



E Estimated value

Analyte detected below quantitation limits RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 1

# Sample Receipt Checklist

Client Name WESTERN REFINING SOUT			Date Receive	e <b>d</b> :	9/9/2009
Work Order Number 0909170			Received by	y: ARS	1 -
Checklist completed by:		9	Sample ID I	labels checked by:	Intitleris
Matrix:	Carrier name: UPS	<u> </u>		·	
Shipping container/cooler in good condition?	Yes	<b>✓</b>	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	V	No 🗀	•	
Chain of custody signed when relinquished and receive	ed? Yes	V	No □		
Chain of custody agrees with sample labels?	Yes		No 🗌		
Samples in proper container/bottle?	Yes	V	No 🗌		
Sample containers intact?	Yes	V	No 🗔		
Sufficient sample volume for indicated test?	Yes	V	No 🗀		
All samples received within holding time?	Yes	V	No 🗀		Number of preserved
_	VOA vials submitted	V	Yes 🗌	No 🗌	bottles checked for pH:
Water - Preservation labels on bottle and cap match?	Yes		No 🗀	N/A 🗹	·
Water - pH acceptable upon receipt?	Yes		No 🗌	N/A 🗹	<2 >12 unless noted
Container/Temp Blank temperature?			<6° C Acceptat	ole	below.
COMMENTS:	•		If given sufficien	t time to cool.	•
=======================================	======	<u> </u>	=====		
Client contacted Date of	contacted:		Pers	son contacted	
Contacted by: Regar	ding:				
Comments:					
Corrective Action					



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email	or Fax#:	email or Fax# 525~634	33-3811	Project Manager:		<b>!</b>	<b>1</b>		_		(*(							8
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Date:	Time:	Relinquished by	ed by:	Received by: Date	Time													
-	necessary,	samples subr	If necessary, samples submitted to Hall Environmental may be subcontracted to o	ther accredited laboratories.	This serves as notice of this possibility	ossibilih	Anvegu	- Lange	tot Lot	od Bina G	clearty	in a testing	the contract of	tyle re	ner levi	į		$\neg$



### COVER LETTER

Thursday, October 01, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990 Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: River Terrace 3rd QTR 2009 VS

Dear Cindy Hurtado:

Order No.: 0909214

Hall Environmental Analysis Laboratory, Inc. received 7 sample(s) on 9/11/2009 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. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

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



Date: 01-Oct-09

CLIENT: Western Refining Southwest, Inc.

**Project:** River Terrace 3rd QTR 2009 VS

**Lab Order:** 0909214

Work Or	der Sample	Summary
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Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date
0909214-01A	TP #10	R35359	EPA Method 8021B: Volatiles	9/10/2009 7:35:00 AM
0909214-01A	TP #10	R35359	EPA Method 8015B: Gasoline Range	9/10/2009 7:35:00 AM
0909214-02A	TP #13	R35359	EPA Method 8021B: Volatiles	9/10/2009 8:00:00 AM
0909214-02A	TP#13	R35359	EPA Method 8015B: Gasoline Range	9/10/2009 8:00:00 AM
0909214-03A	TP #12	R35359	EPA Method 8021B: Volatiles	9/10/2009 8:25:00 AM
0909214-03A	TP #12	R35359	EPA Method 8015B: Gasoline Range	9/10/2009 8:25:00 AM
0909214-04A	TP #11	R35371	EPA Method 8021B: Volatiles	9/10/2009 8:50:00 AM
0909214-04A	TP #11	R35371	EPA Method 8015B: Gasoline Range	9/10/2009 8:50:00 AM
0909214-05A	TP #3	R35371	EPA Method 8021B: Volatiles	9/10/2009 9:15:00 AM
0909214-05A	TP #3	R35371	EPA Method 8015B: Gasoline Range	9/10/2009 9:15:00 AM
0909214-06A	MW #49	R35371	EPA Method 8021B: Volatiles	9/10/2009 9:40:00 AM
0909214-06A	MW #49	R35371	EPA Method 8015B: Gasoline Range	9/10/2009 9:40:00 AM
0909214-07A	DW #1	R35371	EPA Method 8021B: Volatiles	9/10/2009 10:25:00 AM
0909214-07A	DW #1	R35371	EPA Method 8015B: Gasoline Range	9/10/2009 10:25:00 AM

Date: 01-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Client Sample ID: TP #10

Lab Order:

0909214

Collection Date: 9/10/2009 7:35:00 AM

Project:

River Terrace 3rd QTR 2009 VS

Date Received: 9/11/2009

Lab ID:

0909214-01

Matrix: AIR

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE R	ANGE		r r		Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	μg/L	1	9/18/2009 3:13:28 PM
Surr: BFB	87.8	76.8-150	%REC	1	9/18/2009 3:13:28 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.10	µg/L	1	9/18/2009 3:13:28 PM
Toluene	ND	0.10	μg/L	1	9/18/2009 3:13:28 PM
Ethylbenzene	ND	0.10	μg/L	1	9/18/2009 3:13:28 PM
Xylenes, Total	· ND	0.30	μg/L	1	9/18/2009 3:13:28 PM
Surr: 4-Bromofluorobenzene	96.3	70.2-105	%REC	1	9/18/2009 3:13:28 PM

Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike receivery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 01-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0909214

River Terrace 3rd QTR 2009 VS

Project: Lab ID:

0909214-02

Client Sample ID: TP #13

Enem Sample 1D. 11 #15

Collection Date: 9/10/2009 8:00:00 AM

Date Received: 9/11/2009

Matrix: AIR

Analyses	Result	PQL (	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE R	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	μg/L	1	9/18/2009 4:14:38 PM
Surr: BFB	89.0	76.8-150	%REC	1	9/18/2009 4:14:38 PM
EPA METHOD 8021B: VOLATILES		•			Analyst: NSB
Benzene	ND	0.10	µg/L	1	9/18/2009 4:14:38 PM
Toluene	ND	0.10	μg/L	1	9/18/2009 4:14:38 PM
Ethylbenzene	ND	0.10	μg/L	1	9/18/2009 4:14:38 PM
Xylenes, Total	NÖ	0.30	μg/L .	1	9/18/2009 4:14:38 PM
Surr: 4-Bromofluorobenzene	94.9	70.2-105	%REC	1	9/18/2009 4:14:38 PM

Qualifiers:

Page 2 of 7

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 01-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0909214

River Terrace 3rd QTR 2009 VS

Project: Lab ID:

0909214-03

Client Sample ID: TP #12

Collection Date: 9/10/2009 8:25:00 AM

Date Received: 9/11/2009

Matrix: AIR

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	ANGE			. <del></del>	Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	µg/∟	1	9/18/2009 4:44:00 PM
Surn: BFB	91.6	76.8-150	%REC	1	9/18/2009 4:44:00 PM
EPA METHOD 8021B: VOLATILES		,			Analyst: <b>NSB</b>
Benzene	ND	0.10	μg/L	1	9/18/2009 4:44:00 PM
Toluene	ND	<b>0</b> .10	µg/L	1	9/18/2009 4:44:00 PM
Ethylbenzene	ND	0.10	µg/L	1	9/18/2009 4:44:00 PM
Xylenes, Total	ND	0.30	μg/L	1	9/18/2009 4:44:00 PM
Surr: 4-Bromofluorobenzene	98.7	70.2-105	%REC	1	9/18/2009 4:44:00 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded Н

MCL Maximum Contaminant Level

RL Reporting Limit

Page 3 of 7

Date: 01-Oct-09

CLIENT:

Western Refining Southwest, Inc.

0909214

Client Sample ID: TP #11

Lab Order:

Collection Date: 9/10/2009 8:50:00 AM

Project:

River Terrace 3rd QTR 2009 VS

Date Received: 9/11/2009

Lab ID:

0909214-04

Matrix: AIR

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RAN	GE	<del></del>		<del></del>	Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	µg/L	1	9/20/2009 12:40:50 PM
Surr: BFB	93.6	76.8-150	%REC	1	9/20/2009 12:40:50 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.10	μg/L	1 -	9/20/2009 12:40:50 PM
Toluene	ND	0.10	μg/L	1	9/20/2009 12:40:50 PM
Ethylbenzene	ND	0.10	μg/L	1	9/20/2009 12:40:50 PM
Xylenes, Total	ND	0.30	μ <b>g/L</b>	1	9/20/2009 12:40:50 PM
Surr: 4-Bromofluorobenzene	101	70.2-105	%REC	. 1	9/20/2009 12:40:50 PM

Qualifiers:

Page 4 of 7

Value exceeds Maximum Contaminant Level

E Estimated value

⁾ Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank В

Holding times for preparation or analysis exceeded Η

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 01-Oct-09

CLIENT:

Western Refining Southwest, Inc.

0909214

Lab Order: Project:

River Terrace 3rd QTR 2009 VS

Lab ID:

0909214-05

Client Sample ID: TP #3

Collection Date: 9/10/2009 9:15:00 AM

Date Received: 9/11/2009

Matrix: AIR

Analyses	Result	PQL (	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	ANGE	<del></del>	****		Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	μg/L	1	9/20/2009 1:10:18 PM
Surr: BFB	94.7	76.8-150	%REC	1	9/20/2009 1:10:18 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.10	μg/L	1	9/20/2009 1:10:18 PM
Toluene	ND	0.10	μg/L	1	9/20/2009 1:10:18 PM
Ethylbenzene	ND	0.10	μg/L	1	9/20/2009 1:10:18 PM
Xylenes, Total	ND	0.30	μg/L	1	9/20/2009 1:10:18 PM
Surr: 4-Bromofluorobenzene	104	70.2-105	%REC	1	9/20/2009 1:10:18 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

Ε Estimated value

Analyte detected below quantitation limits J

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 5 of 7

Date: 01-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0909214

River Terrace 3rd QTR 2009 VS

Project: Ri
Lab ID: 09

0909214-06

Client Sample ID: MW #49

Collection Date: 9/10/2009 9:40:00 AM

Date Received: 9/11/2009

Matrix: AIR

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE R	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	· ND	5.0	μg/L	1	9/20/2009 1:41:11 PM
Surr: BFB	92.3	76.8-150	%REC	. 1	9/20/2009 1:41:11 PM
EPA METHOD 8021B: VOLATILES				•	Analyst: NSB
Benzene	ND	0.10	µg/L	1	9/20/2009 1:41:11 PM
Toluene	ND	0.10	µg/L	1	9/20/2009 1:41:11 PM
Ethylbenzene	ND	0.10	μġ/L	1	9/20/2009 1:41:11 PM
Xylenes, Total	ND	0.30	μg/L	1	9/20/2009 1:41:11 PM
Surr: 4-Bromofluorobenzene	101	70.2-105	%REC	1	9/20/2009 1:41:11 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

14 Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 6 of 7

Date: 01-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0909214

Project:

River Terrace 3rd QTR 2009 VS

Lab ID:

0909214-07

Client Sample ID: DW #1

Collection Date: 9/10/2009 10:25:00 AM

Date Received: 9/11/2009

Matrix: AIR

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	ANGE			<del></del>	Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	µg/Ĺ	1	9/20/2009 2:39:34 PM
Surr: BFB	90.7	76.8-150	%REC	1	9/20/2009 2:39:34 PM
EPA METHOD 8021B: VOLATILES					Analyst: <b>NS</b> B
Benzene	ND	0.10	μg/L	1	9/20/2009 2:39:34 PM
Toluene	ND	0:10	µg/L	1	9/20/2009 2:39:34 PM
Ethylbenzene	ND	0.10	μg/L	1	9/20/2009 2:39:34 PM
Xylenes, Total	ND	0.30	μg/L	1	9/20/2009 2:39:34 PM
Surr: 4-Bromofluorobenzene	97.8	70.2-105	%REC	1	9/20/2009 2:39:34 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 7 of 7

DATES REPORT

# Hall Environmental Analysis Laboratory, Inc.

0909214 Lab Order: Client: Project:

Western Refining Southwest, Inc.

River Terrace 3rd QTR 2009 VS

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Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Instrument Run W QC Batch W	QC Batch ID Pr	Prep Date	Analysis Date
0909214-01A	0909214-01A TP #10	9/10/2009 7:35:00 AM	M Air	EPA Method 8015B: Gasoline Range ZEUS_090918A		R35359		9/18/2009
				EPA Method 8021B: Volatiles	ZEUS_090918A	R35359		6002/81/6
0909214-02A	TP#13	9/10/2009 8:00:00 AM		EPA Method 8015B: Gasoline Range	ZEUS_090918A	R35359		9/18/2009
,				EPA Method 8021B: Volatiles	ZEUS_090918A	R35359		9/18/2009
0909214-03A	TP#12	9/10/2009 8:25:00 AM		EPA Method 8015B: Gasoline Range	ZEUS_090918A	R35359		6002/81/6
				EPA Method 8021B: Volatiles	ZEUS_090918A	R35359		9/18/2009
0909214-04A	TP #11	9/10/2009 8:50:00 AM		EPA Method 8015B: Gasoline Range	ZEUS_090920A	R35371		600Z/0Z/6
				EPA Method 8021B: Volatiles	ZEUS_090920A	R35371		9/20/2009
- 0909214-05A	TP#3	9/10/2009 9:15:00 AM		EPA Method 8015B: Gasoline Range	ZEUS_090920A	R35371		9/20/2009
				EPA Method 8021.B. Volatiles	ZEUS_090920A	R35371		9/20/2009
0909214-06A	MW #49	9/10/2009 9:40:00 AM		EPA Method 8015B: Gasoline Range	ZEUS_090920A	R35371		6007/02/6
				EPA Method 8021B: Volatiles	ZEUS_090920A	R35371		6007/07/6
0909214-07A	DW #1	9/10/2009 10:25:00 AM		EPA Method 8015B: Gasoline Range	ZEUS_090920A	R35371		6007/07/6
				EPA Method 8021B: Volatiles	ZEUS_090920A	R35371		9/20/2009

Date: 01-Oct-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc. River Terrace 3rd QTR 2009 VS

Work Order:

0909214

Analyte	Result	Units	PQL	SPK Va S	SPK ref	%Rec L	owLimit Hi	ghLimit	%RPD	RPDLimit Qua	al i
Method: EPA Method 8015B: (	Gasoline Rai	nge									
Sample ID: 0909214-01A DUP		DUP				Batch ID:	R35359	Analys	is Date:	9/18/2009 3:45:2	.0 PN
Gasoline Range Organics (GRO)	ND	µg/L	5.0						0	24.6	
Surr: BFB	1823	μg/L	0	2000	0	91.1	76.8	150	0	0	
Sample ID: 0909214-06A DUP		DUP				Batch ID:	R35371	Analys	is Date:	9/20/2009 2:10:1	9 PN
Gasoline Range Organics (GRO)	ND	μg/L	5.0		,				0	24.6	
Surr: BFB	1854	μg/L	0	2000	0	92.7	76.8	150	0	0	
Sample ID: 0909214-01A DUP Benzene	ND	DUP	0.10						0	18.3	
Method: EPA Method 8021B: \	/olatiles					Batch ID:	R35359		is Date:	9/18/2009 3:45:2	
	ND	µg/L	0.10								
Toluene	ND	µg/L	0.10						0 -	35	
Ethylbenzene Yulongo Total	ND	µg/L	0.10						0	41.8 45.4	
Xylenes, Total Surr: 4-Bromofluorobenzene	ND 1.995	µg/L	0.30 0	2	0	99.8	70.2	105	0	45.4	
Sample ID: 0909214-06A DUP	1.555	μg/L <i>DUP</i>	U	2	U	Batch ID:	R35371		is Date:	9/20/2009 2:10:19	o PM
Benzene	ND		0.10				1100011	· mary c	0	18.3	J . 10
Toluene	ND	μg/L							. 0	35	
Oluene		·µg/L	0.10 0.10						0	41.8	
Ethylhonzano			0.10						v	43.0	
Ethylbenzene Kylenes, Total	ND ND	µg/L µg/L	0.30						0	45.4	







Estimated value

Analyte detected below quantitation limits

RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

# Sample Receipt Checklist

Client Name WESTERN REFINING SOUT			Date Receive	d:	9/11/2009
Work Order Number 0909214			Received by	TLS	American
Checklist completed by:		91	11/09	bels checked i	by: Initials
Signature (	ļ	D	ate *		
Matrix:	Carrier name: <u>UPS</u>	<u> </u>		•	
Shipping container/cooler in good condition?	Yes	V	No 🗆	Not Present	
Custody seals intact on shipping container/cooler?	. Yes	Y	No 🗌	Not Present	Not Shipped
Custody seals intact on sample bottles?	Yes		No 🗌	N/A .	
Chain of custody present?	Yes	$\checkmark$	No 🗀		
Chain of custody signed when relinquished and received	ved? Yes	$\checkmark$	No 🗀		
Chain of custody agrees with sample labels?	Yes	$\mathbf{V}$	No 🗌		
Samples in proper container/bottle?	Yes	$ \mathbf{Z} $	No 🗌	,	
Sample containers intact?	Yes	$\checkmark$	No 🗌		
Sufficient sample volume for indicated test?	Yes	¥	No 🗀		
All samples received within holding time?	Yes	✓	No 🗆		Number of preserved
Water - VOA vials have zero headspace?	O VOA vials submitted	$ \mathbf{V} $	Yes 🗌	No 🗆	bottles checked for pH:
Water - Preservation labels on bottle and cap match?	? Yes	$_{_{-}}\square$	No 🗌	N/A 🗹	
Water - pH acceptable upon receipt?	Yes		No 🗌	N/A 🗹	<2 >12 unless noted below.
Container/Temp Blank temperature?	•		<6° C 'Acceptab		BGIOW.
COMMENTS:			If given sufficient	time to cool.	
			•		
				•	
Client contacted Date	e contacted:		Pers	on contacted	
Contacted by: Reg	arding:				
Comments:					
				<u> </u>	
Corrective Action			·		

رو	iain	-of-Cu	Crain-of-Custody Record	Turn-Around Time:	Time:					•			į	į	i			į		
Client:	Weste	Client Western Refining	GNING	Standard	□ Rush				irasu.			֟ <b>֞</b> ֡֓֞֞֞֞֞֞֞֞֞֞֞֞֞֞֞		Hall envikonmental Analysts I adobatody					≤ ر	
				Project Name:						<b>1</b> 3						<u> </u>	T.	<u> </u>	<b>&gt;=</b>	
Mailing,	Addres	S. 井 50	Wailing Address: 井50 CR 4990	River	errace	3 th OTE 2009	2/V	4	301 H	4901 Hawkins NE	SNE	- Alb		Albuquerque, NM 87109	N N	37109				
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□ EDD	EDD (Type)			Sample Herri									ON			<del></del>			<del>10 X</del>	١٥ ،
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type			3TEX + <del>MTE</del> 3TEX + MTE	PH Method	PH (Method	odieM) 80: o AN9) 016:	CRA 8 Met	nions (F,Cl,	180 Pesticio	AOV) 809S	/-imə2) 0\2	···		ir Bubbles (	\ caraana m
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=	necessary,	, samples subr	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	ontracted to other ac	credited laboratori	es. This serves as noti	ce of this po	ossibility.	Any su	o-contra	cted da	a will be	clearty	notated	on the	analyt	dau leoi	ort.		7



### COVER LETTER

Friday, October 23, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990 Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: River Terrace 4th QTR-2009-VS

Dear Cindy Hurtado:

Order No.: 0910120

Hall Environmental Analysis Laboratory, Inc. received 11 sample(s) on 10/7/2009 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. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

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



Date: 23-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Client Sample ID: TP-7

Lab Order:

0910120

Collection Date: 10/6/2009 8:45:00 AM

Project:

River Terrace 4th QTR-2009-VS

Date Received: 10/7/2009

Lab ID:

0910120-01

Matrix: AIR

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	NGE	· · · · · · · · · · · · · · · · · · ·			Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	μg/L	1	10/8/2009 1:17:37 PM
Surr: BFB	103	76.8-150	%REC	1	10/8/2009 1:17:37 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.10	μg/L	1	10/8/2009 1:17:37 PM
Toluene	ND	0.10	μg/L	1	10/8/2009 1:17:37 PM
Ethylbenzene	, ND	0.10	μg/Ĺ	1	10/8/2009 1:17:37 PM
Xylenes, Total	ND	0.30	μg/L	1	10/8/2009 1:17:37 PM
Surr: 4-Bromofluorobenzene	99.0	70.2-105	%REC	1	10/8/2009 1:17:37 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 23-Oct-09

CLIENT:

Project:

Lab ID:

Western Refining Southwest, Inc.

Lab Order: 0910

0910120

0910120-02

River Terrace 4th QTR-2009-VS

Client Sample ID: TP-9

Collection Date: 10/6/2009 9:05:00 AM

Date Received: 10/7/2009

Matrix: AIR

Analyses	Result	PQL Qu	ıal Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RAM	IGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	μg/L	1	10/8/2009 1:46:48 PM
Surr: BFB	96.0	76.8~150	%REC	1	10/8/2009 1:46:48 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	<b>N</b> D	0.10	μg/L	1	10/8/2009 1:46:48 PM
Toluene	ND	0.10	μg/L	1	10/8/2009 1:46:48 PM
Ethylbenzene	ND	0.10	μg/L	1	10/8/2009 1:46:48 PM
Xylenes, Total	ND	0.30	µg/L	1	10/8/2009 1:46:48 PM
Surr: 4-Bromofluorobenzene	94.4	70.2-105	%REC	1	10/8/2009 1:46:48 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 23-Oct-09

CLIENT: Lab Order: Western Refining Southwest, Inc.

