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Western Refining

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April 12, 2013

Glen Von Gonten
Environmental Engineer
New Mexico Energy, Minerals & Natural Resources Dept.
Environmental Bureau
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: 2012 Annual Report – former Giant Bloomfield Refinery.

Federal Express Tracking #: 7995 1279 3627

Dear Mr. Von Gonten;

Please find enclosed the 2012 Annual Report for the former Giant Bloomfield Refinery located in the NW ¼ of Section 27 and the SW ¼ of Section 22, Township 29 N, Range 12 W in San Juan County, New Mexico.

If you should have any questions or require additional information, please do not hesitate to contact me at 505-632-4171 or at Randy.Schmaltz@wnr.com.

Sincerely,

James R. Schmaltz

James R. Schmaltz
Health, Safety, Environmental & Regulatory Director
Western Refining Southwest, Inc.

cc: Brandon Powell, NM OCD Aztec District Office
Allen Haines, Western Refining, El Paso
WNR File

2012 ANNUAL REPORT

FORMER GIANT BLOOMFIELD REFINERY
BLOOMFIELD, NEW MEXICO
DISCHARGE PERMIT GW-040

MARCH 2013

Western Refining

WESTERN REFINING SOUTHWEST, INC.
111 CR 4990
Bloomfield, New Mexico 87413

2012 ANNUAL REPORT

FORMER GIANT BLOOMFIELD REFINERY
BLOOMFIELD, NEW MEXICO

DISCHARGE PERMIT GW-040

MARCH 2013

Prepared for:

WESTERN REFINING SOUTHWEST, INC.
111 County Road 4990
Bloomfield, New Mexico 87413

Prepared by:

LT ENVIRONMENTAL, INC.
2243 Main Avenue, Suite 3
Durango, Colorado 81301
(970) 385-1096

TABLE OF CONTENTS

SECTION **PAGE**

TABLE OF CONTENTS (CONTINUED)

FIGURES

TABLES

APPENDICES

EXECUTIVE SUMMARY

LT Environmental, Inc. (LTE) on behalf of Western Refining Southwest, Inc. (Western) has prepared this report detailing work completed from January through December 2012 at the former Giant Bloomfield Refinery (Site) in Bloomfield, New Mexico. The scope of work for this project was continued recovery and monitoring of petroleum hydrocarbon impacts to groundwater, which were identified upon cessation of refinery operations. During the time period covered in this report, Western utilized a groundwater recovery and remediation system consisting of groundwater recovery wells, a carbon filtration unit, and a treated water infiltration trench.

LTE conducted operations and maintenance on the remediation system and monitored groundwater quality during 2012. In 2012, the total volume of groundwater recovered and treated increased from the volume observed in 2011 by 267,375 gallons to a total of 1,718,998 gallons.

LTE measured depth-to-groundwater in all monitoring wells and recovery wells quarterly and recovered phase-separated hydrocarbons (PSH) in monitoring wells with oil absorbent socks when PSH was detected weekly. Thin accumulations of PSH exist in previously identified source areas. A total of 17.32 gallons of PSH were recovered from the Site in 2012; a significant increase from the 7.03 gallons recovered in 2011. The increased volume of PSH recovered in 2012 can be attributed to a full year of weekly PSH recovery activities. Western increased the frequency of PSH recovery activities to weekly beginning in August 2011. Additionally, monitoring wells SHS-2 and SHS-8 contained detectable PSH for the first time since 2004. A 4-inch product recovery well, GBR-34A, was installed to enhance PSH recovery at the Site.

LTE sampled the remediation system influent and effluent quarterly for laboratory analysis of volatile organic compounds (VOCs) and general water chemistry. In addition, the system effluent was analyzed for polynuclear aromatic hydrocarbons (PAHs) and metals on an annual basis. Annual sampling in January 2012 included collecting groundwater samples from eleven monitoring wells and two recovery wells for laboratory analysis of VOCs and general water chemistry. Six of the groundwater samples were also analyzed for PAHs and four were analyzed for total metals concentrations.