0910120

River Terrace 4th QTR-2009-VS

Project: Lab ID:

0910120-03

Client Sample ID: TP-8

Collection Date: 10/6/2009 9:30:00 AM

Date Received: 10/7/2009

Matrix: AIR

Analyses	Result	PQL (	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	NGE				Analyst: NSB
Gasoline Range Organics (GRO)	110	5.0	μg/L	1	10/9/2009 2:20:11 PM
Surr: BFB	104	76.8-150	%REC	1	10/9/2009 2:20:11 PM
EPA METHOD 8021B: VOLATILES			•		Analyst: <b>NSB</b>
Benzene	0.26	0.10	μg/L	1	10/9/2009 2:20:11 PM
Toluene .	ND	0.10	µg/L	1	10/9/2009 2:20:11 PM
Ethylbenzene	4.9	0.10	µg/L	1	10/9/2009 2:20:11 PM
Xylenes, Total	25	1.5	μg/L	5	10/8/2009 2:16:08 PM
Surr: 4-Bromofluorobenzene	101	70.2-105	%REC	5	10/8/2009 2:16:08 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank В

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Date: 23-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Client Sample ID: TP-6

Lab Order:

0910120

Collection Date: 10/6/2009 9:55:00 AM

Project:

River Terrace 4th QTR-2009-VS

Date Received: 10/7/2009

Lab ID:

0910120-04

Matrix: AIR

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: NSB
Gasoline Range Organics (GF:O)	370	5.0	μg/L	1	10/8/2009 2:45:20 PM
Surr: BFB	118	76.8-150	%REC	1	10/8/2009 2:45:20 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	0.89	0.10	μg/L	1	10/8/2009 2:45:20 PM
Toluene	ND	0.10	μg/L	1	10/8/2009 2:45:20 PM
Ethylbenzene .	1.7	0.10	μg/L	1	10/9/2009 2:49:25 PM
Xylenes, Total	4,0	0.30	µg/L	1	10/9/2009 2:49:25 PM
Surr: 4-Bromofluorobenzene	104	70.2-105	%REC	1	10/9/2009 2:49:25 PM

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

Date: 23-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

Lab ID:

0910120

Project: River Terrace 4th QTR-2009-VS

0910120-05

Client Sample ID: TP-5

Collection Date: 10/6/2009 10:30:00 AM

Date Received: 10/7/2009

Matrix: AIR

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	NGE	<del></del>			Analyst: NSB
Gasoline Range Organics (GRO)	140	10	μg/L	2	10/9/2009 3:18:46 PM
Surr: BFB	99.2	76.8-150	%REC	2	10/9/2009 3:18:46 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.20	μg/L	2	10/9/2009 3:18:46 PM
Toluene	ND	0.20	μg/L	2 .	10/9/2009 3:18:46 PM
Ethylbenzene	8.1	0.20	µg/L	2	10/9/2009 3:18:46 PM
Xylenes, Total	50	3.0	µg/L	10	10/8/2009 3:14:39 PM
Surr: 4-Bromofluorobenzene	99.0	70.2-105	%REC	10	10/8/2009 3:14:39 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded

Maximum Contaminant Level

Reporting Limit

Page 5 of 11

Date: 23-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0910120

River Terrace 4th QTR-2009-VS

Project: Lab ID:

0910120-06

Client Sample ID: TP-1

Collection Date: 10/6/2009 11:00:00 AM

Date Received: 10/7/2009

Matrix: AIR

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	NGE					Analyst: NSB
Gasoline Range Organics (GRO)	49	5.0		µg/L	1	10/8/2009 3:50:15 PM
Surr: BFB	114	76.8-150		%REC	1	10/8/2009 3:50:15 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	0.19	0.10		µg/L	1	10/8/2009 3:50:15 PM
Toluene	ND	0.10		µg/L	1	10/8/2009 3:50:15 PM
Ethylbenzene	2.2	0.10		µg/L	1	10/8/2009 3:50:15 PM
Xylenes, Total	12	0.30		µg/L	1	10/8/2009 3:50:15 PM
Surr: 4-Bromofluorobenzerie	110	70,2-105	S	%REC	1	10/8/2009 3:50:15 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

Ē Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

В Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 6 of 11

Date: 23-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Client Sample ID: TP-2

Lab Order:

0910120

Collection Date: 10/6/2009 12:15:00 PM

Project:

River Terrace 4th QTR-2009-VS

Date Received: 10/7/2009

Lab ID:

0910120-07

Matrix: AIR

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	μg/L	1	10/8/2009 4:19:28 PM
Surr: BFB	93.7	76.8-150	%REC	1	10/8/2009 4:19:28 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.10	μg/L	1	10/8/2009 4:19:28 PM
Toluene	ND	0.10	μg/L	1	10/8/2009 4:19:28 PM
Ethylbenzene	ND	0.10	μg/L	1	10/8/2009 4:19:28 PM
Xylenes, Total	0.34	0.30	μg/L	· 1	10/8/2009 4:19:28 PM
Surr: 4-Bromofluorobenzene	94.5	70.2-105	%REC	1	10/8/2009 4:19:28 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded Н

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 23-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0910120

Project:

River Terrace 4th QTR-2009-VS

Lab ID:

0910120-08

Client Sample ID: DW-1

Collection Date: 10/6/2009 12:50:00 PM

Date Received: 10/7/2009

Matrix: AIR

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	µġ/L	1	10/8/2009 4:48:45 PM
Surr: BFB	94.1	76.8-150	%REC	1	10/8/2009 4:48:45 PM
EPA METHOD 8021B: VOLATILES					Analyst: <b>NSB</b>
Benzene	ND	0.10	μg/L	1	10/8/2009 4:48:45 PM
Toluene	ND.	0.10	μg/L	1	10/8/2009 4:48:45 PM
Ethylbenzene	ND	0.10	μg/L	1	10/8/2009 4:48:45 PM
Xylenes, Total	ND	0.30	µg/L	1	10/8/2009 4:48:45 PM
Surr: 4-Bromofluorobenzene	93.6	70.2-105	%REC	1	10/8/2009 4:48:45 PM

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Reporting Limit

Date: 23-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0910120

Project:

River Terrace 4th QTR-2009-VS

Lab ID:

0910120-09

Client Sample ID: DW-1FD

Collection Date: 10/6/2009 12:52:00 PM

Date Received: 10/7/2009

Matrix: AIR

Analyses	Result	PQL (	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	NGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	µg/L	1	10/9/2009 12:17:27 PM
Surr: BFB	98.4	76.8-150	%REC	1	10/9/2009 12:17:27 PM
EPA METHOD 8021B: VOLATILES			• •	•	Analyst: NSB
Benzene	ND	0.10	μg/L	1	10/9/2009 12:17:27 PM
Toluene	ND	0.10	μg/L	1	10/9/2009 12:17:27 PM
Ethylbenzene	ND	0.10	μg/L	1	10/9/2009 12:17:27 PM
Xylenes, Total	ND	0.30	μg/L	1	10/9/2009 12:17:27 PM
Surr: 4-Bromofluorobenzenė	102	70.2-105	%REC	1	10/9/2009 12:17:27 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

Not Detected at the Reporting Limit ND

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 9 of 11

Date: 23-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Client Sample ID: MW #49

Lab Order:

0910120

Collection Date: 10/6/2009 1:45:00 PM

Project:

River Terrace 4th QTR-2009-VS

Date Received: 10/7/2009

Lab ID:

0910120-10

Matrix: AIR

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	μg/L	1	10/9/2009 12:51:03 PM
Surr: BFB	90.1	76.8-150	%REC	1	10/9/2009 12:51:03 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.10	µg/L	1	10/9/2009 12:51:03 PM
Toluene	ND	0.10	µg/Ľ	1	10/9/2009 12:51:03 PM
Ethylbenzene	ND	. 0.10	µg/L	1	10/9/2009 12:51:03 PM
Xylenes, Total	ND	0.30	μg/L	1	10/9/2009 12:51:03 PM
Surr: 4-Bromofluorobenzene	91.2	70.2-105	%REC	1	10/9/2009 12:51:03 PM

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 23-Oct-09

CLIENT: Lab Order: Western Refining Southwest, Inc.

0910120

River Terrace 4th QTR-2009-VS

Project: Lab ID:

0910120-11

Client Sample ID: Field Blank

Collection Date: 10/6/2009 2:00:00 PM

Date Received: 10/7/2009

Matrix: AIR

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B; GASOLINE RA	ANGE			-	Analyst: NSB
Gasoline Range Organics (GRO)	· ND	5.0	μg/L	1	10/9/2009 1:20:52 PM
Surr: BFB	89.2	76,8-150	%REC	1 .	10/9/2009 1.20:52 PM
EPA METHOD 8021B: VOLATILES					Analyst: <b>NS</b> B
Benzene	ND	0.10	μg/L	1	10/9/2009 1:20:52 PM
Toluene	ND	0.10	µg/L	1	10/9/2009 1:20:52 PM
Ethylbenzene	ND	0.10	μg/L	1	10/9/2009 1:20:52 PM
Xylenes, Total	ND	0.30	µg/L	1	10/9/2009 1:20:52 PM
Surr: 4-Bromofluorobenzene	90.6	70.2-105	%REC	1	10/9/2009 1:20:52 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

Ε Estimated value

Analyte detected below quantitation limits J

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank В

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 11 of 11

Date: 23-Oct-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

River Terrace 4th QTR-2009-VS

Work Order:

0910120

Analyte	Result	Units	PQL	SPK Va S	SPK ref	%Rec L	owLimit Hi	ghLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: G	Sasoline Rai	nge									
Sample ID: 0910120-08A DUP		DUP				Batch ID:	R35645	Analys	sis Date:	10/8/2009	5:18:04 PN
Gasoline Range Organics (GRO)	ND.	μg/L	5.0						0	24.6	
Surr: BFB	1841	μg/L	0	2000	0	92.1	76.8	150	0	0	
Sample ID: 0910120-10A DUP		DUP				Batch ID:	R35663	Analys	sis Date:	10/9/2009	1:50:45 PN
Gasoline Range Organics (GRO)	ND	μg/L	5.0						0	24.6	
Surr: BFB	1901	μg/L	0	2000	0	95.1	76.8	150	0	0	
Method: EPA Method 8021B; V	/olatites										
Sample ID: 0910120-08A DUP		DUP				Batch ID:	R35645	Analys	sis Date:	10/8/2009	5:18:04 PN
Benzene	ND	μg/L	0.10						0	18.3	
Toluene	ND	μg/L	0.10						0	35	
Ethylbenzene	ND	μg/L	0.10						0	41.8	
Xylenes, Total	ND	μg/L	0.30						0	45.4	
Surr: 4-Bromofluorobenzene	1.829	μg/L	0	2	0	91.4	70.2	105	0	0	
Sample ID: 0910120-10A DUP		DUP				Batch ID:	R35663	Analys	sis Date:	10/9/2009	1:50:45 PN
Benzene	ND	μg/L	0.10						0	18.3	
Toluene	ND	μg/L	0.10						0	35	
Ethylbenzene	ND	μg/L	0.10						0	41.8	
Xylenes, Total	ND	μg/L	0.30						0	45.4	
Surr: 4-Bromofluorobenzene	1.958	μg/L	0	2	0	97.9	70.2	105	0	0	







Estimated value

Analyte detected below quantitation limits

RPD outside accepted recovery limits

Holding times for preparation or analysis exceeded Н

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits S

### Sample Receipt Checklist

Client Name WESTERN REFINING SOUT				Date Receive	ed:		10/7/2009	
Work Order Number 0910120	1 }			Received b	y: TLS			
Checklist completed by:	N		16 7 Date	Sample ID	abels checked -	_	Itials	
Matrix:	Carrier name:	<u>UPS</u>						
Shipping container/cooler in good condition?		Yes	V	No 🗌 ·	Not Present			
Custody seals intact on shipping container/coo	oler?	Yes	V	No 🗌	Not Present		Not Shipped	
Custody seals intact on sample bottles?		Yes		No 🗌	N/A	V		
Chain of custody present?		Yes	✓	No 🗌				
Chain of custody signed when relinquished and	d received?	Yeş	$\checkmark$	No 🗌				
Chain of custody agrees with sample labels?		Yes	$\checkmark$	No 🗌				
Samples in proper container/bottle?		Yes	V	No 🗌				
Sample containers intact?		Yes	$\checkmark$	No 🗌				
Sufficient sample volume for indicated test?		Yes	$\checkmark$	No 🗌				
All samples received within holding time?	•	Yes	<b>✓</b>	No 🗌			Number of p	
Water - VOA vials have zero headspace?	No VOA vials subm	itted	V	Yes 🗌	No 🗌		pH:	Red 101
Water - Preservation labels on bottle and cap	match?	Yes		No 🗌	N/A 🗹			
Water - pH acceptable upon receipt?		Yes		No 🗌	N/A 🗹		<2 >12 unles below.	is noted
Container/Temp Blank temperature?				<6° C Acceptal			20.077.	
COMMENTS:				If given sufficier	it time to cool.			
			<del></del> :					
Client contacted	Date contacted:			Dor	son contacted			
·					oon comacica		,	
Contacted by:	Regarding:					·		<del></del>
Comments:								
				· ··				
			•					
	· .							
Corrective Action								
	······································							
							.,	



#### COVER LETTER

Friday, December 11, 2009

Cindy Hurtado
Western Refining Southwest, Inc. #50 CR 4990

Placemfield NIM 87413

Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: GAC 1ST QTR 1-6-09

Dear Cindy Hurtado:

Order No.: 0901085

Hall Environmental Analysis Laboratory, Inc. received 3 sample(s) on 1/7/2009 for the analyses presented in the following report.

This report is an addendum to the report dated January 15, 2009. This is an updated report.

No determination of compounds below these (denoted by the ND or < sign) has been made.

Reporting limits are determined by EPA methodology.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

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



Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0901085

**GAC 1ST QTR 1-6-09** 

Project: Lab ID:

0901085-01

Client Sample ID: GAC-Lead

Collection Date: 1/6/2009 12:45:00 PM

Date Received: 1/7/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF .	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	SE				Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	. 1	1/7/2009
Motor Oll Range Organics (MRO)	ND	5.0	mg/L	1	1/7/2009
Surr: DNOP	114	58-140	%REC	1	1/7/2009
EPA METHOD 8015B: GASOLINE RA	NGE		,		Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1 ,	1/12/2009 11:53:29 AM
Surr: BFB	77.3	59.9-122	%REC	1	1/12/2009 11:53:29 AM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	µg/L	1	1/12/2009 11:53:29 AM
Benzene	ND	1.0	μg/L	1	1/12/2009 11:53:29 AM
Toluene	, ND	1:.0	µg/Ł	1	1/12/2009 11:53:29 AM
Ethylbenzene	ND	1.0	µg/L	1	1/12/2009 11:53:29 AM
Xylenes, Total	ND	2.0	μg/L	. 1	1/12/2009 11:53:29 AM
Surr: 4-Bromofluorobenzene	78.4	65.9-130	%REC	1	1/12/2009 11:53:29 AM

0	us.	
Qua	mie	1.8:

- Value exceeds Maximum Contaminant Level
- Е Estimated value
- Analyte detected below quantitation limits
- Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 1 of 3

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0901085

Client Sample ID: GAC-Lag

Collection Date: 1/6/2009 12:40:00 PM

Project:

**GAC IST QTR 1-6-09** 

Date Received: 1/7/2009

Lab ID:

0901085-02

Matrix: AQUEOUS

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RAN	IGE				Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	1/7/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	. 1/7/2009
Surr: DNOP	124	58-140	%REC	1	1/7/2009
EPA METHOD 8015B: GASOLINE F	RANGE				Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	1/12/2009 12:23:57 PM
Surr: BFB	81.1	59.9-122	%REC	. 1	1/12/2009 12:23:57 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	. ND	2.5	μg/L	1	1/12/2009 12:23:57 PM
Benzene	ND ND	1.0	μg/L	1	1/12/2009 12:23:57 PM
Toluene	ND	1.0	μg/L	1	1/12/2009 12:23:57 PM
Ethylbenzene	ND	1.0	µg/L	1	1/12/2009 12:23:57 PM
Xylenes, Total	ND	2.0	μg/L	1	1/12/2009 12:23:57 PM
Surr: 4-Bromofluorobenzene	84.5	65.9-130	%REC	1	1/12/2009 12:23:57 PM

Qualifiers:

Page 2 of 3

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Date: 11-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

Client Sample ID: GAC-Inlet

0901085

Collection Date: 1/6/2009 12:50:00 PM

Project:

**GAC 1ST QTR 1-6-09** 

Date Received: 1/7/2009

Lab ID:

0901085-03

Matrix: AQUEOUS

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE	<del></del>				Analyst: SCC
Diesel Range Organics (DRO)	3.6	1.0	mg/L	1	1/7/2009
Motor Oil Range Organics (MRO)	. ND	5.0	mg/L	1	1/7/2009
Surr: DNOP	122	58-140	%REC	1	1/7/2009
EPA METHOD 8015B: GASOLINE RAI	NGE			•	Analyst: <b>DAM</b>
Gasoline Range Organics (GRO)	14	0.50	mg/L	10	1/12/2009 12:56:51 PM
Surr: BFB	78.3	59.9-122	%REC	10	1/12/2009 12:56:51 PM
EPA METHOD 8021B: VOLATILES			•		Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	25	μg/L	· 10	1/12/2009 12:56:51 PM
Benzene	ND	5.0	μg/L	10	1/12/2009 12:56:51 PM
Toluene ·	ND	10	µg/L	10	1/12/2009 12:56:51 PM
Ethylbenzene	430	10	µg/L	10	1/12/2009 12:56:51 PM
Xylenes, Total	4100	200	µg/L	100	1/13/2009 2:44:48 AM
Surr: 4-Bromofluorobenzene	87.6	65.9-130	%REC	10	1/12/2009 12:56:51 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

В Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Page 3 of 3

Date: 11-Dec-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

oject:

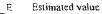
GAC 1ST QTR 1-6-09

Work Order:

0901085

									WOIN	Oruci.	0901003
Analyte	Result	Units	PQL	SPK Va SF	PK ref	%Rec L	owLimit Hi	ghLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: D	lesel Range										
Sample ID: MB-18051		MBLK				Batch ID:	18051	Analys	is Date:		1/7/2009
Diesel Range Organics (DRO)	ND	mg/L	1.0								
Motor Oil Range Organics (MRO)	ND	mg/L	5.0								
Sample ID: LCS-18051		LCS				Batch ID:	18051	Analys	is Date:		1/7/2009
Diesel Range Organics (DRO)	5.007	mg/L	1.0	5	0	100	74	157			
Method: EPA Method 8016B; G	asoline Ran	ge									
Sample ID: 5ML RB		MŖLK				Batch ID:	R31979	Analys	is Date:	1/12/2009	9:18:51 AM
Gasoline Range Organics (GRO)	ND	mg/L	0.050							•	
Sample ID: 2.5UG GRO LCS		LCS				Batch ID:	R31979	Analys	is Date:	1/12/2009	7:33:25 PM
Gasoline Range Organics (GRO)	0.5382	mg/L	0.050	0.5	0	108	80	115			
Method: EPA Method 8021B: V	olatiles		-		,						
Sample ID: 5ML RB		MBLK				Batch ID:	R31979	Analys	s Date:	1/12/2009	9:18:51 AM
Methyl tert-butyl ether (MTBE)	ND	μg/L	2.5								
Benzene	ND	µg/L	1.0						•		
Toluene	ND	μg/L	1.0								
Elhylbenzene	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	2.0								
Sample ID: 100NG BTEX LCS	•	LCS				Batch ID:	R31979	. Analysi	s Date:	1/12/2009	7:02:44 PM
Methyl tert-butyl ether (MTBE)	22.82	μg/L	2.5	20	0	114	51.2	138			
nzene	22.37	μg/L	1.0	20	0	112	85.9	113			
uene .	21.71	μg/L	1.0	20	0	109	86.4	113			
Ethylbenzene	20.85	µg/L	1.0	20	0	104	83.5	118			
Xylenes, Total	62.82	μg/L	2.0	60	0	105	83.4	122			

Qualifiers:



Analyte detected below quantitation limits RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 1

## Sample Receipt Checklist

Client Name WESTERN REFINING SOUT	property have a party			Date Receive	od:	1/7/20	900	
Work Order Number 0901085				Received by	r: ARS			
Checklist completed by:		· <del>-</del>	170 Dale	Sample ID I	abels checked b	y; Initials	· ————	
Matrix:	Carrier name	<u>UPS</u>	<u>2</u> .	*				
Shipping container/cooler in good condition?		Yes	€	No 🗌	Not Present [			
Custody seals intact on shipping container/coole	17	Yes	<b>V</b>	No 🔲 -	Not Present	Not Sh	ipped	
Custody seals intact on sample bottles?		Yes		No 🗌	N/A	Ø		
Chain of custody present?		Yes	Ø	No 🗀				
Chain of custody signed when relinquished and r	eceived?	2eY	$\checkmark$	No 🗆				
Chain of custody agrees with sample labels?		Yes	V	No 🗀				•
Samples in proper container/bottle?		Yes	V	No 🗌				
Sample containers intact?	,	Yes	V	No 🗌				
Sufficient sample volume for indicated test?	,	Yes	<b>V</b>	No 🗆				
All samples received within holding time?	•	Yes	$\mathbf{Z}$	No 🗌				:
Water - VOA vials have zero headspece?	No VOA vials submit			Yes 🗹	No 🗀			•
Water - Preservation labels on bottle and cap ma	tch?	Yes		No 🗌	N/A 🗹			•
Water - pH acceptable upon receipt?		Yes		No 🗌	N/A 🔀			•
Container/Temp Blank temperature?			4°	<6° C Acceptable	9			
COMMENTS:				lf given sufficient	time to cool.			
	•				*			
	·							
	·							
Client contacted	Date contacted:			Perso	n contacted			
Contacted by:	Regarding:							
Comments:								
	دانة داخليات التفاقات و فريهموست هي پيروانيانديد. ماه الانتخاب سيستعدم							
The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon								
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Corrective Aellen								
		·						

	HALL ENVIRORMENTAL		www.nailenvironmental.com $-(6-0)$ 4901 Hawkins NF - Abhuniarana NM 82100	٠,	1el. 505-345-3975 Fax 505-345-4107	()e	ino e	1/88/[)	O _{2,} )	+ TF + TF + TF + TF + TF + TF + TF + TF	BE SEE	TEX + TEST + TEST + TEST + TEST + TEST + MT TEST + MT TEST + MT TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TEST + ME TE	333333333333333333333333333333333333333		3 X X						Remarks:	e Time
Tum-Around Time:	Standard 🗆 Rush	ime:	GAC- 131 OTR 1-6-09	oject#:		Project Manager:			C			Container Preservative Type and # Type	-VOA HC	-10A HC  2	-VOR HC1 3						Time Time	eived by: Date T
nain-of-Custody Record			Mailing Address: #50 CR 4990	2	Phone #: 505 - 632-4/6/	1.		☐ Standard (Full Validation)	Other	CI EDD (Type)		Date Time Matrix Sample Request ID (	1	120 GAL- LA9	1 12:50 HSO GAC-INICT H					Troo: Dallanciaka La	of 1430 (color trabon	Date: Time: Relinquished by: Reco



#### COVER LETTER

Monday, February 23, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990 Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: GAC-Lead 2-12-09

Dear Cindy Hurtado:

Order No.: 0902137

Hall Environmental Analysis Laboratory, Inc. received 1 sample(s) on 2/13/2009 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. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager Nancy McDuffie, Laboratory Manager

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



Date: 23-Feb-09

CLIENT:

Western Refining Southwest, Inc.

Project:

GAC-Lead 2-12-09

Lab Order:

0902137

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date
0902137-01A	GAC-Lead	18352	EPA Method 8015B: Diesel Range	2/12/2009 10:50:00 AM
0902137-01A	GAC-Lead	R32412	EPA Method 8015B: Gasoline Range	2/12/2009 10:50:00 AM
0902137-01A	GAC-Lead	R32412	EPA Method 8021B: Volatiles	2/12/2009 10:50:00 AM

Date: 23-Feb-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0902137

Project:

GAC-Lead 2-12-09

Lab ID:

0902137-01

Client Sample ID: GAC-Lead

none bumple xxx Grad Bond

Collection Date: 2/12/2009 10:50:00 AM

Date Received: 2/13/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE					Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	. 1	2/19/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	2/19/2009
Surr: DNOP	123	58-140	%REC	1	2/19/2009
EPA METHOD 8015B: GASOLINE RAI	NGE				Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	2/14/2009 1:51:17 AM
Surr: BFB	91.5	59.9-122	%REC	1	2/14/2009 1:51:17 AM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	2/14/2009 1:51:17 AM
Benzene	ND	1.0	μg/L	1	2/14/2009 1:51:17 AM
Toluene	ND	1.0	μg/L	1 .	2/14/2009 1:51:17 AM
Ethylbenzene	ND	1:0	μg/L	1	2/14/2009 1:51:17 AM
Xylenes, Total	ND	2.0	μg/L	1	2/14/2009 1:51:17 AM
Surr: 4-Bromofluorobenzene	90.7	65.9-130	%REC	1	2/14/2009 1:51:17 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 1 of 1

Lab Order:

0902137 Western Refining Southwest, Inc.

Client:

DATES REPORT

23-Feb-09

Project:	GAC-Lead 2-12-09			Project: GAC-Lead 2-12-09				-
Sample ID	Client Sample ID	Collection Date	Matrix	Matrix Test Name	Instrument Run ID QC Batch ID Prep Date Analysis Date	QC Batch ID	Prep Date	Analysis Date
0902137-01A	0902137-01A GAC-Lead 2/12/2009 10:50:00 Ah	2/12/2009 10:50:00 AM	Aqueous	M         Aqueous         EPA Method 8015B: Diesel Range         FID(17A)_090219A         18352         2/19/2009         2/19/2009	FID(17A)_090219A 18352	18352	2/19/2009	2/19/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090213A	R32412		2/14/2009
				EPA Method 8021B: Volatiles	ZEUS 090213A	R32412		2/14/2009

Date: 23-Feb-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

oject:

GAC-Lead 2-12-09

Work Order:

0902137

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: D Sample ID: MB-18352	lesel Range	MBLK		1000	Batch I	D: 18352	Analysis D	Date:	2/19/200
Diesel Range Organics (DRO)	ND	mg/L	1.0						
Motor Oil Range Organics (MRO)	ND	mg/L	5.0						
Surr: DNOP	1.212	mg/L	0	121	58	140			
Sample ID: LCS-18352		LCS			Batch II	D: <b>18352</b>	Analysis D	Pate:	2/19/200
Diesel Range Organics (DRO)	5.410	mg/L	1.0	108	74	157			
Surr: DNOP	0.5566	mg/L	0	111	58	140			
Sample ID: LCSD-18352		LCSD			Batch II	D: <b>18352</b>	Analysis D	ate:	2/19/2009
Diesel Range Organics (DRO)	5.679	mg/L	1.0	114	74	157	4.86	23	
Surr: DNOP	0.6273	mg/L	0	125	58	140	0	0	
Method: EPA Method 8015B: G	asoline Ran	na .							
Sample ID: 5ML RB	acomic rail	MBLK			Batch II	D: <b>R32412</b>	Analysis D	ate: 2/13/20	009 10:02:46 AM
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Surr: BFB	16.92	mg/L	0	84.6	59.9	122			
Sample ID: 2.5UG GRO LCS		LCS			Batch II	D: <b>R32412</b>	Analysis D	ate: 2/14/2	2009 2:52:09 AN
Gasoline Range Organics (GRO)	0.5546	mg/L	0.050	111	80	115			
Surr; BFB.	19.11	mg/L	0	95.5	59.9	122			
Sample ID: 2.5UG GRO LCSD		LCSD			Batch II	D: R32412	Analysis D	ate: 2/14/2	009 3:22:30 AM
Gasoline Range Organics (GRO)	0.5572	mg/L	0.050	111	80	115	0.468	8.39	
Surr: BFB	20.10	mg/L	0	101	59.9	122	0	O	
nple ID: 0902137-01A DUP		DUP	•		Batch ID	): <b>R32412</b>	Analysis D	ate: 2/14/2	009 2:21:45 AM
Gasoline Range Organics (GRO)	ND	mg/L	0.050			•	0	20	
Surr: BFB	18.14	mg/L	0	90.7	59.9	122	0	0	

Qualifiers:



Estimated value

Analyte detected below quantitation limits RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 1

Date: 23-Feb-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

Project:

GAC-Lead 2-12-09

Work Order:

0902137

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPD	Limit	Qual -
Method: EPA Method 8021B: \	/olatiles									
Sample ID: 5ML RB		MBLK	*		Batch I	D: <b>R32412</b>	Analysis Dat	e:	2/13/200	09 10:02:46 A
Methyl tert-butyl ether (MTBE)	ND	μg/L	2.5							
Benzene	ND	μg/L	1.0	•			•			
Toluene	ND	µg/L	1.0							
Ethylbenzene	ND	µg/∟	1.0							
Xylenes, Total	ND	μg/L	2.0			•				
Surr: 4-Bromofluorobenzene	15.79	µg/L	0	79.0	65.9	130				
Sample ID: 100NG BTEX LCS		LCS			Batch !	D: <b>R32412</b>	Analysis Dat	e:	2/14/20	009 3:52:52 A
Methyl tert-butyl ether (MTBE)	21.56	µg/L	2.5	108	51.2	138				
Benzene	19.28	µg/L	1.0	96.4	85.9	113				
Toluene	20.43	μg/L	1.0	101	86.4	113				
Ethylbenzene	21.19	µg/L	1.0	106	83.5	118				
Xylenes, Total	64.55	µg/L	2.0	108	83.4	122				
Surr: 4-Bromofluorobenzene	19.74	µg/L	0	98.7	65. <del>9</del>	130				
Sample ID: 100NG BTEX LCSD		LCSD			Batch I	D: <b>R32412</b>	Analysis Dat	е;	2/14/20	009 4:23:20 A
Methyl tert-butyl ether (MTBE)	21.24	μg/L	2.5	106	51.2	138	1.48	28		
Benzene	19.00	µg/L	1.0	95.0	85.9	113	1.44	27		
Toluene	19.72	µg/L	1.0	97.2	86.4	113	3.52	19		
Ethylbenzene	20.69	µg/L	1.0	103	83.5	118	2.37	10		
Xylenes, Total	63.27	μg/L	2.0	105	83.4	122	2.00	13		
Surr: 4-Bromofluorobenzene	19.52	µg/L	0	97.6	65.9	130	0	0		
Sample ID: 0902137-01A DUP		DUP			Batch I	D: <b>R32412</b>	Analysis Dat	<b>e</b> :	2/14/20	009 2:21:45 A
Methyl tert-butyl ether (MTBE)	. ND	μg/L	2.5			•	0	20		
Benzene	ND	µg/L	1.0				0	20		
Toluene	ND	μg/L	1.0				0	20		
Ethylbenzene	ND	µg/L	1.0				0	20		
Xylenes, Total	ND	μg/L	2.0				0	20		
Surr: 4-Bromofluorobenzene	17.80	µg/L	0	89.0	85.9	130	0	0		

	-		
On	ыl	ífi.	ers:

E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 2

### Sample Receipt Checklist

ient Name WESTERN REFINING SOUT	ر يوندستين			Date	Received	l:		2/13/2009	
Work Order Number 0902137  Checklist completed by: Signature		2	15 (		eceived by:	ARS bels checked	by:	Initials	
Matrix:	Carrier name <u>Ui</u>	<u> </u>							
Shipping container/cooler in good condition?	Υe	es	¥	No		Not Present			
Custody seals intact on shipping container/co	ooler? Ye	es	V	No		Not Present		Not Shipped	
Custody seals intact on sample bottles?	Υe	es		No		N/A	¥		
Chain of custody present?	Ye	35	$\checkmark$	No					
Chain of custody signed when relinquished a	nd received? Ye	98	$\checkmark$	No					
Chain of custody agrees with sample labels?	Ye	8	$ \mathbf{V}$	No					
Samples in proper container/bottle?	Ye	s	V	No					
Sample containers intact?	Ye	s	V	No		•			
Sufficient sample volume for indicated test?	Ye	s	V	No					
All samples received within holding time?	Ye	s	V	No					
Water - VOA vials have zero headspace?	No VOA vials submitte	d (		Yes	$\checkmark$	No 🗆			
Water - Preservation labels on bottle and cap	match? Ye	s [		No		N/A 🗹			
Water - pH acceptable upon receipt?	Ye	s [		No		N/A 🗹			
Container/Temp Blank temperature?		4	•		Acceptable				
COMMENTS:				If given	sufficient i	time to cool.			
r									
	=======	_					:		
Client contacted	Date contacted:				Perso	n contacted			
Contacted by:	Regarding:								
Comments:			······································			<del></del>			· 
					×	<del></del>			
Corrective Action									

	ANAL ENVIRONMENTAL		4901 Hawkins NE - Albuquerque, NM 87109		Analysis	(Vlr	oss Oilee	15B (G8 18.1) 14.1) 13.100 _{2,} 1 1,8082	\(\Lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)\(\lambda\)	TEX + MTI TEX + MTI TEX + MTI TEX + MTI TEX + MTI TEX + MEtho TEX TEX TEX TEX TEX TEX TEX TEX TEX TEX	HT							Remarks:	
Tum-Around Time:	© Standard □ Rush	Project Name:	GR-Lead 2-12-09	Project #:		Project Manager:		Sampler: Sapparation of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sample of the sa	Surjection of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the	Container Preservative Type and # Type	-3-10A HCI						C	97 9.40 2/13/09	Received by: Date Time
Chain-of-Custody Record	Client: Western Refining (Binfld)		Mailing Address: #50 (R4990	2	Phone #: 505 - 633-4/6/	7	QA/QC Package:	n Other	□ EDD (Type)	Time Matrix Sample Request ID	7-4-51 10:50 140 OAL-Lead							Time: Relinquished by:  9 11, 30 (2) fut Kalen	Relinquished by:



#### COVER LETTER

Wednesday, March 18, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990 Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: GAC Lead - 3/5/09

Dear Cindy Hurtado:

Order No.: 0903098

Hall Environmental Analysis Laboratory, Inc. received 1 sample(s) on 3/6/2009 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. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager Nancy McDuffie, Laboratory Manager

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



Date: 18-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Project:

GAC Lead - 3/5/09

Lab Order:

0903098

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date
0903098-01A	GAC Lead	R32764	EPA Method 8021B: Volatiles	3/5/2009 9:15:00 AM
0903098-01A	GAC Lead	R32764	EPA Method 8015B: Gasoline Range	3/5/2009 9:15:00 AM
0903098-01A	GAC Lead	18475	EPA Method 8015B: Diesel Range	3/5/2009 9:15:00 AM

Date: 18-Mar-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0903098

Project:

GAC Lead - 3/5/09

Lab ID:

0903098-01

Client Sample ID: GAC Lead

Collection Date: 3/5/2009 9:15:00 AM

Date Received: 3/6/2009

Matrix: AQUEOUS

Analyses	Result	PQL (	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E				Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	3/9/2009 .
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	3/9/2009
Surr: DNOP	129	58-140	%REC	1	3/9/2009
EPA METHOD 8015B: GASOLINE RA	NGE				Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	3/16/2009 4:39:57 AM
Surr: BFB	84.6	59.9-122	%REC	1	3/16/2009 4:39:57 AM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	- 3/16/2009 4:39:57 AM
Benzene	ND	1.0	μg/L	1	3/16/2009 4:39:57 AM
Toluene	ND	1.0	μ <b>g/</b> L	1	3/16/2009 4:39:57 AM
Ethylbenzene	ND	1.0	µg/L	1	3/16/2009 4:39:57 AM
Xylenes, Total	ND	2.0	μg/L	1	3/16/2009 4:39:57 AM
Surr: 4-Bromofluorobenzene	89.5	65.9-130	%REC	1	3/16/2009 4:39:57 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 1 of 1

0903098 Lab Order:

Western Refining Southwest, Inc.

Client:

DATES REPORT

18-Mar-09

	Instrument Run ID QC Batch ID Prep Date Analysis Date	3/8/2009 3/9/2009	3/16/2009	3/16/2009
	QC Batch ID Pr	18475 3//	R32764	R32764
	Instrument Run ID	FID(17A)_090309A 18475	ZEUS_090315A	ZEUS_090315A
	Matrix Test Name Instrument Run ID QC Batch ID Prep Date Analysis Date	0903098-01A GAC Lead 3/5/2009 9:15:00 AM Aqueous EPA Method 8015B: Diesel Range FID(17A)_090309A 18475 3/8/2009 3/9/2009	EPA Method 8015B: Gasoline Range	EPA Method 8021B: Volatiles
	Matrix	Aqueous		
	Collection Date	3/5/2009 9:15:00 AM		
GAC Lead - 3/5/09	Sample ID Client Sample ID Collection Date	GAC Lead		
Project:	Sample ID	0903098-01A GAC Lead		

Date: 18-Mar-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

oject:

GAC Lead - 3/5/09

Work Order:

0903098

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit Qual
Method: EPA Method 8015B: D	iesei Range				<b>75</b> _4 = 1 - 1	D. 404==	Amelyaia De	2/0/000
Sample ID: MB-18475		MBLK			Batch I	D: <b>18475</b>	Analysis Da	ite: 3/9/2009
Diesel Range Organics (DRO)	ND	mg/L	1.0					
Motor Oil Range Organics (MRO)	ND	mg/L	5.0					
Surr: DNOP	1.128	mg/L	0	113	58	140		
Sample ID: LCS-18475		LCS			Batch I	D: <b>18475</b>	Analysis Da	ite: 3/9/2009
Diesel Range Organics (DRO)	5.667	mg/L	1.0	113	74	157		
Surr: DNOP	0.5827	mg/L	0	117	58	140		
Sample ID: LCSD-18475		LCSD			Batch I	D: <b>18475</b>	Analysis Da	te: 3/9/2009
Diesel Range Organics (DRO)	5.184	mg/L	1.0	104	74	157	8.90	23
Surr: DNOP	0.5582	mg/L	0	112	58	140	0	0
Method: EPA Method 8015B: G	asolina Ran	αe						
Sample ID: 5ML RB		MBLK			Batch I	D: <b>R32764</b>	Analysis Da	te: 3/15/2009 1:25:27 PM
Gasoline Range Organics (GRO)	ND	mg/L	0.050					
Surr: BFB	16.88	mg/L	0 .	84.4	59.9	122		
Sample ID: 2.5UG GRO LCS		LCS			Batch I	D: <b>R32764</b>	Analysis Da	te: 3/15/2009 11:35:04 PM
Gasoline Range Organics (GRO)	0.5530	mg/L	0.050	111	80	115	•	
Surr: BFB	19.35	mg/L	0	96.7	59.9	122		
Method: EPA Method 8021B: Ve	olatiles							
Sample ID: 5ML RB		MBLK			Batch II	D: <b>R32764</b>	Analysis Da	te: 3/15/2009 1:25:27 PM
hyl tert-butyl ether (MTBE)	ND	µg/L	2.5					
nzene	ND	μg/L	1.0					
Toluene	ND	μg/L	1.0					,
Ethylbenzene	ND	μg/L	1.0					•
Xylenes, Total	ND	µg/L	2.0					
Surr: 4-Bromofluorobenzene	17.98	μg/L	0	89.9	65.9	130		
Sample ID: 100NG BTEX LCS		LCS			Batch II	D: <b>R32764</b>	Analysis Dat	te: 3/15/2009 11:04:33 PM
Methyl tert-butyl ether (MTBE)	22.70	μg/L	2.5	113	51.2	138		
Benzene	21.83	µg/L	1.0	109	85.9	113		
Toluene	22.73	µg/L	1.0	114	86.4	113		S
Ethylbenzene	22.17	µg/L	1.0	111	83.5	118		
(ylenes, Total	66.37	µg/L	2.0	-111	83.4	122		
Surr: 4-Bromofluorobenzene	20.37	µg/L	0	102	65.9	130		

_				
Qu	al	11	Δ.	-0
VΨ	41	111	C	



Estimated value

Analyte detected below quantitation limits

RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 1

## Sample Receipt Checklist

Client Name WESTERN REFINING SOUT	•	Date Received:		3/6/2009
Work Order Number 0903098		Received by:	TLS	4
Checklist completed by:	3 L Date	Sample ID labels	checked by:	Inittels
Matrix: Carrier nam	e: <u>UPS</u>			
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 su	bmitted	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°	<6° C Acceptable		
COMMENTS:		If given sufficient time	to cool.	
		·.		
Client contacted Date contacted:		Person co	ontacted ·	
Contacted by: Regarding:			·	
Comments:			·	
Corrective Action				
			<del> </del>	

	TORY						(	N 10 Y	Air Bubbles (					-		
	HALL ENVIRONMENTAL  ANALYSIS LABORATORY	www.hallenvironme	4901 Hawkins NE - Albuquerque, NM 87109	505-345-3975 Fax 505-345-4107	AnalysisiRequest	(*(	) ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	1.814 t 1.403 t 1.6HA 1.e 1.e 1.e 1.e 1.e 1.e 1.e 1.e 1.e 1.e	HTH Method EDB (Method 8310 (PNA o 8310 (PNB o Anions (F,CL 8081 Pesticio 8260B (VOA 8250 (Semi-							
	8		4901	_:		(λ)ι	o H (Gas or	T + 38	BTEX + MTE BTEX + MTE	1						Remarks:
Turn-Around Time:	Z Standard □ Rush	Project Name:	GAC Lead-3/05/09	Project #:		Project Manager:	Sample Files b		er Preservative	4-VOA- HCC -1						Received by:    Structure   Desirent   Time   Perceived by:
ain-of-Custody Record	Dient Western Refining (BIMFLA)		Aailing Address: 井 <b>雪の</b> (R 499)	Bloomfield, NM 87413	hone #: 505-632-4161	smail or Fax#: 505-632-391/	Level 4 (Full Validation)		Matrix Sample Request ID	NO GAC Lead						Relinquished by:
ain-(	Wester		Address:	Sloom	#. 505-	r Fax#:	2A/QC Package: 3 Standard 3 Other	EDD (Type)	Time	954						Time:
	Slient:		Mailing		hone	mail o	JAVOC Pa J Standa J Other	J EDC	Date	608	_					) ate:

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.