Laboratory analytical results indicated no VOCs or PAHs were detected in influent and effluent groundwater samples, and groundwater samples collected from monitoring and recovery wells did not contain concentrations of VOCs or PAHs exceeding New Mexico Water Quality Control Commission (NMWQCC) standards. Sulfate concentrations exceeded NMWQCC standards in samples collected from twelve of the 13 monitoring and recovery wells and from the influent and effluent. Total dissolved solids exceeded NMWQCC standards in groundwater samples collected from all thirteen monitoring and recovery wells and from the influent and effluent. Chloride concentrations exceeded the NMWQCC standard in groundwater samples collected from two upgradient monitoring wells and one on-site monitoring well. The influent and nine of the thirteen monitoring and recovery wells contained manganese in excess of NMWQCC standards. Downgradient monitoring well SHS-8 contained fluoride concentrations in excess of NMWQCC standards. Iron concentrations exceeded the NMWQCC standard in nine of the thirteen monitoring and recovery wells. Chromium, selenium, and nickel concentrations exceeded NMWQCC standards in upgradient monitoring wells. These parameters can be attributed to an upgradient release at the Lee Acres Landfill in 1985 or to naturally occurring background conditions.

Based on the results presented in this report, Western will continue PSH recovery and operation of the remediation system. Western will continue quarterly monitoring of groundwater flow behavior, as well as influent and effluent sampling and laboratory analysis. Annual sampling of monitoring wells and recovery wells will continue.

1.0 INTRODUCTION

LT Environmental, Inc. (LTE) prepared this report on behalf of Western Refining Southwest, Inc. (Western) to summarize work completed from January through December 2012 at the former Giant Bloomfield Refinery (Site) in Bloomfield, New Mexico.

1.1 SITE DESCRIPTION

The Site is on the northeast corner of United States (U.S.) Highway 64 and County Road 3500, approximately five miles west of Bloomfield, New Mexico, in the southwest quarter of Section 22 and, the northwest quarter of Section 27 Township 29 North, Range 12 West in San Juan County, New Mexico (Figure 1). The remediation system includes a control building, aboveground storage tanks, two carbon filtration tanks, an infiltration trench, groundwater monitoring wells, and groundwater recovery wells (Figure 2).

1.2 SITE HISTORY

The former refinery, under ownership of Giant Industries, Arizona (Giant), produced leaded and unleaded gasoline, diesel, kerosene, and other refined petroleum products from 1974 to 1982 and is presently inactive. The refining operations and subsequent truck loading and unloading activities impacted groundwater, which were identified and investigated as part of the site closure requirements in 1986 prescribed by the New Mexico Oil Conservation Division (NMOCD). Details of a subsurface investigation and initial remediation efforts are contained in a 1987 report entitled *Soil and Groundwater Investigations and Remedial Action Plan, Giant Industries, Inc. Bloomfield Refinery, Bloomfield, New Mexico.* The investigation identified three source areas (Figure 2):

- Northern Area (Diesel Spill Area): 10,000 to 15,000 gallons of diesel were released from a pipeline in 1985;
- Central Area (Truck Fueling Area): 15,000 gallons of diesel were released from a pipeline in 1986; and
- Southern Area: Historical releases from a former fire fighting drill area east and upgradient of the Site may have collected in a former seep and a stormwater catchment area.

Concurrent with refinery operations, the former Lee Acres Landfill located upgradient of the Site operated as a San Juan County landfill from 1962 to 1986 (Figure 1). Landfill operations included solid waste disposal in trenches, and a series of lagoons that were used for disposal of a variety of liquid wastes. The NMOCD sampled the lagoons in 1985 and demonstrated that the liquids in the impoundments contained a variety of chlorinated solvents, petroleum hydrocarbon constituents, heavy metals, and salts. In April 1985, a breach in the dike retaining the lagoons released liquid wastes into an arroyo west of the Site. The arroyo drains south toward the Lee Acres Subdivision, where the NMOCD and the New Mexico Environment Department (NMED) identified impacted groundwater in domestic water wells in 1988. In response, the NMOCD required Giant to investigate petroleum hydrocarbon impacts to groundwater downgradient of the refinery in the Lee Acres Subdivision, and the NMED conducted a separate investigation to identify potential impacts from the landfill. The results of the subsurface investigation conducted by Giant south of the refinery are contained in three volumes of the 1992 report, *Remedial Investigation Report for Lee Acres Landfill.* The NMED in conjunction with the Bureau of Land Management and the United States Geological Survey published their results in three reports referenced in Section 6.0 of this report.