#### **COVER LETTER**

Monday, April 13, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: GAC 2nd Qtr 4-1-09

Dear Cindy Hurtado:

Order No.: 0904038

Hall Environmental Analysis Laboratory, Inc. received 3 sample(s) on 4/2/2009 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. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager Nancy McDuffie, Laboratory Manager

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



Date: 13-Apr-09

CLIENT:

Western Refining Southwest, Inc.

Project:

GAC 2nd Qtr 4-1-09

Lab Order:

0904038

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date
0904038-01A	GAC-Lag	18738	EPA Method 8015B: Diesel Range	4/1/2009 9:25:00 AM
0904038-01A	GAC-Lag	R33137	EPA Method 8021B: Volatiles	4/1/2009 9:25:00 AM
0904038-01A	GAC-Lag	R33137	EPA Method 8015B: Gasoline Range	4/1/2009 9:25:00 AM
0904038-02A	GAC-Lead	18738	EPA Method 8015B: Diesel Range	4/1/2009 9:30:00 AM
0904038-02A	GAC-Lead	R33137	EPA Method 8021B: Volatiles	4/1/2009 9:30:00 AM
0904038-02A	GAC-Lead	R33137	EPA Method 8015B: Gasoline Range	4/1/2009 9:30:00 AM
0904038-03A	GAC-Inlet	R33137	EPA Method 8021B: Volatiles	4/1/2009 9:35:00 AM
0904038-03A	GAC-Inlet	R33137	EPA Method 8015B: Gasoline Range	4/1/2009 9:35:00 AM
0904038-03A	GAC-Inlet	18738	EPA Method 8015B: Diesel Range	4/1/2009 9:35:00 AM
0904038-03A	GAC-Inlet	R33137	EPA Method 8021B; Volatiles	4/1/2009 9:35:00 AM
0904038-03A	GAC-Inlet	R33137	EPA Method 8021B: Volatiles	4/1/2009 9:35:00 AM
0904038-03A	GAC-Inlet	R33137	EPA Method 8021B: Volatiles	4/1/2009 9:35:00 AM
0904038-03A	GAC-Inlet	R33137	EPA Method 8015B: Gasoline Range	4/1/2009 9:35:00 AM
0904038-03A	GAC-Inlet	R33137	EPA Method 8015B: Gasoline Range	4/1/2009 9:35:00 AM

Date: 13-Apr-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904038

GAC 2nd Qtr 4-1-09

Project: Lab ID:

0904038-01

Client Sample ID: GAC-Lag

Collection Date: 4/1/2009 9:25:00 AM

Date Received: 4/2/2009

Matrix: AQUEOUS

Analyses	Result	PQL (	ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	<u> </u>				Analyst: SCC
Diesel Range Organics (DRO)	2.7	1.0	mg/L	1	4/8/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	4/8/2009
Surr: DNOP	111	58-140	%REC	1	4/8/2009
EPA METHOD 8015B: GASOLINE RA	ANGE		•		Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	4/8/2009 2:24:18 AM
Surr. BFB	88.9	59.9-122	%REC	1 .	4/8/2009 2:24:18 AM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	4/8/2009 2:24:18 AM
Benzene	ND	1.0	μg/L	1	4/8/2009 2:24:18 AM
Toluene	ND	1.0	μg/L	1	4/8/2009 2:24:18 AM
Ethylbenzene	ND	1.0	μg/L	1	4/8/2009 2:24:18 AM
Xylenes, Total	ND	2.0	μg/L	1	4/8/2009 2:24:18 AM
Surr. 4-Bromofluorobenzene	91.2	65.9-130	%REC	1	4/8/2009 2:24:18 AM



Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 13-Apr-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904038

0904038-02

Client Sample ID: GAC-Lead

Collection Date: 4/1/2009 9:30:00 AM

Project: Lab ID:

GAC 2nd Qtr 4-1-09

Date Received: 4/2/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE					Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	4/8/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	4/8/2009
Surr: DNOP	116	58-140	%REC	1 .	4/8/2009
EPA METHOD 8015B: GASOLINE RAN	IGE				Analyst: <b>DAM</b>
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	4/8/2009 3:25:11 AM
Surr: BFB	85.4	59.9-122	%REC	1	4/8/2009 3:25:11 AM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	4/8/2009 3:25:11 AM
Benzene -	ND	1.0	μg/L	1	4/8/2009 3:25:11 AM
Toluene	ND	1.0	µg/L	1	4/8/2009 3:25:11 AM
Ethylbenzene	ND	1.0	μg/L	1	4/8/2009 3:25:11 AM
Xylenes, Total	<b>N</b> D	2.0	μg/L	1	4/8/2009 3:25:11 AM
Surr: 4-Bromofluorobenzene	86.5	65.9-130	%REC	1	4/8/2009 3:25:11 AM

### Qualifiers:

- Value exceeds Maximum Contaminant Level
- Estimated value E
- Analyte detected below quantitation limits
- Not Detected at the Reporting Limit ND
- Spike recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Reporting Limit

Date: 13-Apr-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0904038

Project:

GAC 2nd Qtr 4-1-09

Lab ID:

0904038-03

Client Sample ID: GAC-Inlet

Collection Date: 4/1/2009 9:35:00 AM

Date Received: 4/2/2009

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RAN	GE				Analyst: SCC
Diesel Range Organics (DRO)	2.2	1.0	mg/L	1	4/8/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	4/8/2009
Surr: DNOP	116	58-140	%REC	1	4/8/2009
EPA METHOD 8015B: GASOLINE R	ANGE				Analyst: DAM
Gasoline Range Órganics (GRO)	1.5	0.10	mg/L	2	4/9/2009 12:08:22 PM
Surr: BFB	89.8	59.9-122	%REC	2	4/9/2009 12:08:22 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	5.0	μg/L	2	4/9/2009 12:08:22 PM
Benzene	52	2.0	μg/L	2	4/9/2009 12:08:22 PM
Toluene	ND	2.0	μg/L	2	4/9/2009 12:08:22 PM
Ethylbenzene	180	2.0	μg/L	2	4/9/2009 12:08:22 PM
Xylenes, Total	260	4.0	μg/L	2	4/9/2009 12:08:22 PM
Surr: 4-Bromofluorobenzene	99.3	65.9-130	%REC	2	4/9/2009 12:08:22 PM

- Value exceeds Maximum Contaminant Level
- Ε Estimated value
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Reporting Limit

DATES REPORT

# Hall Environmental Analysis Laboratory, Inc.

0904038 Lab Order: Client:

Western Refining Southwest, Inc.

GAC 2nd Qtr 4-1-09 Project:

,			The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s					
Sample ID	α		Matrix	Test Name	Instrument Run ID QC Batch ID Prep Date	QC Batch ID	Prep Date	Analysis Date
0904038-01A	0904038-01A GAC-Lag	4/1/2009 9:25:00 AM	Aqueous	EPA Method 8015B: Diesel Range TD(17A) 2_090408, 18738 4/6/2009	TD(17A) 2_090408	18738	li	4/8/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090407A	R33137		4/8/2009
				EPA Method 8021B: Volatiles	ZEUS_090407A	R33137		4/8/2009
0904038-02A	GAC-Lead	4/1/2009 9:30:00 AM		EPA Method 8015B. Diesel Range	TD(17A) 2_090408,	18738	4/6/2009	4/8/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090407A	R33137		4/8/2009
				EPA Method 8021B: Volatiles	ZEUS_090407A	R33137		4/8/2009
0904038-03A	GAC-Inlet	4/1/2009 9:35:00 AM		EPA Method 8015B. Diesel Range	ID(17A) 2_090408,	18738	4/6/2009	4/8/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090409A	R33137		4/9/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090407A	R33137		4/8/2009
		·	٠	EPA Method 8015B. Gasoline Range	ZEUS_090407A	R33137		4/8/2009
Ę				EPA Method 8021B: Volatiles	ZEUS_090409A	R33137		4/9/2009
				EPA Method 8021B: Volatiles	ZEUS_090408A	R33137		4/8/2009
				EPA Method 8021B: Volatiles	ZEUS_090407A	R33137		4/8/2009
				EPA Method 8021B: Volatiles	ZEUS_090407A	R33137		4/8/2009

Date: 13-Apr-09

# QA/QC SUMMARY REPORT

lient:

Western Refining Southwest, Inc.

GAC 2nd Qtr 4-1-09

Work Order:

0904038

Analyte	Result	Units -	PQL	%Rec	LowLimit H	HighLimit	%RPD	RPD	imit Qual
Method: EPA Method 8015B: D	iesel Range								
Sample ID: MB-18738		MBLK			Batch ID	18738	Analysis D	ate:	4/8/2009
Diesel Range Organics (DRO)	ND	mg/L	1.0						
Motor Oil Range Organics (MRO)	ND	mg/L	5.0						
Surr: DNOP	1.168	mg/L	0	117	58	140			
Sample ID: LCS-18738		LCS			Batch ID	18738	Analysis D	ate:	4/8/2009
Diesel Range Organics (DRO)	6.267	mg/L	1.0	125	74	157		4	
Surr: DNOP	0.5736	mg/L	0	115	58	140			
Sample ID: LCSD-18738		LCSD			Batch ID	18738	Analysis D	ate:	4/8/2009
Diesel Range Organics (DRO)	6.576	mg/L	1.0	132	74	157	4.82	23	
Surr: DNOP	0.5942	mg/L	0	119	58	140	0	0	
Method: EPA Method 8015B: G	asoline Ran	ne e							
Sample ID: 5ML RB	asonno man	MBLK		•	Batch ID	R33137	Analysis Da	ate:	4/7/2009 9:38:13 AM
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Surr: BFB	18.06	mg/L	0	90.3	59.9	122			
Sample ID: 2.5UG GRO LCS		LCS			Batch ID	R33137	Analysis Da	ale:	4/7/2009 7:18:05 PM
Gasoline Range Organics (GRO)	0.5090	mg/L	0.050	102	80	115			
Surr: BFB	18.25	mg/L	0	91.2	59.9	122			
Sample ID: 2.5UG GRO LCSD		LCSD			Batch ID:	R33137	Analysis Da	ate:	4/7/2009 7:48:31 PM
Gasoline Range Organics (GRO)	0.5360	mg/L	0.050	107	80	115	5.17	8.39	
Furr: BFB	19.65	mg/L	. 0	98.2	59.9	122	0	٥	
mple ID: 0904038-01A DUP		DUP			Batch ID:	R33137	Analysis Da	ate:	4/8/2009 2:54:47 AM
Gasoline Range Organics (GRO)	ND	mg/L	0.050				0	20	
2 2 1 ,		-	0	82.1	59.9	122		D	



Estimated value

Analyte detected below quantitation limits RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

Project:

GAC 2nd Qtr 4-1-09

Work Order:

0904038

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDL	imit Qual
Method: EPA Method 8021B: V	olatiles								
Sample ID: 5ML RB		MBLK			Batch	ID: <b>R33137</b>	Analysis D	ate:	4/7/2009 9:38:13 AM
Methyl tert-butyl ether (MTBE)	ND	µg/L	2.5						
Benzene	ND	µg/L	1.0						
Toluene	ND	μg/L	1.0		*				•
Ethylbenzene	ND	µg/L	1.0		•				•
Xylenes, Total	ND	µg/L	2.0						
Surr: 4-Bromofluorobenzene	17.85	μg/L	0	89.3	65.9	130			
Sample ID: 100NG BTEX LCS		LCS			Batch	ID: <b>R33137</b>	Analysis D	ate:	4/7/2009 8:19:01 PM
Methyl tert-butyl ether (MTBE)	20.75	μg/L	2.5	104	51.2	138			
Benzene	21.36	μg/L	1.0	107	85.9	113			
Toluene	22.01	µg/L	1.0	110	86.4	113		•	
Ethylbenzene	21.38	µg/L	1.0	107	83.5	[.] 118			
Xylenes, Total	63.41	µg/∟	2.0	106	83.4	122	,		
Surr: 4-Bromofluorobenzene	20.41	μg/L	0	102	65.9	130			
Sample ID: 100NG BTEX LCSD		LCSD			Batch	ID: <b>R33137</b>	Analysis D	ate:	4/7/2009 8:49:21 PM
Methyl tert-butyl ether (MTBE)	20.71	· μg/L	2.5	104	51.2	138	0.212	28	
Benzene	20.65	µg/L	1.0	103	85.9	113	3.39	27	. *
Toluene	20.87	µg/L	1.0	104	86.4	113	5.31	19	
Ethylbenzene	20.36	µg/L	1.0	102	83.5	118	4.86	10	
Kylenes, Total	60.47	µg/L	2.0	101	83.4	122	4.75	13	
Surr: 4-Bromofluorobenzene	17.69	µg/L	0	88.4	65.9	130	0	0	
Sample ID: 0904038-01A DUP		DUP	•		Batch	ID: <b>R33137</b>	Analysis D	ate:	4/8/2009 2:54:47 AM
Methyl tert-butyl ether (MTBE)	ND	μg/L	2.5				0	20	
Benzene	ND	µg/L	1.0				0	20	
Toluene	ND	μg/L	1.0		•		0	20	
Ethylbenzene	ND	µg/L	1.0				0	20	
Kylenes, Total	ND	μg/L	2.0				О	20	
Surr: 4-Bromofluorobenzene	16.65	µg/L	0	83.3	65.9	130	0	0	

Q	u	a	I	ί	Ĭ	e	r	S	:

E Estimated value

Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 2



7

### Sample Receipt Checklist 4/2/2009 lient Name WESTERN REFINING SOUT-Date Received: Received by: ARS Work Order Number 0904038 Sample ID labels checked by: Checklist completed by: Carrier name: UPS Matrix: Yes 🗸 No 🗀 Not Present Shipping container/cooler in good condition? No 🗌 Not Present Custody seals intact on shipping container/cooler? Yes 🗸 Not Shipped Yes 🗌 No 🗀 N/A Custody seals intact on sample bottles? Yes 🗸 No 🗆 Chain of custody present? No 🗌 Yes 🗹 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? No 🗆 All samples received within holding time? Yes 🗹 No VOA vials submitted Yes 🗸 No 🗌 Water - VOA vials have zero headspace? Yes 🗌 No 🗆 N/A 🔽 Nater - Preservation labels on bottle and cap match? Yes 🗌 No 🗔 N/A Water - pH acceptable upon receipt? <6° C Acceptable Container/Temp Blank temperature? 3° If given sufficient time to cool. COMMENTS: Person contacted Date contacted: Client contacted Contacted by: Regarding: Comments: Corrective Action

HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com kins NE - Albuquerque, NM 87109 345-3975 Fax 505-345-4107	(AOV) (Semi-VOA) (AOV-imes) 073	78		ated on the anal
IALL ENVIRON NALYSIS LAB( www.hallenvironmental.com ins NE - Albuquerque, NM 8 5-3975 Fax 505-345-41	110 (PNA or PAH) SRA 8 Metals nions (F,Cl,NO $_3$ ,NO $_2$ ,PO $_4$ ,SO $_4$ ) 1808 PCB's	Я		data will be clearly note
ANALL  ANALL  www.hal  4901 Hawkins NE -  Tel. 505-345-3975	(Gas only) (Gas only) (Gas only) (Gas/Diesel) H9 (Method 8015B (Gas/Diesel) H9 (Method 504.1)	H	×	Remarks:
Time:    Rush   4-1-09	anager:  Composition (8021)  For a preservative (8021)  For a preservative (8021)		HC/ 3 4	Date Time Date Time This serves as notice of this
Turn-Around Time:  Standard Project Name:  AProject #:	Sample: Kontainer Type and #	4-NOA-H	H-10A	Received by: Received by:
Record Ng 790	Full Validation)	GAC-LAG	GAC-INICT	Time: Relinquished by:  Received by:  Received by:  Received by:  Received by:  Received by:
In-of-Custody F ESTERN REFINITIONS REFINITIONS CR 450 CR 450 CR 450 CR 450 CR 450 CR 450 CR 450 CR 450 CR 460 CR 4	Other Matrix	H20 H20	5 H20	Refinguished by Relinquished by Reinquished by Samples submitted
Client: Western  Client: Western  Mailing Address: #  Ploon Gield  Phone #: 505-6	email or Fax#  QA/QC Package.  ☐ Standard  Accreditation  ☐ NELAP  ☐ EDD (Type)  ☐ Date  Time	41-09 9:30	3E;6 60-1-H	V-C9 11:00 Date: Time:



### COVER LETTER

Thursday, June 04, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: GAC-Lead 5-4-09

Dear Cindy Hurtado:

Order No.: 0905051

Hall Environmental Analysis Laboratory, Inc. received 1 sample(s) on 5/5/2009 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. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager Nancy McDuffie, Laboratory Manager

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



Date: 04-Jun-09

CLIENT:

Western Refining Southwest, Inc.

Project:

GAC-Lead 5-4-09

Lab Order:

0905051

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date	
0905051-01A	GAC-Lead	19069	EPA Method 8015B: Diesel Range	5/4/2009 9:55:00 AM	
0905051-01A	GAC-Lead	R33566	EPA Method 8015B: Gasoline Range	5/4/2009 9:55:00 AM	
0905051-01A	GAC-Lead	R33566	EPA Method 8021B: Volatiles	5/4/2009 9:55:00 AM	

Date: 04-Jun-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order: Project:

0905051

GAC-Lead 5-4-09

Lab ID:

0905051-01

Client Sample ID: GAC-Lead

Collection Date: 5/4/2009 9:55:00 AM

Date Received: 5/5/2009

Matrix: AQUEOUS

Analyses	Result	PQL Ç	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RAN	GE				Analyst: SCC
Diesel Range Organics (DRO)	2.7	1.0	mg/L	1	5/13/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	5/13/2009
Surr: DNOP	140	58-140	%REC	1	5/13/2009
EPA METHOD 8015B: GASOLINE R	ANGE	•			Analyst: DAM
Gasoline Range Organics (GRO)	ND	0.050	mg/L	. 1	5/6/2009 1:52:14 PM
Surr: BFB	84.6	59.9-122	%REC	. 1	5/6/2009 1:52:14 PM
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	5/6/2009 1:52:14 PM
Benzene	ND ND	1.0	μg/L	1	5/6/2009 1:52:14 PM
Toluene	ND	1.0	μg/L	1	5/6/2009 1:52:14 PM
Ethylbenzene	ND	1.0	μg/L	1	5/6/2009 1:52:14 PM
Xylenes, Total	ND	2.0	μg/L	1	5/6/2009 1:52:14 PM
Surr: 4-Bromofluorobenzene	90.0	65.9-130	%REC	· 1	5/6/2009 1:52:14 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

Е Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Page 1 of 1

Lab Order: 0905051

Western Refining Southwest, Inc.