The investigations identified two separate plumes of impacted groundwater that commingled across the refinery and flowed downgradient into the Lee Acres Subdivision. Groundwater contaminants detected in the refinery plume included phase-separated hydrocarbons (PSH) and dissolved phase petroleum hydrocarbons. The dissolved-phase constituents included benzene, toluene, ethylbenzene, and total xylenes (BTEX), naphthalene, and 1,2 dichloroethane (EDC). The landfill contaminant plume contained total dissolved solids (TDS), chloride, sulfate, manganese, metals, BTEX, naphthalene, 1,1 dichloroethane, cis-1,2-dichloroethene, trans-1,2-dichloroethene, tetrachloroethene, 1,1,1-trichloroethane, and trichloroethene.

Beginning in 1988, Giant installed a groundwater recovery, treatment, and disposal system in stages at the Site to restrict migration of contaminants and to remediate groundwater impacts caused by Giant's operations. A total of 45 monitoring wells were initially installed and designated GBR wells (Figure 2). Of these 45 monitoring wells, 11 were converted to recovery wells and re-named with GRW designations. An additional 17 monitoring wells were completed in the Lee Acres Subdivision and designated as SHS wells. Four SHS wells initially operated as recovery wells. Giant pumped groundwater from the recovery wells into storage tanks, then treated the groundwater with an air stripper and carbon filtration and re-injected treated groundwater into the subsurface through two infiltration galleries.

As groundwater quality improved over time, the remediation system was gradually simplified. It currently consists of 9 active groundwater recovery wells that pump groundwater into a single storage tank (Tank 102). Groundwater from Tank 102 is pumped to a carbon filtration tank, and then passes through a treated water infiltration trench (Figure 2). Following initial contaminant reduction, the groundwater remediation system has operated in an operation and maintenance mode. Concentrations of contaminates within the remediation system's influent and effluent were below laboratory detection limits for 18 years. In 2008, Western conducted a supplemental evaluation of the remedial operations, which included shutting down the remediation system and sampling groundwater wells under static conditions in an effort to redefine the area of impact and assess effectiveness of the remediation system. Existing equipment was inspected and repaired to optimize performance. Results from the sampling event were included in the 2008 annual report submitted to the NMOCD. Pumping and treating operations were resumed in February 2009 and continued through 2012.

1.3 SITE HYDROLOGY

The Site is located on weathered outcrops of the Nacimiento Formation, which is comprised of shales, sandstones, and siltstones of Cretaceous-Teritary age. The San Juan River is approximately 2,000 feet south of the Site. Immediately west is a large unnamed arroyo, which is underlain by 30 feet to 60 feet of Quaternary alluvial sediments. Older Quaternary terrace deposits of cobbles and boulders were observed on the interfluvial ridges adjacent to the arroyo.

These terrace deposits may have been utilized as fill on the Site. The outcropping surfaces of the Nacimiento Formation have been eroded to form a paleo-channel that appears to be similar in morphology to the existing surface arroyo located to the west. The bedrock is overlain by recent alluvial deposits (gravel, sand, silt, and clay), which thicken toward the south-southwest as illustrated on the cross section on Figure 3.

The subsurface geology is a controlling feature for groundwater flow direction and contaminant migration. Shallow groundwater is generally unconfined with some local areas potentially under semi-confined conditions. There are two aquifers of concern that are in direct hydraulic communication: a shallow aquifer composed of recent alluvial materials and a bedrock aquifer that exists in the underlying Nacimiento Formation (Figures 3 and 4, respectively). The alluvial aquifer generally has the higher permeability of the two aquifers, and recovery wells completed within this aquifer have higher yields with larger radii of influence.

1.4 SCOPE OF WORK

The scope of work for this project included operating and maintaining the groundwater remediation system, monitoring groundwater quality and presence of PSH, and recovering PSH. A summary of field activities, results, conclusions, and recommendations are presented in the subsequent sections of this report.

2.0 METHODOLOGY

2.1 GROUNDWATER REMEDIATION SYSTEM

The groundwater remediation system at the Site was designed to pump impacted groundwater from local aquifers through a series of recovery wells, which prevent migration of impacted groundwater beyond the influence of the wells as illustrated on Figure 5. The recovered groundwater is collected in Tank 102 then pumped to a second tank with a carbon matrix lining where it is treated by carbon adsorption. The treated water is then returned to the aquifer through an infiltration trench. The infiltration trench consists of a subsurface system of perforated polyvinyl chloride (PVC) pipes placed within gravel packs. Water infiltrates the surrounding strata and eventually returns to the aquifer. The return of recovered water to the aquifer acts as a recharge mechanism. Figure 6 is a simplified diagram representation of the groundwater recovery, treatment, and disposal system at the Site.

2.2 OPERATIONS AND MAINTENANCE

LTE conducted weekly inspections to ensure normal operation of the remediation system. A panel located in the control building controls operation of the remediation system and incorporates shutdown functions to safeguard against a tank overflow and other undesirable events. The control panel was monitored weekly, as were water flow meters at the storage tank and each recovery well. Weekly observations were recorded in a bound field log book with the date, time, and person recording the information noted. Water flow meter readings were entered into a spreadsheet to calculate flow volumes and monitor cumulative flow rates. All equipment at the Site was inspected for leaks and malfunctions. The inspector was familiar with the location of underground lines and noted any surface indication of underground leaks.

Maintenance included repair and replacement of well pumps, pump controllers, and flow meters. Additionally, LTE replaced filters in well houses on a regular basis, inspected the carbon pre-filter, and repaired any other hardware as necessary.

2.3 PSH RECOVERY

Oil absorbent socks were used to passively recover PSH detected in groundwater monitoring wells at the Site. The socks were monitored weekly from January through December and replaced when they were greater than 50 percent full. Volumes of recovered PSH were estimated based on percent saturation observed in the socks and were recorded in a field log book. In addition, LTE and Western manually recovered PSH from GBR-34 and SHS-2 when present with disposable bailers weekly.

2.4 GROUNDWATER MONITORING

Quarterly groundwater monitoring included measurements of depth to groundwater at all monitoring and recovery wells with a Keck oil-water interface probe. The interface probe was decontaminated with Alconox™ soap and rinsed with de-ionized water before each measurement. Depth to groundwater measurements were used to calculate quarterly groundwater elevations at the Site to determine direction of groundwater flow and hydraulic control achieved by the recovery wells. The recovery pumps were not turned off during quarterly monitoring events nor were the pumps removed from the recovery wells; therefore, calculated groundwater elevations do not represent static conditions.

Influent and effluent groundwater samples were collected quarterly and analyzed for general water chemistry parameters including pH, electrical conductivity (EC), TDS, alkalinity, hardness, anions (bromide, chloride, sulfate, fluoride, nitrite, nitrate, and phosphate), and cations (calcium, iron, magnesium, manganese, potassium, and sodium) and for volatile organic compounds (VOCs) using United States Environmental Protection Agency (USEPA) Method 8260B. The effluent groundwater sample was also analyzed annually for polynuclear aromatic hydrocarbons (PAHs) according to USEPA Method 8310 and total metals (barium, beryllium, cadmium, chromium, copper, nickel, silver, zinc, antimony, arsenic, selenium, and thallium) according to USEPA Method 200.7 and 200.8, and mercury according to USEPA Method 245.1. Influent groundwater was collected from a system valve before it entered the carbon filtration unit. Effluent groundwater was collected through a sample valve as treated water exited the carbon adsorption tank. Groundwater samples were collected in appropriate pre-cleaned and/or pre-preserved sample bottles or glass vials. Samples were labeled with the date and time of collection, sample designation, project name, collector's name, and parameters to be analyzed and immediately sealed and packed on ice. The samples were shipped on ice following strict chain-of-custody procedures to Hall Environmental Analysis Laboratory (HEAL) in Albuquerque, New Mexico, before designated holding times expired.