Client:

DATES REPORT

04-Jun-09

Project: GAC-Lead 5-4-09

	Collection Date Matrix Test Name Instrument Run ID QC Batch ID Prep Date Analysis Date	5/4/2009 9:55:00 AM Aqueous EPA Method 8015B: Diesel Range 'ID(17A) 2_090513, 19069 5/11/2009 5/13/2009	EPA Method 8015B; Gasoline Range TRISTAR_090506A R33566 S/6/2009	EPA Method 8021B: Volatiles
		5/4/2009 9:55:00 AM		
	Client Sample ID	0905051-01A GAC-Lead 5/4/2009 9:55:00 A		
THE PROPERTY OF PERSONS ASSESSED.	Sample ID	0905051-01A		

Date: 04-Jun-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

ect:

GAC-Lead 5-4-09

Work Order:

0905051

Analyte	Result	Units	PQL	%Rec	LowLimit F	lighLimit	%RPD	RPDI	_imit Qual
Method: EPA Method 8016B: D	lesel Range		And promo						
Sample ID: MB-19069		MBLK			Batch ID	19069	Analysis D	ate:	5/13/2009
Diesel Range Organics (DRO)	ND	mg/L	1.0						
Motor Oil Range Organics (MRO)	ND	mg/L	5.0						
Surr: DNOP	1.194	mg/L	0 .	119	58	140		•	
Sample ID: LCS-19069		LCS			Batch ID:	19069	Analysis D	ate:	5/13/2009
Diesel Range Organics (DRO)	6.162	mg/L	1.0	123	74	157			
Surr: DNOP	1.713	mg/L	0 -	114	58	140			
Sample ID: LCSD-19069		LCSD			Batch ID:	19069	Analysis D	ate:	5/13/2009
Diesel Range Organics (DRO)	6.658	mg/L	1.0	133	74	157	7.75	23	
Surr: DNOP	1.781	mg/L	0	119	58	140	Ó	0	
Method: EPA Method 8016B: G	asoline Ran	ge							
Sample ID: b 1		MBLK			Batch ID:	R33566	Analysis D	ate:	5/6/2009 10:17:20 AM
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Surr: BFB	17.21	mg/L	0	86.0	59.9	122			
Sample ID: 2.5UG GRO LCS		LCS			Batch ID:	R33566	Analysis D	ate:	5/6/2009 3:24:11 PM
Gasoline Range Organics (GRO)	0.5080	mg/L	0:050	102	80	115			
Surr: BFB	18.83	mg/L	0	94.2	59.9	122			× .
Sample ID: 2.5UG GRO LCSD		LCSD			Batch ID:	R33566	Analysis D	ate:	5/6/2009 3:54:54 PM
Gasoline Range Organics (GRO)	0.5120	mg/L	0.050	102	80	115	0.784	8.39	
Surr: BFB	19.00	mg/L	0	95.0	59.9	122	0	0	
mple ID: 0905051-01A DUP		DUP			Batch ID:	R33566	Analysis D	ate:	5/6/2009 2:22:55 PM
Gasoline Range Organics (GRO)	ND	mg/L	0.050				0	20	•
Surr. BFB	16.84	mg/L	0	84.2	59.9	122	0	0	

Qualifiers:



Estimated value

Analyte detected below quantitation limits

RPD outside accepted recovery limits

Η. Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits Page 1

Date: 04-Jun-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

Project:

GAC-Lead 5-4-09

Work Order:

0905051

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD F	RPDL	imit Qual
Method: EPA Method 8021B: V	olatiles								
Sample ID: b1		MBLK			Batch	ID: R33566	Analysis Date	::	5/6/2009 10:17:20 AM
Methyl tert-butyl ether (MTBE)	ND ·	μg/L	2.5						
Benzene	ND	µg/L	1.0						
Toluene	ND	·µg/L	1.0						
Ethylbenzene	ND	μg/L	1.0				•		
Xylenes, Total	ND	µg/L	2.0	•					
Surr: 4-Bromofluorobenzene	18.66	µg/L	0	93.3	65.9	130			
Sample ID: 100NG BTEX LCS		LCS			Batch	ID: <b>R33566</b>	Analysis Date	:	5/6/2009 4:25:37 PM
Benzene	20.92	μg/L	1.0	105	85.9	113			
Toluene	21.43	μg/L	1.0	107	86.4	113			
Ethylbenzene	21.80	μg/L	1.0	109	83.5	118			
Xylenes, Total	63.60	µg/L	2.0	106	83.4	122			
Surr: 4-Bromofluorobenzene	20.90	μg/L	Ô	104	65.9	130			•
Sample ID: 100NG BTEX LCSD		LCSD			Batch	ID: <b>R33566</b>	Analysis Date	:	5/6/2009 4:56:17 PM
Benzene	20.80	µg/L	1.0	104	85.9	113	0.556	27	
Toluene	21.35	μg/L	1.0	107	86.4	113	0.355.	19	
Ethylbenzene	21.83	μg/L	1.0	109	83.5	118	0.147	10	
Xylenes, Total	63.02	μg/L	2.0	105	83.4	122	0.907	13	
Surr: 4-Bromofluorobenzene	20.84	µg/L	0	104	65.9	130	0	0	
Sample ID: 0905051-01A DUP		DUP			Batch	ID: <b>R33566</b>	Analysis Date	:	5/6/2009 2:22:55 PM
Methyl tert-butyl ether (MTBE)	ND	μg/L	2.5				0	20	
Benzene	ND	µg/L	1.0				0	20	
Toluene	ND	μg/L	1.0				0 .	20	
Ethylbenzene	ND	μg/L	1.0				. 0	20	
Xylenes, Total	ND	µg/L	2.0			•	0	20	
Surr: 4-Bromofluorobenzene	17.88	µg/L	0	89.4	65.9	130	0	Ō	

Qualifiers:

Estimated value

Analyte detected below quantitation limits

RPD outside accepted recovery limits R

Holding times for preparation or analysis exceeded Н

Not Detected at the Reporting Limit ND

Spike recovery outside accepted recovery limits



## Sample Receipt Checklist

nt Name WESTERN REFINING SOUT		Date Received:	5/5/2009
Work Order Number 0905051  Checklist completed by: Signature	5 S	Received by: ARS Sample ID labels checked	by: Initials
Matrix:	Carrier name: <u>UPS</u>		
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	$ \mathbf{V} $
Chain of custody present?	Yes 🗹	No 🗆	
Chain of custody signed when relinquished and rec	eived? 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 <b>⊻</b>	No 🗆	
	No VOA vials submitted	Yes 🗹 No 🗌	
Yater - Preservation labels on bottle and cap match	h? Yes 🗌	No □ N/A 🗹	
ater - pH acceptable upon receipt?	Yes 🗌	No □ N/A 🗹	
Container/Temp Blank temperature?	6°	<6° C Acceptable	
COMMENTS:		If given sufficient time to cool.	
			•
		•	
Client contacted Da	te contacted:	Person contacted	
Olient Contacted .	te contacted.	Person contacted	
Contacted by:	garding:		
Comments:	·		
Corrective Action			

	HALL ENVIKONMENIAL Anaivsis I Arodatory	മ	VE - Albuquerque, NM 87109		Analysis Request	<u> </u>			(HA:0N,e)	als: desdess ()	8310 (PNA d RCRA 8 Met Anions (F,Cl 8081 Pestici 8260B (VOA 8270 (Semi-								d data will be clearly notated on the analytical report
		WWW	4901 Hawkins NE	Tel. 505-345-3975		(ʎĮu	o se	(e	H9T 4 ) 831 (1.8	- 3E	BTEX + MTE TPH Method TPH (Method TPB (Method	×						Remarks:	ssibiliv. Any sub-contracte
Turn-Around Time:	iar Standard □ Rush	Project Name:	18AC-Lead 5-4-09	Project #:		Project Manager:			Sampler: Bab		d# Type	3-10A HC( )						97 A 30 5 5 67	Time: Relinquished by: Received by: Date Time  Received by: Time: Relinquished by: Date Time  If necessary samples submitted to Hall Environmental may be subcontracted to the analytical report
Chain-of-Custody Record	Client: Western Refining		Mailing Address: #50CR 4990	C87413	Phone #: 525-632-416/	email or Fax#: 595-637-39//	iĝe:	☐ Standard ☐ ☐ Level 4 (Full Validation)	Accreditation	□ EDD (Type)	Date Time Matrix Sample Request ID	5-4-09 9:55 Has 17AC-Lead						Date: Time: Relinquished by: 5-4-09 3:00 (Bount Frake)	Date: Relinquished by:



## COVER LETTER

Friday, June 19, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990 Bloomfield, NM 87413

TEL: (505) 632-4161

FAX (505) 632-3911

RE: GAC Lead June 2009

Dear Cindy Hurtado:

Order No.: 0906033

Hall Environmental Analysis Laboratory, Inc. received 1 sample(s) on 6/2/2009 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. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager Nancy McDuffie, Laboratory Manager

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



Date: 19-Jun-09

CLIENT:

Western Refining Southwest, Inc.

Project:

GAC Lead June 2009

Lab Order:

0906033

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date
0906033-01A	GAC-Lead	R34041	EPA Method 8021B: Volatiles	6/1/2009 8:20:00 AM
0906033-01A	GAC-Lead	R34041	EPA Method 8015B: Gasoline Range	6/1/2009 8:20:00 AM
0906033-01A	GAC-Lead	19270	EPA Method 8015B: Diesel Range	6/1/2009 8:20:00 AM

Date: 19-Jun-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0906033

0900033

GAC Lead June 2009

Project: Lab ID:

0906033-01

Client Sample ID: GAC-Lead

Collection Date: 6/1/2009 8:20:00 AM

Date Received: 6/2/2009

Matrix: AQUEOUS

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E				Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	6/5/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	6/5/2009
Surr: DNOP	118	58-140	%REC	1	6/5/2009
EPA METHOD 8015B: GASOLINE RA	NGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	6/10/2009 10:26:37 PM
Surr: BFB	80.5	59.9-122	%REC	1	6/10/2009 10:26:37 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	hg/L	1	6/10/2009 10:26:37 PM
Benzene	ND.	1.0	µg/L	1	6/10/2009 10:26:37 PM
Toluene	ND	1.0	µg/L	1	6/10/2009 10:26:37 PM
Ethylbenzene	ND	1.0	μg/L	1	6/10/2009 10:26:37 PM
Xylenes, Total	ND	2.0	µg/L	1	6/10/2009 10:26:37 PM
Surr: 4-Bromofluorobenzene	82.5	65.9-130	%REC	1	6/10/2009 10:26:37 PM



Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 1 of 1

6809060 Lab Order: Western Refining Southwest, Inc.

DATES REPORT

19-Jun-09

GAC Lead June 2009 Project: Client:

	Instrument Run ID QC Batch ID Prep Date Analysis Date	6/4/2009 6/5/2009		6/10/2006	6/10/2009
THE PERSON NAMED IN COLUMN	QC Batch ID	19270		R34041	R34041
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	Matrix Test Name	M Agreens FPA Method 80158: Diesel Range (1772) 2 090605, 19270 6/4/2009 6/5/2009	0	EPA Method 8015B: Gasoline Range	EPA Method 8021B; Volatiles
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	Collection Date	6/1/2009 8-20-00 AM			
ender der der der eine der der der der der der der der der de	Client Sample ID	0006033_01A GAC_I Pad GAC_I Pad			
STREET, BOARD STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET,	Sample ID	0006033-014	1710-00000		

Date: 19-Jun-09

# QA/QC SUMMARY REPORT

Western Refining Southwest, Inc.

GAC Lead June 2009

Work Order:

0906033

Analyte	Result	Units	PQL	%Rec	LowLimit F	HighLimit	%RPD f	RPDLimit	Qual
Method: EPA Method 8015B: D	iesel Range								
Sample ID: MB-19270		MBLK			Batch ID	19270	Analysis Date	•	6/5/200
Diesel Range Organics (DRO)	ND	mg/L	1.0						
Motor Oil Range Organics (MRO)	ND	mg/L	5.0						
Surr: DNOP	1.220	mg/L	. 0	122	58	140	•		
Sample ID: LCS-19270		LCS			Batch ID	19270	Analysis Date	: .	6/5/200
Diesel Range Organics (DRO)	5.716	mg/L	1.0	114	. 74	157			
Surr: DNOP	0.5902	mg/L	0	118	58	140			
Sample ID: LCSD-19270		LCSD			Batch ID	19270	Analysis Date	:	6/5/2009
Diesel Range Organics (DRO)	6.800	mg/L	1.0	136	74	157	17.3	23	
Surr: DNOP	0.6325	mg/L	0	127	58	140	0	0	
Method: EPA Method 8015B: G	asoline Ran	ae					4		
Sample ID: 5ML RB		MBLK			Batch ID	R34041	Analysis Date	: 6/10/	2009 8:42:45 AM
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Surr: BFB	17.02	mg/L	0 -	85.1	59.9	122			
Sample ID: 2.5UG GRO LCS	•	LCS			Batch ID	R34041	Analysis Date	: 6/10/	2009 6:20:24 PM
Gasoline Range Organics (GRO)	0.5394	mg/L	0.050	108	80	115			
Surr: BFB	19.02	mg/L	0	95.1	59.9	122			
Sample ID: 2.5UG GRO LCSD		LCSD			Batch ID	R34041	Analysis Date	6/10/	2009 6:50:52 PN
≘asoline Range Organics (GRO)	0.5334	mg/L	0.050	107	80	115	1.12	8.39	*
Surr: BFB	19.01	mg/L	0	<b>9</b> 5.1	59.9	122	0	0	•
Cample ID: 0906033-01A DUP		DUP			Batch ID	R34041	Analysis Date	6/10/2	009 10:57:00 PM
Gasoline Range Organics (GRO)	ND	mg/L	0.050				0	20	
Surr: BFB	17.08	mg/L	0	85.4	59.9	122	0	0	



Estimated value

Analyte detected below quantitation limits

RPD outside accepted recovery limits

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Page 1

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

Project:

GAC Lead June 2009

Work Order:

0906033

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit Qual
Method: EPA Method 8021B: V	olatiles							
Sample ID: 5ML RB		MBLK			Batch I	D: <b>R34041</b>	Analysis Dat	te: 6/10/2009 8:42:45 A
Methyl tert-butyl ether (MTBE)	ND	μg/L	2.5					
Benzene	ND	µg/L	1.0					
Toluene	ND	μg/L	1.0					•
Ethylbenzene	ND .	μg/L	1.0					
Xylenes, Total	ND	µg/L	2.0					
Surr: 4-Bromofluorobenzane	16.87	μg/L	0	84.4	65.9	130		
Sample ID: 100NG BTEX LCS		LCS			Batch I	D: <b>R34041</b>	Analysis Dat	te: 6/10/2009 5:19:17 P
Methyl tert-butyl ether (MTBE)	19.99	µg/L	2.5	99.9	51,2	. 138		
Benzene	19.69	µg/L	1.0	98.5	85.9	113		
Toluene	19.87 。	μg/L	1.0	99.3	86.4	113		
Ethylbenzene	19.55	μg/L	1.0	96.8	83.5	1 <b>1</b> 8		
Xylenes, Total	58.61	µg/L	2.0	97.7	83.4	<b>12</b> 2		
Surr: 4-Bromofluorobenzene	19.15	µg/L	0	95.8	65.9	130		
Sample ID: 100NG BTEX LCSD		LCSD			Batch I	D: <b>R34041</b>	Analysis Dat	te: 6/10/2009 5:49:50 F
Methyl tert-butyl ether (MTBE)	19.73	μg/L	2.5	98.6	51.2	138	1.31	28
Benzene	19.26	µg/L	1.0	96.3	85.9	113	2.21	27
Toluene	19.23	μg/L	1.0	96.2	86.4	113	3.24	19
Ethylbenzene	18.85	µg/L	1.0	93.2	83.5	118	3.66	10
Xylenes, Total	56.19	µg/L	2.0	93.7	83.4	122	4.21	13
Surr: 4-Bromofluorobenzene	18.43	- μg/L	0	92.2	65.9	130	D	0
Sample ID: 0906033-01A DUP		DUP			Batch I	D: <b>R3404</b> 1	Analysis Dat	te: 6/10/2009 10:57:00 F
Methyl tert-butyl ether (MTBE)	ND	μ <b>g</b> /L	2.5			•	O	20
Benzene	ND	μg/L	1.0				0	20
Toluene	ND	µg/L	1.0				0	20
Ethylbenzene	ND	µg/L	1.0				0	20
Xylenes, Total	ND	µg/L	2.0				0	20
Surr: 4-Bromofluorobenzene	17.71	µg/L	0	88.5	65.9	- 130	0	0

Qualifiers	

E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits





## Sample Receipt Checklist

ent Name WESTERN REFINING SOUT		•	Date Receive	d:	6/2/2009
Vork Order Number 0906033  Checklist completed by:		6/2/	Received by Sample ID la	: ARS	initials
Signature Matrix:	Carrier name:	Date			
Shipping container/cooler in good condition?		Yes 🗹	No 🗆	Not Present	
Custody seals intact on shipping container/cool	er?	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 🗆		Number of preserved
Water - VOA vials have zero headspace?	No VOA vials subn	nitted	Yes 🗹	No 🗌	bottles checked for pH:
Water - Preservation labels on bottle and cap m	natch?	Yes	No 🗀	N/A 🗹	·
Vater - pH acceptable upon receipt?		Yes 🗌	No 🗆	N/A 🗹	<2 >12 unless noted below.
Container/Temp Blank temperature?		4.7°	<6° C Acceptable		<b>,</b>
COMMENTS:			If given sufficient	time to cool.	
Client contacted	Date contacted:		Pers	on contacted _	
Contacted by:	Regarding:				
Comments:					
		·			
Corrective Action					· · · · · · · · · · · · · · · · · · ·

	ANAL ENVIRONMENTAL ANAL VSTS. JAROBATORY	u.	4901 Hawkins NE - Albuquerque, NM 87109	ıc	Analysis	(**	08'*0	Ddʻ	(1.46 (1.46 (HA (HA 50N,e (808 \	d 50 d 4. 7. P., hC d esa desa desa desa desa desa desa des	PPH (Methoring Methoring Methorical PDB (Methorical PDB Methorical Posticil								the management of date in the closest and the matter of the control of the closest at the control of the closest at the control of the closest at the control of the closest at the control of the closest at the control of the closest at the control of the closest at the control of the closest at the control of the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closest at the closes
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						(	1208	95	1982	3E -	BTEX + MTI	又			 			Rem	
Turn-Around Time:	⊕ Standard □ Rush	Project Name:	GAC LEAS JUNE 5009			Project Manager:			Sampler: ESD	Salab de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya	Container Preservative Type Type Type	4-10A HCI						Received by: Time 12.00   12.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.0	Keinquished by:  Kecelved by:  Cate 1. Time  Date 1. Time
Chain-of-Custody Record	Olient Western Refining		Mailing Address: 450 (1.499)	8180mG, 4 11h 974,3	Phone #: 505-632-416/	email or Fax#:	ige:	☐ Standard ☐ CLevel 4 (Full Validation)	Accreditation	□ EDD (Type)	Date Time Matrix Sample Request ID	6-1-9 8:20 H20 GAC-Lead						Time:	Uate: Keinquished by:



### COVER LETTER

Wednesday, July 15, 2009

Cindy Hurtado
Western Refining Southwest, Inc. #50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: GAC 3rd QTR 7/1/09

Dear Cindy Hurtado:

Order No.: 0907048

Hall Environmental Analysis Laboratory, Inc. received 3 sample(s) on 7/2/2009 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. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager

Nancy McDuffie, Laboratory Manager

NM Lab # NM9425 AZ license # AZ0682

ORELAP Lab # NM100001

Texas Lab# T104704424-08-TX



Date: 15-Jul-09

CLIENT:

Western Refining Southwest, Inc.

Project:

GAC 3rd QTR 7/1/09

Lab Order: 0907048

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date
0907048-01A	GAC-Lag	R34474	EPA Method 8021B: Volatiles	7/1/2009 1:00:00 PM
0907048-01A	GAC-Lag	R34474	EPA Method 8015B: Gasoline Range	7/1/2009 1:00:00 PM
0907048-01A	GAC-Lag	19548	EPA Method 8015B: Diesel Range	7/1/2009 1:00:00 PM
0907048-02A	GAC-Lead	R34474	EPA Method 8021B: Volatiles	7/1/2009 1:05:00 PM
0907048-02A	GAC-Lead	R34474	EPA Method 8015B: Gasoline Range	7/1/2009 1:05:00 PM
0907048-02A	GAC-Lead	19548	EPA Method 8015B: Diesel Range	7/1/2009 1:05:00 PM
0907048-03A	GAC-Inlet	R34504	EPA Method 8021B: Volatiles	7/1/2009 1:10:00 PM
0907048-03A	GAC-Inlet	R34474	EPA Method 8021B: Volatiles	7/1/2009 1:10:00 PM
0907048-03A	GAC-Inlet	R34474	EPA Method 8015B: Gasoline Range	7/1/2009 1:10:00 PM
0907048-03A	GAC-Inlet	19548	EPA Method 8015B: Diesel Range	7/1/2009 1:10:00 PM

Date: 15-Jul-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0907048

Project:

GAC 3rd QTR 7/1/09

Lab ID:

0907048-01

Client Sample ID: GAC-Lag

Collection Date: 7/1/2009 1:00:00 PM

Date Received: 7/2/2009

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGI	=				Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	. mg/L	1	7/7/2009
Motor Oll Range Organics (MRO)	ND	5.0	mg/L	1	7/7/2009
Surr: DNOP	106	58-140	%REC	1	7/7/2009
EPA METHOD 8015B: GASOLINE RAI	NGE		·		Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	7/10/2009 10:16:19 PM
Surr: BFB	83.1	59.9-122	%REC	1	7/10/2009 10:16:19 PM
EPA METHOD 8021B: VOLATILES			,	•	Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	7/10/2009 10:16:19 PM
Benzene	ND	1.0	μg/L	· 1	7/10/2009 10:16:19 PM
Toluene	ND	1.0	μg/L	1	7/10/2009 10:16:19 PM
Ethylbenzene	ND	1.0	μg/L _.	1	7/10/2009 10:16:19 PM
Xylenes, Total	ND	2.0	μ <b>g/</b> L.	1	7/10/2009 10:16:19 PM
Surr: 4-Bromofluorobenzene	85.5	65.9-130	%REC	1	7/10/2009 10:16:19 PM

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

[.] H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 15-Jul-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0907048

GAC 3rd QTR 7/1/09

Project: Lab ID:

0907048-02

Client Sample ID: GAC-Lead

Collection Date: 7/1/2009 1:05:00 PM

Date Received: 7/2/2009

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE	<del></del>			********	Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	7/7/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1 .	7/7/2009
Surr: DNOP	108	58-140	%REC	1	7/7/2009
EPA METHOD 8015B: GASOLINE RAI	NGE	•			Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	7/10/2009 10:46:40 PM
Surr: BFB	79.9	59.9-122	%REC	.1	7/10/2009 10:46:40 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	7/10/2009 10:46:40 PM
Benzene	ND	1.0	μg/L	1	7/10/2009 10:46:40 PM
Toluene	ND.	1.0	µg/L	1	7/10/2009 10:46:40 PM
Ethylbenzene	ND	1.0	μg/L	1	7/10/2009 10:46:40 PM
Xylenes, Total	ND	2.0	μg/L	1	7/10/2009 10:46:40 PM
Surr: 4-Bromofluorobenzene	81.2	65.9-130	%REC	1	7/10/2009 10:46:40 PM

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

Date: 15-Jul-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0907048

GAC 3rd QTR 7/1/09

Project: Lab ID:

0907048-03

Client Sample ID: GAC-Inlet

Collection Date: 7/1/2009 1:10:00 PM

Date Received: 7/2/2009

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	3E				Analyst: SCC
Diesel Range Organics (DRO)	2.6	1.0	mg/L	1	7/7/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	7/7/2009
Surr: DNOP	118	58-140	%REC	1	7/7/2009
EPA METHOD 8015B; GASOLINE RA	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	18	0.25	mg/L	5	7/10/2009 11:19:35 PM
Surr: BFB	109	59.9-122	%REC	5	7/10/2009 11:19:35 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	13	˙μg/L	5 '	7/10/2009 11:19:35 PM
Benzene	ND	5.0	µg/L	5	7/10/2009 11:19:35 PM
Toluene	ND	5.0	µg/L	5	7/10/2009 11:19:35 PM
Ethylbenzene	410	5.0	μg/L	5	7/10/2009 11:19:35 PM
Xylenes, Total	3600	100	μg/L	50	7/13/2009 12:18:38 PM
Surr: 4-Bromofluorobenzene	123	65.9-130	%REC	5	7/10/2009 11:19:35 PM

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

DATES REPORT

# Hall Environmental Analysis Laboratory, Inc.

Lab Order: 0907048

Western Refining Southwest, Inc.