LTE collected annual groundwater samples from groundwater monitoring wells and recovery within and south of the Site (Table 1). The volume of groundwater in the monitoring wells was calculated, and a minimum of three well casing volumes of groundwater was purged from each well using a disposable bailer. As groundwater was extracted, pH, EC, and temperature were monitored. Monitoring wells were purged until these properties stabilized or the well bailed dry, indicating the purge water was representative of aquifer conditions. Stabilization was defined as three consecutive stable readings for each water property (±0.4 units for pH, ±10 percent for electric conductivity, and ±2° Celsius for temperature). Once each monitoring well was properly purged, groundwater samples were collected in bottles or vials and shipped to HEAL. Groundwater sampling from recovery wells followed the same procedures as monitoring wells, except pumps installed in recovery wells were used to purge the appropriate volume of groundwater from each recovery well. The groundwater samples were analyzed for VOCs according to USEPA method 8260B and general water chemistry parameters including pH, EC, TDS, alkalinity, hardness, anions (bromide, chloride, sulfate, fluoride, nitrite, nitrate, and phosphate), and cations (calcium, iron, magnesium, potassium, and sodium). Six of the groundwater samples were analyzed for PAHs according to USEPA Method 8310 and four groundwater samples were analyzed for total metals (barium, beryllium, cadmium, chromium, copper, lead, nickel, silver, zinc, antimony, arsenic, selenium, and thallium) according to USEPA Method 200.7 and 200.8, and mercury according to USEPA Method 245.1.

3.0 RESULTS

3.1 OPERATIONS AND MAINTENANCE

LTE and Western worked concurrently to keep the groundwater remediation system fully operational. Repairs and observations included:

- Western removed the housing and pump in GRW-12 and airlifted sediment from the well between February 8 and February 21, 2012. Pump maintenance decreased as a result;
- Western removed the pumps in GRW-4, GRW-5, and GRW-6 on February 21, 2012, for inspection after observing low pumping volumes. The pump in GRW-4 was reinstalled on March 1, 2012, after being cleaned. The pumps in GRW-5 and GRW-6 were cleaned, reinstalled, and put back into service on March 23, 2012. The cleaning of the pumps improved recovery volumes;
- The pump in GRW-13 was replaced on March 26, 2012. The pump was down for less than a week during maintenance;
- On April 11, 2012, the filter housing on GRW-5 snapped at the threads. Between April 5 and April 18, 2012, the above ground piping and filter housings were replaced in GRW-5 and in GRW-6 as a precautionary measure;
- On April 18, 2012, Western replaced the pump motor control on GRW-11. The pump was down for less than one week during maintenance;
- The pump in GRW-6 was lowered three feet on April 25, 2012, in an attempt to increase the volume of groundwater recovered. Recovery volumes increased as a result;
- Western replaced the surface piping on GRW-3 on May 16, 2012, after leaking water was discovered;
- GRW-3 had electrical problems and was taken out of service on July 25, 2012, at which time the motor in the pump was replaced with a new 115 volt motor. Replacing the motor did not fix the problem; an electrician was hired to repair the pump. The well was put back into service on November 3, 2012;
- Sometime between July 2012 and October 2012, SHS-13 was run over with a car. The concrete housing has been shifted over the top of the well, making it inaccessible; and
- No surface indications of underground leaks were observed in 2012.