Client:

Project: GAC 3rd QTR 7/1/09

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Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Instrument Run ID QC Batch ID Prep Date	QC Batch ID	Prep Date	Analysis Date
0907048-01A	0907048-01A GAC-Lag 77/1/2009 1:00:00 PM	7/1/2009 1:00:00 PM	Aqueous	I Aqueous EPA Method 8015B: Diesel Range ID(17A) 2_090707, 19548 7/7/2009 7/7/2009	TD(17A) 2_090707,	19548	7/7/2009	7/7/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090710A	R34474		7/10/2009
				EPA Method 8021B: Volatiles	ZEUS_090710A	R34474		7/10/2009
0907048-02A	GAC-Lead	7/1/2009 1:05:00 PM		EPA Method 8015B: Diesel Range	TD(17A) 2_090707,	19548	6002/1/1	7/7/2009
				EPA Method 8015B. Gasoline Range	ZEUS_090710A	R34474		7/10/2009
				EPA Method 8021B: Volatiles	ZEUS_090710A	R34474	-	7/10/2009
0907048-03A	GAC-inlet	7/1/2009 1:10:00 PM		EPA Method 8015B. Diesel Range	TD(17A) 2_090707,	19548	6002/1//	7/7/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090710A	R34474		7/10/2009
				EPA Method 8021B: Volatiles	ZEUS_090713A	R34504		7/13/2009
				EPA Method 8021B: Volatiles	ZEUS_090710A	R34474		7/10/2009

Date: 15-Jul-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

oject:

GAC 3rd QTR 7/1/09

Work Order:

0907048

Analyte	Result	Units	PQL	%Rec	LowLimit H	lighLimit	%RPD	RPDLimi	t Qual
Method: EPA Method 8015B: D	iesel Range								7/7/000
Sample ID: MB-19548		MBLK			Batch ID:	19548	Analysis Da	ate;	7/7/2009
Diesel Range Organics (DRO)	ND	mg/L	1.0						•
Motor Oll Range Organics (MRO)	ND	mg/L	5.0	440		140			
Surr: DNOP Sample ID: LCS-19548	1.105	mg/L LCS	0	110	58 Batch ID:		Analysis Da	ato.	. 7/7/2009
·	5 504		4.0	440			Allalyala Di		· ITTEOU
Diesel Range Organics (DRO) Surr: DNOP	5.594 0.6469	mg/L	1.0 0	112 129	74 58	157 140			
Sample ID: LCSD-19548	0.0409	mg/L LCSD	U	129	Batch ID:		Analysis Da	ate:	7/7/2009
·	5.619		1.0	112	74	157	0.453	23	1777200
Diesel Range Organics (DRO) Surr: DNOP	0.6213	mg/L mg/L	1.0 0	124	7 <del>4</del> 58	140	0.455	0	
Out. Dito:	0.0210			124					
Method: EPA Method 8015B: G	asoline Ran	<b>5</b> -							
Sample ID: 5ML RB		MBLK		•	Batch ID:	R34474	Analysis Da	ite: 7/10	D/2009 9:38:44 AN
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Surr: BFB.	17.04	mg/L	0	85.2	59.9	122		. 740	0000 44 50 44 50
Sample ID: b 29		MBLK			Batch ID:	R34474	Analysis Da	ite: 7/10/	2009 11:50:11 PM
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Surr: BFB	16. <b>9</b> 2	mg/L	0	84.6	59.9	122	Au aluaia Da	7147	1/0000 0-40-57 AB
Sample ID: 5ML RB		MBLK			Batch ID:	R34504	Analysis Da	ite: //1:	3/2009 9:16:57 AM
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Surr: BFB	16.66	mg/L	0	83.3	59.9	122	Amalusia Da	7/1/	1/2000 7:44:42 FIR
ample ID: 2.5UG GRO LCS		LCS			Batch ID:		Analysis Da	ite: //10	0/2009 7:44:13 PM
Gasoline Range Organics (GRO)	.0.4212	mg/L	0.050	84.2		115			
Surr: BFB	17.80	mg/L	0	89.0	59.9	122	Analysis Da		1/2000 P-26-07 DM
Sample ID: 2.5UG GRO LCS		LCS			Batch ID:	R34504	Analysis Da	ite. 7/13	3/2009 8:26:07 PM
Gasoline Range Organics (GRO)	0.4978	mg/L	0.050	99.6		115			
Surr: BFB Sample ID: 2.5UG GRO LCSD	18.76	mg/L LCSD	0	93.8	59.9 Batch ID:	122 R34504	Analysis Da	to: 7/13	//2009 8:56:43 PM
	0.4700		0.050	95.5			•		1/2009 0.50.45 FIV
Gasoline Range Organics (GRO)	0.4760	mg/L	0.050 0	95.2		115	4.48 0	8.39 O	
Surr: BFB Sample ID: 0907096-01A DUP	18.70	mg/L <i>DUP</i>	U	93.5	59.9 Batch ID:	122 R34504	u Analysis Da	-	/2009 1:19:17 PM
•	NED		0.050		Daton ID.	R34904	-		72003 1.18.11 FIVI
Gasoline Range Organics (GRO)	ND 15.80	mg/L mg/l	0.050 · 0	· 70 5	50.0	100	0	20	
Surr: BFB	15.89	mg/L	υ	79.5	59.9	122	0	0	

Oua	lifiers



Estimated value

Analyte detected below quantitation limits RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 1

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

Project:

GAC 3rd QTR 7/1/09

Work Order:

0907048

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD RPI	OLimit Qual
Method: EPA Method 8021B: Vo	olatiles			=-				
Sample ID: 6ML RB		MBLK			Batch I	D: <b>R34474</b>	Analysis Date:	7/10/2009 9:38:44 AM
Methyl tert-butyl ether (MTBE)	ND	μg/L	2.5					
Benzene	ND	µg/L	1.0					
Foluene	ND	μg/L	1.0				,	
Ethylbenzene	ND	μg/L	1.0					
Cylenes, Total	ND.	μg/L	2.0					
Surr: 4-Bromofluorobenzene	17.18	µg/L	0	85.9	65.9	130		•
Sample ID: b 22		MBLK			Batch II	D: <b>R34474</b>	Analysis Date:	7/10/2009 8:14:41 PM
Methyl tert-butyl ether (MTBE)	ND	μg/L	2.5					
Benzene	ND	µg/L	1.0					•
Foluene	ND	μg/L	1.0					
Ethylbenzene	ND	μg/L	1.0					
(ylenes, Total	ND	μg/L	2.0					
Surr: 4-Bromofluorobenzene	16.47	μg/L	0	82.4	65.9	130	•	
Sample ID: 5ML RB		MBLK			Batch II	D: <b>R34504</b>	Analysis Date:	7/13/2009 9:16:57 AM
Methyl tert-butyl ether (MTBE)	ND	µg/L	2.5					
Benzene	ND	μg/L	1.0					
oluene	ND	μg/L	1.0					
thylbenzene	ND	µg/L	1.0					
(ylenes, Total	ND	µg/L	2.0					
Surr: 4-Bromofluorobenzene	16.74	μg/L	0	83.7	65.9	130		•
Sample ID: 100NG BTEX LCS		LCS		•••	Batch II		Analysis Date:	7/10/2009 7:13:39 PM
fethyl tert-butyl ether (MTBE)	20.40	μg/L	2.5	102	51.2	138		
enzene	19.24	µg/L	1.0	96.2	85.9	113		
oluene	20.29	μg/L	1.0	101	86.4	113		
thylbenzene	21.16	μg/L	1.0	106	83.5	118		
ylenes, Total	64.36	μg/Ł	2.0	107	83.4	122	•	
Surr: 4-Bromofluorobenzene	21.26	µg/L	0	106	65.9	.130	-	
ample ID: 100NG BTEX LCS-II		LCS			Batch II	D: <b>R34474</b>	Analysis Date:	7/11/2009 6:25:25 AM
lethyl tert-butyl ether (MTBE)	18.52	µg/L	2.5	92.6	51.2	138	·	
enzene	20.32	μg/L	1.0	102	85.9	113		
oluene	19.95	µg/L	1.0	99.8	86.4	113		
thylbenzene	19.63	hã/r	1.0	97.9	83.5	118		
ylenes, Total	57.91	ha\r	2.0	96.5	83.4	122		ř
Surr: 4-Bromofluorobenzene	19.60	µg/L	0	98.0	65.9	130		
sample ID: 100NG BTEX LCS	10.00	LCS	Ū	00.0	Batch II		Analysis Date:	7/13/2009 7:55:26 PM
·	20.42		2.5	102	51.2	138	•	
lethyl tert-butyl ether (MTBE)	20.42 19.53	µg/L µg/l	2.5 1.0	97.7	85.9	113		
enzene	19.53	µg/L	1.0	95.8	86.4	113		
oluene thylbenzene	19.16	µg/L µg/L	1.0	95.8 97.2	83.5	118		
CHVIDENZHUH					83.4	122		*
	57 OF							
ylenes, Total Surr: 4-Bromofluorobenzene	57.95 19.05	µg/L µg/L	2.0 0	96.6 95.3	65.9	130		

Oug	lli	fie	rs	

E Estimated value

Page 2

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

## Sample Receipt Checklist

ent Name WESTERN REFINING SOUT	•		•	Date Received	d:		7/2/2009
ork Order Number 0907048				Received by	: TLS		
$\sim$				Sample ID la	bels checked	by:	
Checklist completed by:			7 JO	100			Initials
		ſ					
Matrix:	Carrier name:	UPS	<u> </u>				
Shipping container/cooler in good condition?		Yes	<b>V</b>	No 🗌	Not Present		
Custody seals intact on shipping container/cool	ler?	Yes	$\checkmark$	No 🗌	Not Present	<u> </u>	Not Shipped
Custody seals intact on sample bottles?		Yes		No 🗌	N/A	$\checkmark$	
Chain of custody present?		Yes	$\checkmark$	No 🗌			
Chain of custody signed when relinquished and	received?	Yes	$\checkmark$	No 🗌			•
Chain of custody agrees with sample labels?		Yes	$\checkmark$	No 🗌			
Samples in proper container/bottle?		Yes	V	No 🗌			
Sample containers intact?		Yes	$\checkmark$	No 🗌			
Sufficient sample volume for indicated test?		Yes	V	No 🗌			
All samples received within holding time?		Yes	<b>✓</b>	No 🗌			Number of preserved
Water - VOA vials have zero headspace?	No VOA vials subm	nitted		Yes 🗹	No 🗌		bottles checked for pH:
Water - Preservation labels on bottle and cap n	natch?	Yes		No 🗌	N/A		
ater - pH acceptable upon receipt?		Yes		No 🗌	N/A		<2 >12 unless noted below.
Container/Temp Blank temperature?		2.	.6°	<6° C Acceptabl			perow.
COMMENTS:				If given sufficient	time to cool.		
•							
					•		
•						*	
Client contacted	Date contacted:			Perso	on contacted		
Contacted by:	Regarding:		· · · · · ·				
Comments:							
Corrective Action					**		

	ANALL ENVIRONMENTAL	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Aralysis	(les	Pies	Ses.	(1.8 (1.1) (1.1) (H) (1.0 ₂ (1.0 ₂ (1.0 ₂ (1.0 ₂ )	1 41 1 41 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1	Method Method (PNA o 4 8 Meta 5 (F,Cl, 5 (VOA) (Semi-/	7 H9T (1977) H9T (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018) (2018)		*	<u> </u>					ks:	
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i um-Around Time:	Standard 🗆 Rush	ž	GAC 312 GIR July 1, 2009	Project #:		Project Manager:			Sampler. Bb		Container Preservative		3-VOA HCI /	HC(	3-VOA HCI 3					by: $ A  >  A $	Received by: Date Time
Chain-of-Custody Record	Client Western Refining		Mailing Address: #50 CR 4990	8743			ıge:	☐ Standard	Accreditation S		Matrix Sample Reguest ID	מווופ אושווי סמוווים אפלותפטרום	77-09 1:00 H20 GAC-LAG	ď	inlet					LKralow)	kelinquished by:



## **COVER LETTER**

Tuesday, August 11, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990 Bloomfield, NM 87413

TEL: (505) 632-4161

FAX (505) 632-3911

RE: GAC Monthly 8/3/09

Dear Cindy Hurtado:

Order No.: 0908048

Hall Environmental Analysis Laboratory, Inc. received 1 sample(s) on 8/5/2009 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. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager

+a∈Nancy McDuffie, Laboratory Manager

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



Date: 11-Aug-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0908048

GAC Monthly 8/3/09

Project: Lab ID:

0908048-01

Client Sample ID: GAC-LEAD

Collection Date: 8/3/2009 9:10:00 AM

Date Received: 8/5/2009

Analyses	Result	PQL	Qual Units	<b>DF</b>	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE				· · · · · · · · · · · · · · · · · · ·	Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	8/10/2009
Motor Oil Range Organics (MRO)	ND	5.0	mg/⊥	· 1	8/10/2009
Surr: DNOP	118	58-140	%REC	1	8/10/2009
EPA METHOD 8015B: GASOLINE RANG	GE	24			Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	8/7/2009 1:27:23 AM
Surr: BFB	81.5	59.9-122	%REC	1	8/7/2009 1:27:23 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	µg/∟	1	8/7/2009 1:27:23 AM
Benzene	ND	1.0	μg/L	1	8/7/2009 1:27:23 AM
Toluene	ND	1.0	μg/L	1	8/7/2009 1:27:23 AM
Ethylbenzene	ND	1.0	μg/L	1	8/7/2009 1:27:23 AM
Xylenes, Total	ND	2.0	μg/L	. 1	8/7/2009 1:27:23 AM
Surr: 4-Bromofluorobenzene	80.3	65.9-130	%REC	1	8/7/2009 1:27:23 AM

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

Date: 11-Aug-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

roject:

GAC Monthly 8/3/09

Work Order:

0908048

	-,/						''		700040
Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDL	limit Qual
Method: EPA Method 8015B: D	iesel Range								
Sample ID: MB-19826		MBLK			Batch	ID: 19826	Analysis Da	ite:	8/10/2009
Diesel Range Organics (DRO)	ND	mg/L	1.0						
Motor Oil Range Organics (MRO)	ND	mg/L	5.0			Im			A 14 A 10 A D
Sample ID: LCS-19826	4	LCS			Batch		Analysis Da	ite:	8/10/2009
Diesel Range Organics (DRO)	4.714	mg/L	1.0	94.3	74	157			
Sample ID: LCSD-19826		LCSD			Batch	ID: <b>19826</b>	Analysis Da	ite:	8/10/2009
Diesel Range Organics (DRO)	4.914	mg/L	1.0	98.3	74	157	4.17	23	
Method: EPA Method 8015B: G	asoline Rar	nge							
Sample ID: 5ML RB		MBLK			Batch	ID: <b>R34820</b>	Analysis Da	te:	8/6/2009 9:16:45 AM
Gasolina Range Organics (GRO)	ND	mg/L	0.050						
Sample ID: 2.5UG GRO LCS		LCS			Batch	ID: <b>R34820</b>	Analysis Da	ite:	8/6/2009 6:20:02 PM
Gasoline Range Organics (GRO)	0.5218	mg/L	0.050	104	80	115			
Sample ID: 2.5UG GRO LCSD		LCSD			Batch	ID: <b>R34820</b>	Analysis Da	te:	8/6/2009 6:50:41 PM
Gasoline Range Organics (GRO)	0.5268	mg/L	0.050	105	80	<b>1</b> 15	0.954	8.39	
Method: EPA Method 8021B: V	olatiles								
Sample ID: 5ML RB		MBLK			Batch	ID: <b>R34820</b>	Analysis Da	te:	8/6/2009 9:16:45 AM
Methyl tert-butyl ether (MTBE)	ND	μg/L	2.5						
Benzene	ND	μg/L	1.0						
Toluene	ND	µg/L	1.0						
thylbenzene	ND	µg/L	1.0						,
kylenes, Total	ND	µg/L	2.0						
Sample ID: 100NG BTEX LCS		LCS			Batch	ID: R34820	Analysis Da	te:	8/6/2009·7:21:17 PM
Methyl tert-butyl ether (MTBE)	18.72	µg/L	2.5	93.6	51.2	138			
Benzene	19.44	µg/∟	1.0	97.2	85.9	113			
Toluene	20.23	μg/L	1.0	101	86.4	113			
Ethylbenzene	19.14	μg/L	1.0	94.9	83.5	118			
Xylenes, Total	56.98	µg/L	2.0	95.0	83.4	122			
Sample ID: 100NG BTEX LCSD		LCSD			Batch	ID: <b>R34820</b>	Analysis Da	te:	8/6/2009 7:51:45 PM
Methyl tert-butyl ether (MTBE)	18.62	µg/L	2.5	93.1	51.2	138	0.578	28	
Benzene	19.47	µg/L	. 1.0	97.3	85.9	113	0.123	27	
Toluene	21.00	µg/L	1.0	104	86.4	113	3.73	19	
Ethylbenzene Xylenes, Total	20.78 62.69	µg/L µg/L	1.0 2.0	103 104	83.5 83.4	118 122	8.22 9.54	10 . 13	
Aylenes, Total	02.08	µgr∟	۷.۷	104	65.4	122	9.04	. 13	

Qualifiers:



Analyte detected below quantitation limits

RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

### Sample Receipt Checklist

Client Name WESTERN REFINING SOUT				Date Receive	ed:		8/5/2009	•
Work Order Number 0908048	•			Received by	y: TLS		Market Comment	
Checklist completed by:			8/2	Sample ID I	abeis checked		Initials	
Signature			Date		•			
Matrix:	Carrier name:	UPS	<u> </u>					
Shipping container/cooler in good condition?		Yes	<b>V</b> .	No 🗌	Not Present			
Custody seals intact on shipping container/coo	ler?	Yes	$\checkmark$	No 🗌	Not Present		Not Shipped	
Custody seals intact on sample bottles?		Yes		No 🗌	N/A	<b>~</b>		
Chain of custody present?		Yes	V	No 🔲.				
Chain of custody signed when relinquished and	received?	Yes	V	No 🗔				
Chain of custody agrees with sample labels?		Yes	V	No 🗌				
Samples in proper container/bottle?		Yes	V	No 🗌				
Sample containers intact?		Yes	✓	No 🗌				
Sufficient sample volume for indicated test?		Yes	V	No 🗌				
All samples received within holding time?		Yes	V	No 🗆			Number of	1
Water - VOA vials have zero headspace?	No VOA vials subr	mitted		Yes 🗹	No 🗌		bottles che pH:	CKOU IOI
Water - Preservation labels on bottle and cap n	natch?	Yes		No 🗌	N/A			
Water - pH acceptable upon receipt?		Yes		No 🗆	N/A 🔽		<2 >12 unie below.	ess noted
Container/Temp Blank temperature?		6	.9°	<6° C Acceptab			<i>D010111</i>	
COMMENTS:				If given sufficien	t time to cool.			•
Client contacted	Date contacted:			Pers	son contacted			
Contacted by:	Regarding:			·				
Comments:								•
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Corrective Action	,				<del></del>			<del></del>
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•	Pro	Project Name:						NAMAN	haller	www hallenvironmental com	·	2		] ]		a #
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Bloomfield, NM 87413		l	_		Γ	Tel.	Tel. 505-345-3975	15-39	in	Fax	505-345-4107	345-4	1107			
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email or Fax#: 505-631-3911	Pro	Project Manager:	er:				(10)			(*(						
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☐ Standard ★Level 4 (Full Validation)	lidation)									Эď,	) 급 경					
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3-09 9:10 Hat GAC-Lead	3	-YOA	Hel				4				3	3	3			
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vate: Time: Refinquished by:	Receive	eived big		Date Time	<del></del>											
If necessary, samples submitted to Hall Environmental may be subcontracted	may be subcontrac	ted to other acc	edited laboratories	to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report	idissod si	ity. Any	sub-con	tracted	lata will	be clear	y notate	ed on t	he anaf	vtical re	port.	