Except for GRW-4, GRW-5, and GRW-11, the recovery wells pumped larger volumes of groundwater in 2012 as compared to 2011. In 2012, GRW-4, GRW-5, and GRW-11 had a lower weekly average of gallons pumped by 281 gallons, 609 gallons, and 1,397 gallons, respectively. Mechanical problems with pumps required extensive down time. Table 2 presents the total volume of groundwater pumped from each recovery well during 2011 and 2012. A total of 1,718,998 gallons of groundwater were recovered and treated by carbon filtration in 2012, representing an increase from the 1,451,623 gallons of groundwater treated during 2011.

3.2 GROUNDWATER ELEVATION

Groundwater elevations measured in groundwater monitoring and recovery wells are presented in Table 3 and quarterly potentiometric surface maps are depicted on Figures 7 through 10. When PSH is detected, the groundwater elevation is corrected using an estimated density correction factor of 0.88. Groundwater flow direction was consistently toward the southwest throughout the year. Drawdown around recovery wells is evident each quarter. Groundwater elevations in most wells were lower during 2012 than in the past, which is a regional trend resulting from the ongoing drought.

3.3 PSH RECOVERY

Thin accumulations of PSH were detected in groundwater monitoring wells near the source areas identified in the preliminary subsurface investigation conducted by Giant. Oil-absorbent socks were installed and maintained in monitoring wells GBR-7, GBR-8, GBR-11, GBR-20, GBR-22, GBR-23, GBR-25, GBR-26, GBR-34, and product recovery well GBR-34A during 2012 (Figure 11). Annual volumes of PSH recovered from 2009 through 2012 are presented in Table 4. More than two times the amount of PSH was recovered in 2012 as compared to 2011.

In the Northern Area, LTE did not detect measurable PSH in GBR-23, GBR-25, and GBR-26 in 2012, but approximately 1.7 gallons of PSH were recovered with oil absorbent socks during the year.

In the Central Area, LTE regularly detected and recovered PSH in GBR-34. The thickness of PSH in GBR-34 was as high as 0.74 feet in April 2012. A total of 10.1 gallons of PSH was removed from GBR-34 using oil-absorbent socks and manual bailing. The cross sections depicted on Figures 3 and 4 indicate a small depression in the groundwater table at GBR-34 that may be controlling PSH accumulations at this location. LTE removed a total of 2.2 gallons of PSH from GBR-22 during 2012 using oil-absorbent socks.

Western installed GBR-34A on February 10, 2012, as a 4-inch product recovery well to increase efficiency of product recovery in the Central Area. GBR-34A was installed adjacent to GBR-34, which regularly contains the largest volume of PSH at the Site. PSH was detected in GBR-34A once in 2012; 0.02 feet was measured on May 8, 2012. In an attempt to adequately develop GBR-34A and to draw PSH into the well, LTE bailed the well dry weekly by removing approximately 9 to 14 gallons of groundwater. Multiple purge events did not result in greater PSH accumulations and did not appear to impact the volume of PSH accumulating in GBR-34. A 4-inch diameter oil-absorbent sock was installed on June 14, 2012, and replaced when PSH saturated more than 50% of the sock. A total of 0.98 gallons of PSH were recovered from GBR-34A.

In the Southern Area, no PSH was detected in GBR-7, GBR-8, GBR-11, or GBR-20 during 2012. LTE continued to recover small volumes of PSH in oil absorbent socks throughout the year. A total amount of 2.29 gallons of PSH were recovered from the Southern Area.

For the first time since October 2004, PSH was discovered in groundwater monitoring wells south of Highway 64. SHS-2 and SHS-8 contained 0.01 feet of PSH on October 4, 2012. LTE measured depth to water in the surrounding monitoring wells weekly for the remainder of 2012 to observe the behavior of the PSH.