Air Bubbles (Y or N)



### **COVER LETTER**

Thursday, October 01, 2009

Cindy Hurtado
Western Refining Southwest, Inc.
#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: GAC Lead 9/8/09

Dear Cindy Hurtado:

Order No.: 0909167

Hall Environmental Analysis Laboratory, Inc. received 1 sample(s) on 9/9/2009 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. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

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



Date: 01-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Project:

GAC Lead 9/8/09

Lab Order:

0909167

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date
0909167-01A	GAC-Lead	R35329	EPA Method 8015B: Gasoiine Range	9/8/2009 11:20:00 AM
0909167-01A	GAC-Lead	R35329	EPA Method 8015B: Gasoline Range	9/8/2009 11:20:00 AM
0909167-01A	GAC-Lead	R35329	EPA Method 8021B: Volatiles	9/8/2009 11:20:00 AM
0909167-01A	GAC-Lead	R35329	EPA Method 8021B: Volatiles	9/8/2009 11:20:00 AM
0909167-01A	GAC-Lead	R35281	EPA Method 8021B; Volatiles	9/8/2009 11:20:00 AM
0909167-01A	GAC-Lead	R35281	EPA Method 8015B: Gasoline Range	9/8/2009 11:20:00 AM
0909167-01A	GAC-Lead	20075	EPA Method 8015B: Diesel Range	9/8/2009 11:20:00 AM

Date: 01-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Client Sample ID: GAC-Lead

Lab Order:

0909167

Collection Date: 9/8/2009 11:20:00 AM

Project:

GAC Lead 9/8/09

Date Received: 9/9/2009

Lab ID:

0909167-01

Matrix: AQUEOUS

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	<del></del>	<del></del>			Analyst: SCC
Diesel Range Organics (DRO)	2.4	1.0	mg/L	1	9/10/2009 6:43:55 PM
Motor Oil Range Organics (MIRO)	ı ND	5.0	mg/L	1	9/10/2009 6:43:55 PM
Surr: DNOP	107	58-140	%REC	1	9/10/2009 6:43:55 PM
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	11	1.0	mg/L	20	9/17/2009 1:24:35 AM
Surr: BFB	78.1	55.2-107	%REC	20	9/17/2009 1:24:35 AM
EPA METHOD 8021B: VOLATILES					· Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	9/12/2009 11:57:38 AM
Benzene	ND	1.0	μg/L	1	9/12/2009 11:57:38 AM
Toluene	1.5	1.0	μg/L	1	9/12/2009 11:57:38 AM
Ethylbenzene	250	20	µg/L	20	9/17/2009 1:24:35 AM
Xylenes, Total	2800	40	μg/L	20	9/17/2009 1:24:35 AM
Surr: 4-Bromofluorobenzene	100	65.9-130	%REC	1	9/12/2009 11:57:38 AM



Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

0909167 Lab Order:

Western Refining Southwest, Inc. GAC Lead 9/8/09

Client:

DATES REPORT

01-Oct-09

Project:

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Sample ID	Client Sample W	Collection Date	Matrix	Test Name	Instrument Run ID QC Batch ID Prep Date Analysis Date	QC Batch ID	Prep Date	Analysis Date
0909167-01A	GAC-Lead	9/8/2009 11:20:00 AM	Aqueous	0909167-01A GAC-Lead 9/8/2009 11.20:00 AM Aqueous EPA Method 8015B: Diesel Range ID(17A) 2_090910, 20075 9/9/2009 9/10/2009	TD(17A) 2_090910	20075	6/9/2009	9/10/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090916A	R35329		6/17/2009
				EPA Method 8015B. Gasoline Range	ŻEUS_090916A	R35329		6/17/2009
				EPA Method 8015B: Gasoline Range	ZEUS_090911A	R35281		9/12/2009
				EPA Method 8021B: Volatiles	ZEUS_090916A	R35329 ·		9/17/2009
				EPA Method 8021B: Volatiles	ZEUS_090916A	R35329		9/17/2009

9/12/2009

R35281

ZEUS_090911A

EPA Method 8021B: Volatiles

Date: 01-Oct-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

GAC Lead 9/8/09

0000177

ect: GAC Lead 9	9/8/09								Work	Order:	0909167
Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec L	owLimit Hi	ghLimit	%RPD	RPDLim	it Qual
Method: EPA Method 8015B: D	Diesel Range										
Sample ID: MB-20075		MBLK				Batch ID:	20075	Analys	sis Date:	9/10/2009	11:38:17 AI
Diesel Range Organics (DRO)	ND	mg/L	1.0								
Motor Oil Range Organics (MRO)	ND	mg/L	5.0								
Surr: DNOP	1.001	mg/L	0	1	0	100	58	140			
Sample ID: LCS-20075		LCS				Batch ID:	20075	Analys	sis Date:	9/10/2009	12:13:42 P
Diesel Range Organics (DRO)	5.802	mg/L	1.0	5	0	116	74	157			
Surr: DNOP	0.6280	mg/L	0	0.5	0	126	58	140			
Sample ID: LCSD-20075		LCSD				Batch ID:	20075	Analys	is Date:	9/10/2009	12:49:08 PI
Diesel Range Organics (DRO)	5.041	mg/L	1.0	5	0	101	74	157	14.0	23	
Surr: DNOP	0.5734	mg/L	0	0.5	0	115	58	140	0	. 0	
Method: EPA Method 8015B: G	Sascline Ran	ge									
Sample ID: 5ML RB		MBLK				Batch ID:	R35281	Analys	is Date:	9/11/200	9 9:16:49 A <mark>l</mark>
Gasoline Range Organics (GRO)	ND	mg/L	0.050								
Surr: BFB	17.53	mg/L	0	20	0	87.7	55.2	107			
Sample ID: 2.5UG GRO LCS		LCS				Batch ID:	R35281	Analys	is Date:	9/11/200	9 7:48:27 PI
Gasoline Range Organics (GRO)	0.5120	mg/L	0.050	0.5	0	102	80	115			
Surr: BFB	20.96	mg/L	0	20	0	105	55.2	107			
Method: EPA Method 8021B: V	olatiles										
Sample ID: 5ML RB		MBLK				Batch ID:	R35281	Analys	is Date:	9/11/200	9 9:16:49 AN
yl terf-butyl ether (MTBE)	ND	µg/L	2.5								
zene	ND	µg/L	1.0								
Toluene	ND	μg/L	1.0	•							
Ethylbenzene	ND	µg/L	1.0								
Xylenes, Total	ND	μg/L	2.0								
Surr: 4-Bromofluorobenzene	17.62	μg/L	0	20	D	88.1	65.9	130			
Sample ID: 100NG BTEX LCS		LCS				Batch ID:	R35281	Analys	is Date:	9/11/2009	9 6:17:16 PM
Methyl tert-butyl ether (MTBE)	19.27	μg/L	2.5	20	0	96.4	51.2	138		•	
Benzene	19.87	μg/L	1.0	.20	0	99.3	85.9	113			
Toluene	19.02	µg/L	1.0	20	0	95.1	86.4	113			
Ethylbenzene	18.99	µg/L	1.0	20	0.078	94.6	83.5	118			
Xylenes, Total	56.96	μg/L	2.0	60	0	94.9	83.4	122			
Surr: 4-Bromofluorobenzene	18.76	µg/L	0	20	0	93.8	<b>6</b> 5.9	130			

### Qualifiers:



Estimated value

Analyte detected below quantitation limits RPD outside accepted recovery limits

H

Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Page 1

# Sample Receipt Checklist

Client Name WESTERN REFINING SOUT			Date Receive	<b>d</b> :	9/9/2009
Work Order Number 0909167			Received by	: ARS	Λ -
Checklist completed by:		Obate	Sample ID la	abels checked by:	initiats
Matrix:	Carrier name:	UPS	·	•	
Shipping container/cooler in good condition?		Yes 🗹	No 🗌	Not Present	
Custody seals intact on shipping container/cooler	r?	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 r	eceived?	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 🗀		Number of preserved bottles checked for
Water - VOA vials have zero headspace?	No VOA vials subm	nitted	Yes 🗹	No 🗀	pH:
Water - Preservation labels on bottle and cap ma	tch?	Yes 🗌	No 🗌	N/A 🗹	
Water - pH acceptable upon receipt?		Yes 🗌	No 🗌	N/A	<2 >12 unless noted below.
Container/Temp Blank temperature?		0.7°	<6° C Acceptab		Dalow.
COMMENTS:			If given sufficient	time to cool.	•
Client contacted	Date contacted:		Pers	on contacted	
Contacted by:	Regarding:				
Comments:					
	<del></del>	<del></del>			
	<del></del>				<u> </u>
Corrective Action					

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į			nane	- X	1724 PM	(1/2)	⊃8, _¢ (	JG,	ON'E	ON'	,l⊃,∃) anoinA									_		
	<b>1</b> \$	֓֞֞֜֞֜֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֡֓֓֓֓֓֓֡֓֓֡֓֡֓֡֓	Alb Alb	LL						als	JeM 8 ARDF											
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	HALL ENVI Anai Ysts		www.n	Tel. 505-345-3975							EDB (Method											
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Time:	l □ Rush	<u>е</u>	ead		٠	ager:			50b	Deliatore	Preservative Type	HC1									10:30	
Turn-Around Time:	Standard	Project Name:	GAC 1	Project #:		Project Manager:			Sampler: E	Samoerten	Container Type and #	3-10A									Received by:	
Crain-of-Custody Record	Client: Western Refining	/	CR 4990	87413	-4/6/	3911		(K Level 4 (Full Validation)			Sample Request ID	GAC-Lead									ent halow	
-of-Cu	Eru R		Mailing Address: #50	Bloomfield, NM	Phone #: 505-632-4/6	email or Fax#: 505-635			□ Other		Matrix	120									Relinquished by: Relinquished by:	_
iain.	West		Address	untie	# 50g	ır Fax#:	QA/QC Package:	ndard	iitation AP	□ EDD (Type)	Time	11,20									Time:	
	Client:		Mailing	73/0	Phone	email c	QA/QC	□ Standard	Accreditation □ NELAP		Date	9-8-09 11,20 H20									9-8-99 Date:	



### COVER LETTER

Friday, October 23, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990 Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: GAC 4th QTR 10/1/09

Dear Cindy Hurtado:

Order No.: 0910044

Hall Environmental Analysis Laboratory, Inc. received 3 sample(s) on 10/2/2009 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. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

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



GAC 4th QTR 10/1/09

Date: 23-Oct-09

CLIENT:

Project:

Western Refining Southwest, Inc.

Lab Order:

0910044

Client Sample ID: GAC-Lead

Collection Date: 10/1/2009 7:40:00 AM

Date Received: 10/2/2009

Lab ID: 0910044-01 Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE					Analyst: SCC
Diesel Range Organics (DRO)	ND	. 1.0	mg/L	1	10/9/2009 12:12:16 PM
Motor Oil Range Organics (MRO)	. ND	5.0	mg/L	1	10/9/2009 12:12:16 PM
Surr: DNOP	105	58-140	%REC	1	10/9/2009 12:12:16 PM
EPA METHOD 8015B: GASOLINE RANG	3E				Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	10/14/2009 4:24:35 PM
Surr: BFB	95.5	55.2-107	%REC	1	10/14/2009 4:24:35 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	µg/L	1 .	.10/14/2009 4:24:35 PM
Benzene	ND	1.0	µg/L	1	10/14/2009 4:24:35 PM
Toluene	ND	1.0	μg/L	1	10/14/2009 4:24:35 PM
Ethylbenzene	ND	1.0	µg/L	1 .	10/14/2009 4:24:35 PM
Xylenes, Total	· ND	2.0	µg/L	1	10/14/2009 4:24:35 PM
Surr: 4-Bromofluorobenzene	96.2	65.9-130	%REC	1	10/14/2009 4:24:35 PM

Oua	liti	ers:

- Value exceeds Maximum Contaminant Level
- Ε Estimated value
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 1 of 3

Date: 23-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0910044

Project:

GAC 4th QTR 10/1/09

Lab ID:

0910044-02

Client Sample ID: GAC-Lag

Collection Date: 10/1/2009 1:50:00 PM

Date Received: 10/2/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE					Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	10/9/2009 12:47:57 PM
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	10/9/2009 12:47:57 PM
Surr: DNOP	109	58-140	%REC	1	10/9/2009 12:47:57 PM
EPA METHOD 8015B: GASOLINE RAN	GE				Analyst: NSB
Gasoline Range Organics (GFO)	ND	0.050	mg/L	1	10/13/2009 3:09:22 PM
Surr: BFB	90.3	55.2-107	%REC	1	10/13/2009 3:09:22 PM
EPA METHOD 8021B: VOLATILES	•				Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	10/13/2009 3:09:22 PM
Benzene	ND	1.0	μg/L	1	10/13/2009 3:09:22 PM
Toluene	ND	1.0	μg/L	1	10/13/2009 3:09:22 PM
Ethylbenzene	ND	1.0	µg/L	1	10/13/2009 3:09:22 PM
Xylenes, Total	ND	2.0	μg/L	1	10/13/2009 3:09:22 PM
Surr: 4-Bromofluorobenzene	90.2	65.9-130	%REC	1	10/13/2009 3:09:22 PM



Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 23-Oct-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order: Project:

0910044

GAC 4th QTR 10/1/09

Lab ID:

0910044-03

Client Sample ID: GAC-Inlet

Collection Date: 10/1/2009 1:45:00 PM

Date Received: 10/2/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E					Analyst: SCC
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/9/2009 1:23:22 PM
Motor Oil Range Organics (MRO)	ND	-5.0		mg/L	1	10/9/2009 1:23:22 PM
Surr: DNOP	<b>1</b> 07	58-140		%REC	1	10/9/2009 1:23:22 PM
EPA METHOD 8015B: GASOLINE RA	NGE			•		Analyst: NSB
Gasoline Range Organics (GRO)	3.8	0.25		mg/L	5	10/13/2009 4:40:27 PM
Surr: BFB	109	55.2-107	S	%REC	5	10/13/2009 4:40:27 PM
EPA METHOD 8021B: VOLATILES						Analyst: <b>NS</b> B
Methyl tert-butyl ether (MTBE)	ND	13		μg/L	5	10/13/2009 4:40:27 PM
Benzene	45	5.0		μg/L	5	10/13/2009 4:40:27 PM
Toluene	ND	5.0		μg/L	5	10/13/2009 4:40:27 PM
Ethylbenzene	610	50		µg/L	50	10/13/2009 4:10:09 PM
Xylenes, Total	960	100		μg/L	50	10/13/2009 4:10:09 PM
Surr: 4-Bromofluorobenzene	117	65.9-130		%REC .	5	10/13/2009 4:40:27 PM

Qualifiers:

Page 3 of 3

Value exceeds Maximum Contaminant Level

Estimated value Ε

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit .

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 23-Oct-09

# QA/QC SUMMARY REPORT

Crent:

Western Refining Southwest, Inc.

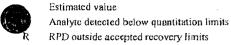
GAC 4th QTR 10/1/09

Work Order:

0910044

Analyte	Result	Units	PQL	SPK Va S	SPK ref/	%Rec Lo	owLimit Hi	ghLimit	%RPD	RPDLimit Qual
Method: EPA Method 8015B: D	iesel Range						2222	A i i	:- Data:	40/0/0000 40 05:40 45
Sample ID: MB-20272		MBLK				Batch ID:	20272	Analysi	is Date:	10/9/2009 10:25:12 AN
Diesel Range Organics (DRO)	ND	mg/L	1.0							
Motor Oil Range Organics (MRO)	ND	mg/L	5.0							
Sample ID: LCS-20272		LCS				Batch ID:	20272	Analysi	is Date:	10/9/2009 11:00:52 AN
Diesel Range Organics (DRO)	5.166	mg/L	1.0	5	0	103	74	157		
Sample ID: LCSD-20272		LCSD				Batch ID:	20272	Analysi	is Date:	10/9/2009 11:36:36 AN
Diesel Range Organics (DRO)	5,144	mg/L	1.0	5	0	103	74	157	0.419	23
Method: EPA Method 8015B: G	asoline Ran	ge		•						
Sample ID: 5ML RB	•	MBLK				Batch ID:	R35711	Analysi	is Date:	10/13/2009 10:02:35 AN
Gasoline Range Organics (GRO)	ND	mg/L	0.050							
Sample ID: 5ML RB		MBLK				Batch ID:	R35732	Analysi	is Date:	10/14/2009 9:35:07 AN
Gasoline Range Organics (GRO)	ND	mg/L	0.050							
Sample ID: 2.5UG GRO LCS		LCS				Batch ID:	R35711	Analysi	is Date:	10/13/2009 8:12:57 PM
Gasoline Range Organics (GRO)	0.5040	mg/L	0.050	0.5	0	101	80	115		
Sample ID: 2.6UG GRO LCS		LCS				Batch ID:	R35732	Analysi	s Date:	10/14/2009 7:26:37 PM
Gasoline Range Organics (GRO)	0.5100	mg/L	0.050	0.5	0	102	80	115		•
Sample ID: ,2.5UG GRO LCSD		LCSD				Batch ID:	R35711	Anaiysi	is Date:	10/13/2009 8:43:12 PM
Gasoline Range Organics (GRO)	0.5154	mg/L	0.050	0.5	0	103	80	115	2.24	8.39





H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Date: 23-Oct-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

Project:

GAC 4th QTR 10/1/09

Work Order:

0910044

Analyte	Result	Units	PQL	SPK Va S	DK ref	%Rec I	owLimit Hi	ahl imit	%RPD	RPDLimit	Qual
Arialyte	- Result		PUL	JEN VA G	- NIGI	787.60	OWEIIIII 11		701110	RPDLIMIK	Qual
Method: EPA Method 8021B:	Volatiles										
Sample ID: 5ML RB		MBLK				Batch ID:	R35711	Analysis	B Date:	10/13/2009 1	0:02:35 Al
Methyl tert-butyl ether (MTBE)	ND	μg/L	2.5								
Benzene	ND	μg/L	1.0								
Toluene	ND	μg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	2.0								
Sample ID: 5ML RB		MBLK				Batch ID:	R35732	Analysis	s Date:	10/14/2009	9:35:07 AN
Methyl tert-butyl ether (MTBE)	ND	µg/L	2.5								
Benzene	ND	μg/L	1.0								
Toluene	ND	μg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
Xylenes, Total	ND	μg/L	2.0					,			
Sample ID: 100NG BTEX LCS		LCS				Batch ID:	R35711	Analysis	Date:	10/13/2009	9:13:40 PN
Methyl tert-butyl ether (MTBE)	17.80	μg/L	2.5	20	0	89.0	51.2	138			
Benzene	19.66	μg/L	1.0	20	0	98.3	85.9	113			
Toluene	20.53	μg/L	1.0	. 20	0	103	86.4	113			
Ethylbenzene	20.41	μg/L	1.0	20	0	102	83.5	118			
Xylenes, Total	60.56	µg/L	2.0	60	0	101	83.4	122			
Sample ID: 100NG BTEX LCS		LCS				Batch ID:	R35732	Analysis	Date:	10/14/2009	B:57:33 PN
Methyl tert-butyl ether (MTBE)	18.11	μg/L	2.5	20	0	90.6	51.2	138			
Benzene	20.47	μg/L	1.0	20	0	102	85.9	113			
Toluene	21.71	μg/L	1.0	20	0	109	86.4	113			
Ethylbenzene	22.18	μg/L	1.0	20	0	111	83.5	118			
Xylenes, Total	65.91	μg/L	2.0	60	0	110	83.4	122			
Sample ID: 100NG BTEX LCSD		LCSD				Batch ID:	R35711	Analysis	Date:	10/13/2009	9:44:04 PN
Methyl tert-butyl ether (MTBE)	18.19	μg/L	2.5	20	0	91.0	51.2	138	2.17	28	
Benzene	19.45	μg/L	1.0	20	0	97.3	85.9	113	1.05	27	
Toluene	19.89	μg/L	1.0	. 20	0	99.4	86.4	113	3.20	. 19	
Ethylbenzene	19,73	μg/L	1.0	20	0	98.6	83.5	118	3.40	10	
Xylenes, Total	58.36	μg/L	2.0	60	0	97.3	83.4	122	3.70	13	

Oua	lifier	rs:

E Estimated value

Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 2

### Sample Receipt Checklist

ent Name WESTERN REFINING SOUT			·	Date Rece	eived:		10/2/2009
Work Order Number 0910044				Receive	d by: TLS		_
Checklist completed by:			Date	2/2/09	ID labels checked	by:	Initials
Matrix:	Carrier name:	<u>UPS</u>	<u>i</u>				
Shipping container/cooler in good condition?		Yes	<b>✓</b>	No 🗌	Not Present		
Custody seals intact on shipping container/coole	er?	Yes	V	No 🗌	Not Present		Not Shipped
Custody seals intact on sample bottles?		Yes		No 🗌	N/A	V	
Chain of custody present?		Yes		No 🗌			
Chain of custody signed when relinquished and	received?	Yes	$\checkmark$	No 🗌			
Chain of custody agrees with sample labels?		Yes		No 🗀			
Samples in proper container/bottle?		Yes	<b>✓</b>	No 🗌	·		
Sample containers Intact?		Yes	$\checkmark$	No 🗌			
Sufficient sample volume for indicated test?		Yes	V	No 🗌			
All samples received within holding time?		Yes	$\checkmark$	No 🗌			Number of preserved
Water - VOA vials have zero headspace?	No VOA vials subn	nitted		Yes 🗹	No 🗀		bottles checked for pH:
Water - Preservation labels on bottle and cap ma	atch?	Yes		No 🗌	N/A		
ater - pH acceptable upon receipt?		Yes		No 🗌	N/A 🗹		<2 >12 unless noted below.
Container/Temp Blank temperature?		4.	3°	<6° C Accep	table		Delow.
COMMENTS:				II given suffic	lent time to cool.		
•							
						= :	
Client contacted	Date contacted:			P	erson contacted		
Contacted by:	Regarding:						
Comments:							
Corrective Action							

### ### ### ### ### ### ### ### ### ##	
Albuquerque (F,CI,NO ₂ ,PO ₄ ,SO ₄ )  Albuquerque (B081 Pesticides / 8082 PCB's (C), PO ₄ , P	
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Chain-of-Custody Record  Client:  Western Refining Southwest Inc  Bloom field Refuny  Mailing Address: # 50 CR 4990  Cloom field Nim 874/13  Phone #: 526-632-4/10/  email or Fax#: 505-632-391/  OA/QC Package:  I Standard  Colored Time Matrix Sample Request ID  Date Time Matrix Sample Request ID  (0-1-09 7:40 1/20 CAC-LA9  (1:45 4-16 CAC-IA9	13-1-09 2:30 ( Defendable by: Date: Time: Relinquished by:



### **COVER LETTER**

Monday, December 07, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: GAC 11-17-09

Dear Cindy Hurtado:

Order No.: 0911371

Hall Environmental Analysis Laboratory, Inc. received 1 sample(s) on 11/19/2009 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. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't 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



Date: 07-Dec-09

CLIENT: Western Refining Southwest, Inc.

**Project:** GAC 11-17-09

Lab Order: 0911371

Work Order Sample Summary

			· · · · · · · · · · · · · · · · · · ·	<u> </u>
Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date
0911371-01A	GAC-Lead	R36365	EPA Method 8021B: Volatiles	11/17/2009 8:35:00 AM
0911371-01A	GAC-Lead	R36365	EPA Method 8015B: Gasoline Range	11/17/2009 8:35:00 AM
0911371-01A	GAC-Lead	R36343	EPA Method 8021B: Volatiles	11/17/2009 8:35:00 AM
0911371-01A	GAC-Lead	R36343	EPA Method 8015B: Gasoline Range	11/17/2009 8:35:00 AM
0911371-01A	GAC-Lead	20702	EPA Method 8015B: Diesel Range	11/17/2009 8:35:00 AM

Date: 07-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0911371

GAC 11-17-09

Project: Lab ID:

0911371-01

Client Sample ID: GAC-Lead

Collection Date: 11/17/2009 8:35:00 AM

Date Received: 11/19/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E				Analyst: SCC
Diesel Range Organics (DRO)	ИD	1.0	mg/L	1	11/29/2009 10:21:29 PM
Motor Oil Range Organics (MRC)	ND	5.0	mg/L	· 1	11/29/2009 10:21:29 PM
Surr: DNOP	138	58-140	%REC	1	11/29/2009 10:21:29 PM
EPA METHOD 8015B: GASOLINE RA	NGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	11/30/2009 12:02:06 PM
Surr: BFB	78.2	<b>5</b> 5.2-1 <b>0</b> 7	%REC	1	11/30/2009 12:02:06 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	µg/L	1	11/30/2009 12:02:06 PM
Benzene	ND	1.0	µg/L	1	11/30/2009 12:02:06 PM
Toluene	ND	1.0	μg/L	1	11/30/2009 12:02:06 PM
Ethylbenzene	ND	1.0	μg/L	1	11/30/2009 12:02:06 PM
Xylenes, Total	ND.	2.0	µg/L	1	11/30/2009 12:02:06 PM
Surr: 4-Bromofluorobenzene	83.6	65.9-130	%REC	1	11/30/2009 12:02:06 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 1 of 1

0911371 Lab Order: Client:

Western Refining Southwest, Inc.

DATES REPORT

07-Dec-09

GAC 11-17-09 Project:

Sample ID
0911371-01A

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Client Sample ID	Collection Date	Matrix	Matrix Test Name	Instrument Run ID QC Batch ID Prep Date Analysis Date	QC Batch ID	Prep Date	Analysis Date
GAC-Lead	11/17/2009 8:35:00 AM	Aqueous	GAC-Lead 11/17/2009 8:35:00 AM Aqueous EPA Method 8015B: Diesel Range 1D(17A) 2_091124, 20702 11/24/2009 11/29/2009	'ID(17A) 2_091124,	20702	11/24/2009	11/29/2009
			EPA Method 8015B: Gasoline Range	ZEUS_091130A	R36365		11/30/2009
			EPA Method 8015B: Gasoline Range	ZEUS_091125A	R36343		11/25/2009.
			EPA Method 8021B: Volatiles	ZEUS_091130A	R36365		11/30/2009
			EPA Method 8021B: Volatiles	ZEUS_091125A	R36343		11/25/2009

Date: 07-Dec-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

et:

GAC 11-17-09

Work Order:

0911371

Analyte	Result	Units	PQL	SPK Va S	PK ref	%Rec L	owLimit Hi	ghLimit %RP	D RPDLimit Qual
Method: EPA Method 8015B: E	Diesel Range					Batch ID:	20702	Analysis Date	: 11/29/2009 7:23:03 PM
Sample ID: MB-20702		MBLK				Daton ID.	20702	Allalysis Date	. 11/29/2009 1.23.03 FW
Diesel Range Organics (DRO)	ND	mg/L	1.0						
Motor Oil Range Organics (MRO)	ND	mg/L	5.0		_				
Surr: DNOP	1.329	mg/L	0	1	0	133	58	140	
Sample ID: LCS-20702		LCS		•		Batch ID:	20702	Analysis Date:	11/29/2009 7:58:44 PM
Diesel Range Organics (DRO)	5.932	mg/L	1.0	5	0	119	74	157	
Surr: DNOP	0.6322	mg/L	0	0.5	0	126	58	140	<u> </u>
Method: EPA Method 8015B: G	asoline Rar	nge							
Sample ID: 5ML RB	ouson, o mai	MBLK				Batch ID:	R36343	Analysis Date:	11/25/2009 9:34:54 AM
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Surr: BFB	16.73	mg/L	0	20	0	<b>8</b> 3.6	55.2	107	
Sample ID: 5ML RB		MBLK				Batch ID:	R36365	Analysis Date:	11/30/2009 9:27:14 AM
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Surr: BFB	15.38	mg/L	0	20	0	76.9	55.2	107	
Sample ID: 2.5UG GRO LCS		LCS				Batch ID;	R36343	Analysis Date:	11/25/2009 12:07:54 PM
Gasoline Range Organics (GRO)	0.4834	mg/L	0.050	0.5	0	96.7	80	115	
Surr: BFB	18.89	mg/L	0	20	0	94.4	<b>5</b> 5.2	107	
Sample ID: 0911371-01A DUP	•	DUP				Batch ID:	R36365	Analysis Date:	11/30/2009 12:32:32 PM
Gasoline Range Organics (GRO)	ND	mg/L	0.050					0	20
Tr: BFB	17.73	mg/L	0	20	0	88.7	55.2	107 0	0



Estimated value
Analyte detected below quantitation limits
RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 1

Date: 07-Dec-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

Project:

GAC 11-17-09

Work Order:

0911371

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec L	owLimit Hig	ghLimit %RPE	RPDLimit Qual
Method: EPA Method 8021B: \ Sample ID: 5ML RB	Volatiles	MBLK				Batch ID:	R36343	Analysis Date:	11/25/2009 9:34:54 AM
Methyl tert-butyl ether (MTBE)	ND	µg/L	2.5	•					
Benzene	ND	μg/L	1.0						
Toluene	ND	μg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						
Surr: 4-Bromofluorobenzene	17.88	μg/L	0	20	0	89.4	65.9	130	
Sample ID: 5ML RB		MBLK				Batch ID:	R36365	Analysis Date:	11/30/2009 9:27:14 AM
Methyl tert-butyl ether (MTBE)	ND	µg/L	2.5					•	
Benzene	ND	µg/L	1.0						
Toluene	ND	μg/L	1.0					•	
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						
Surr: 4-Bromofluorobenzene	15.40	μg/L	0	20	0	77.0	65.9	130	-
Sample ID: 100NG BTEX LCS	•	LCS				Batch ID:	R36343	Analysis Date:	11/25/2009 12:38:14 PM
Methyl tert-butyl ether (MTBE)	20.04	μg/L	2.5	20	0	100	51.2	138	
Benzene	19.96	μg/L	1.0	20	0	99.8	85.9	113	
Toluene	20.94	µg/L	1.0	20	0	105	86.4	113	
Ethylbenzene	20.50	µg/L	1.0	20	0.08	102	83.5	118	
Xylenes, Total	61.21	μg/L	2.0	60	0	102	83.4	122	
Surr: 4-Bromofluorobenzene	21.26	µg/L	0	20	0	106	65.9	130	
Sample ID: 0911371-01A DUP		DUP				Batch ID:	R36365	Analysis Date:	11/30/2009 12:32:32 PM
Methyl tert-butyl ether (MTBE)	ND	μg/L	2.5					0	20
Benzene	ND	µg/L	1.0					0	20
Toluene	ND	μg/L	1.0					0	20
Ethylbenzene	ND	μg/L	1.0					0	20
Xylenes, Total	ND	μg/L	2.0					0	-20
Surr: 4-Bromofluorobenzene	19.57	µg/L	0	20	0	97.9	65.9	130 0	0 .

		• •				
(	)	12	٩l	ií	ĭe	75

E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 2

### Sample Receipt Checklist

ent Name WESTERN REFINING SOUT		Date Received:	11/19/2009
rk Order Number 0911371		Received by: TLS	20
Checklist completed by:	Dete	Sample ID labels checked	d by: (V)
Matrix: Carrier nam	ne: <u>UPS</u>		
Shipping container/cooler in good condition?	Yes 🗹	No Not Present	t 🗆
Custody seals intact on shipping container/cooler?	Yes 🗹	No Not Present	t Not Shipped
Custody seals intact on sample bottles?	Yes 🗌	No ☐ N/A	<b>2</b>
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 🗌	Number of preserved bottles checked for
Water - VOA vials have zero headspace? No VOA vials su	ubmitted	Yes 🗹 No 🗆	pH:
Water - Preservation labels on bottle and cap match?	Yes	No ☐ N/A 🗹	
iter - pH acceptable upon receipt?	Yes 🗌	No ☐ N/A 🗹	<2 >12 unless noted below.
Container/Temp Blank temperature?	1.4°	<6° C Acceptable	<i>50701</i> 11
COMMENTS:		If given sufficient time to cool.	•
	year baddi yanga and datad		
Client contacted Date contacted:		Person contacted	
Contacted by: Regarding:			
Comments:			
Corrective Action			

	anai ysis i aroratory		www.rialenvinorinenial.com 4901 Hawkins NE - Albuquerque, NM 87109	107						oVS8) (Semi-											e analv" 'report.
(		www.hallenvironmental.com	e, NM	505-345-4107	uest					AOV) 80628											ited on th
<u> </u>			nbuer	505	Rec	<u> </u>				8081 Pestici											urly nota
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<			ns N	5-39						EDB (Metho			<del>                                     </del>								racted (
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	-	60	了一個							新産の	`									Date Time	This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the ana
nd Time:	□ Rush	ā	1-11 -			iger:		Sab		Preservative Type	Hel								11/20		er accredited laboratorios
Turn-Around	D Standard	Project Name:	GAC	Project #:		Project Manager:		Sampler:		Container Type and #	3-10A								Received by:	Received by	ontracted to other a
Chain-of-Custody Record	9W!N9		Mailing Address: #50 CR4990	- Bloom Ciell, NM B7413	4161	1165	ovel 4 (Full Validation)			Sample Request ID	GAC-Lead								rakon		necessary, samples submitted to Hall Environmental may be subcontracted to oth
ustoc	2.4%		2	MM	-050	632-		ier			S					-			shed by:	shed by:	ubmitted to H
of-C	iru S		#50	ell,	5,51632-	1		□ Other		Matrix	420								 Relinquished by	Relinquished by:	samples so
hain	Client Western Refining		Address	20mCi	#: "	email or Fax#: 505	QA/QC Package:	itation	□ EDD (Type)	Time	147-9 8:35 H20								Time: 138	Time:	f necessary.
O	Client:		Mailing	A PAR	Phone #:	email o	QA/QC Packa	Accreditation		Date	(H7-09								Date: 17-18-09	Date:	



### COVER LETTER

Thursday, December 17, 2009

Cindy Hurtado Western Refining Southwest, Inc. #50 CR 4990 Bloomfield, NM 87413

TEL: (505) 632-4161 FAX (505) 632-3911

RE: GAC 12-2-09

Dear Cindy Hurtado:

Order No.: 0912064

Hall Environmental Analysis Laboratory, Inc. received 1 sample(s) on 12/3/2009 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. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't 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



Date: 17-Dec-09

CLIENT:

Western Refining Southwest, Inc.

Lab Order:

0912064

GAC 12-2-09

Project: Lab ID:

0912064-01

Client Sample ID: GAC-Lead

Collection Date: 12/2/2009 9:45:00 AM

Date Received: 12/3/2009

Matrix: AQUEOUS

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE					Analyst: SCC
Diesel Range Organics (DRO)	ND	. 1.0	mg/L	1	12/7/2009 10:34:25 AM
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	12/7/2009 10:34:25 AM
Surr: DNOP	117	58-140	%REC	1	12/7/2009 10:34:25 AM
EPA METHOD 8015B: GASOLINE RAN	GE				Analyst: NSB
Gasoline Range Organics (GRO)	· ND	0.050	mg/L	1	12/9/2009 2:19:35 AM
Surr: BFB	80.5	55.2-107	%REC	1	12/9/2009 2:19:35 AM
EPA METHOD 8021B: VOLATILES		٠			Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	µg/L	. 1	12/9/2009 2:19:35 AM
Benzene	ND	1.0	μg/L	1	12/9/2009 2:19:35 AM
Toluene	ND	1.0	μg/L	1	12/9/2009 2:19:35 AM
Ethylbenzene	ND	1.0	μg/L	1	12/9/2009 2:19:35 AM
Xylenes, Total	ND	2.0	µg/L	1	12/9/2009 2:19:35 AM
Surr: 4-Bromofluorobenzene	85.0	65.9-130	%REC	1	12/9/2009 2:19:35 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

Ε Estimated value

Analyte detected below quantitation limits

Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Date: 17-Dec-09

# QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Inc.

oject:

GAC 12-2-09

Work Order:

0912064

Analyte	Result	Units	PQL	SPK Va S	PK ref	%Rec L	owLimit Hig	hLimit %RPD	RPDLimit Qual
Method: EPA Method 8015B: D	iesel Range							343	
Sample ID: MB-20789		MBLK				Batch ID:	20789	Analysis Date:	12/7/2009 8:07:34 AM
Diesel Range Organics (DRO)	ND	mg/L	1.0						
Motor Oll Range Organics (MRO)	ND	mg/L	5.0						
Sample ID: LCS-20789		LCS.				Batch ID:	20789	Analysis Date:	12/7/2009 8:44:34 AM
Diesel Range Organics (DRO)	5.454	mg/L	1.0	5	0	109	74	157	
Method: EPA Method 8015B: G	asoline Rar	nge							•
Sample ID: 5ML RB	•	MBLK				Batch ID:	R36483	Analysis Date:	12/8/2009 9:32:43 AN
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Sample ID: 2:5UG GRO LCS		LCS				Batch ID:	R36483	Analysis Date:	12/9/2009 4:53:55 AM
Gasoline Range Organics (GRO)	0:4792	mg/L	0.050	0.5	0	95.8	80	115	
Method: EPA Method 8021B; V	olatiles								
Sample ID: 5ML RB		MBLK				Batch ID:	R36483	Analysis Date:	12/8/2009 9:32:43 AM
Methyl tert-butyl ether (MTBE)	ND	μg/L	2.5						
Benzene	ND	· µg/L	1.0						
Toluene	ND	μg/L	1,0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						
Sample ID: 100NG BTEX LCS		LCS				Batch ID:	R36483	Analysis Date:	12/9/2009 5:24:05 AN
Methyl tert-butyl ether (MTBE)	19.48	μg/L	2.5	20	0	97.4	51.2	138	
nzene	20.54	µg/L	1.0	20	0	103	85.9	113	
oluene	20.85	µg/L	1.0	20	0	104	86.4	113	i
Ethylbenzene	20.39	μg/L	1.0	20	0	102	83.5	118	,
Xylenes, Total	60.86	μg/L	2.0	60	0	101	83.4	122	•

### Qualifiers:



Analyte detected below quantitation limits

RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

### Sample Receipt Checklist

Client Name WESTERN REFINING SOUT	•		Date Receiv	ea:	12/3/2009
Work Order Number 0912064	\		Received b	y: TLS	۸
		101	Sample ID	labels checked by:	
Checklist completed by:	1	123 Date	09		Initials
	)	1	•		
Matrix:	Carrier name	: UPS			
Shipping container/cooler in good condition?		Yes 🗹	No 🗌	Not Present	
Custody seals intact on shipping container/cooler?	<b>,</b>	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 re-	ceived?	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 <b>⊻</b>	No 🗆		Number of preserved
· · ·	No VOA vials sub		Yes 🗹	No 🗌	bottles checked for pH:
Water - Preservation labels on bottle and cap mate		Yes 🗌	No 🗆	N/A 🗹	<b>P.</b>
Water - pH acceptable upon receipt?		Yes 🗌	No 🗔	N/A 🗹	<2 >12 unless noted
Container/Temp Blank temperature?		3.8°	<6° C Accepta	able	below.
COMMENTS:			If given sufficie	nt time to cool.	
				·	
Client contacted D	ate contacted:		Pe	rson contacted	
Contacted by:	egarding:				
Comments:					
·			· · · · · · · · · · · · · · · · · · ·		
				A	
	,				,
Corrective Action					

ANALYSIS LABORATORY HALL ENVIRONMENTAL 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 4901 Hawkins NE - Albuquerque, NM 87109 Fax 505-345-4107 (AOV-ima2) 0YS8 www.hallenvironmental.com (AOV) 808S8 8081 Pesticides / 8082 PCB's Anions (F,CI,NO₃,NO₂,PO₄,SO₄) RCRA 8 Metals Tel. 505-345-3975 (HA9 10 AN9) 01E8 EDB (Method 504.1) TPH (Method 418.1) メ PPH Method 8015B (Gas/Diesel) Remarks: 2 BTEX + MTBE + TPH (Gas only) BTEX + MTBE + Take (8021) Time 780 Date Preservative □ Rush Type Turn-Around Time: Project Manager: Project Name: Standard Container Type and # GAC 3-104 Sampler: Received by: Project #: (Full Validation) Sample Request ID ain-of-Custody Record GAC-Lead Bloomfield, NM 87413 Mailing Address: #50 CR 4990 Refining email or Fax#: 505-632-39// elinguished by □ Other 120 Matrix Client: Western Phone #: 505 -9:45 122-09 11/00 QA/QC Package: Time □ EDD (Type) Accreditation Time: □ Standard □ NELAP 12-2-09 Date

Air Bubbles (Y or N)