3.4 GROUNDWATER SAMPLING

Laboratory analytical results from groundwater sampling are presented in Table 5 and the complete laboratory analytical reports are in Appendix A. Isopach maps and geologic cross sections illustrating the distribution of analytes are not included because the sampling events do not include wells from all of the current source areas. Such a presentation of results would not be indicative of actual conditions at the Site. Laboratory analytical results from 2012, as compared to NMWQCC standards are summarized below:

- No VOCs exceeded laboratory detection limits in influent or effluent samples;
- VOCs were detected in the annual groundwater samples, but only in minor concentrations that did not exceed NMWQCC standards:
  - EDC was detected in groundwater from monitoring well GBR-24D;
  - Tetrachloroethene (PCE) was detected in groundwater in upgradient monitoring wells GBR-32, GBR-48 and GBR-49;
  - Acetone was detected in groundwater from monitoring well SHS-8;
- Concentrations of PAHs were not detected above the respective laboratory limits in samples collected from the system effluent or from samples collected the groundwater monitoring and recovery wells;
- Except in groundwater in SHS-8, sulfate concentrations exceeded the NMWQCC standard in samples collected from the groundwater monitoring and recovery wells, system influent, and system effluent;
- TDS exceeded the NMWQCC standard in samples collected from the groundwater monitoring and recovery wells, system influent, and system effluent;
- Chloride concentrations exceeded the NMWQCC standard in groundwater samples collected from up-gradient wells GBR-32, and GBR-49, and at GBR-30;
- The total chromium concentration in groundwater from GBR-48 exceeded the NMWQCC standard. GBR-48 is located within the arroyo adjacent to and upgradient of the Site;

- Iron concentrations exceeded the NMWQCC standard in the annual groundwater sample from GRW-3, GBR-17, GBR-24D, GBR-30, GBR-31, GBR-48, GBR-51, GBR-52, and SHS-8;

- Manganese was detected in concentrations exceeding the NMWQCC standard in annual groundwater samples from GRW-3, GRW-6, GBR-24D, GBR-30, GBR-31, GBR-32, GBR-48, GBR-49, SHS-8, and from the influent sample;

- The concentration of fluoride exceeded the NMWQCC standard in groundwater collected from monitoring well SHS-8;

- The concentration of nickel exceeded the NMWQCC standard in groundwater collected from upgradient monitoring well GBR-49;

- The concentration of selenium exceeded the NMWQCC standard in groundwater from upgradient monitoring wells GBR-32 and GBR-48.

4.0 CONCLUSIONS

Western successfully maintained the groundwater remediation system at the Site and continued to recover residual PSH from original source areas. The volume of groundwater recovered at the Site increased due to ongoing maintenance of the remediation system.

Measurable PSH near the previously identified sources at the Site has decreased in 2012 compared to 2011. The presence of PSH south of Highway 64 is most likely residual PSH that was trapped in the smear zone near the monitoring wells and exposed as groundwater elevation decreased as a result of ongoing drought conditions. Figure 12 depicts the groundwater elevations in wells SHS-2 and SHS-8 from 2009 to 2012. Groundwater elevations measured before 2009 were not included due to the inconsistency caused from pumping in nearby recovery wells. A decreasing trend is evident in 2012 and groundwater elevation measured in 2012 represents the lowest elevations measured. Continued frequent monitoring will aid in determining how to address the PSH.

Contaminants of concern were either not detected in groundwater samples or, if detected, can be attributed to an upgradient source or naturally occurring background conditions. The influent and effluent groundwater associated with the remediation system at the Site did not contain detectable concentrations of VOCs or PAHs during 2012, and groundwater samples collected from monitoring and recovery wells did not contain VOCs or PAHs exceeding NMWQCC standards.

Influent and effluent water associated with the pump and treat system at the Site is consistently compliant with standards for general chemistry parameters and metals, with the exception of TDS, chloride, and sulfate. Elevated sulfate, chloride, and TDS are historically characteristic of groundwater at the Site and are most likely related to a release at the Lee Acres Landfill in 1985. These analytes were identified in earlier studies as constituents within the groundwater contaminant plume that originated from the landfill. Previous investigations at the landfill reported elevated levels of chloride present in the water sampled from liquid waste lagoons (McQuillan, D. and Longmire, P., *Water Quality Investigations at the Lee Acres Landfill and Vicinity, San Juan County, New Mexico*), and the landfill accepted produced water from natural gas well operations in the San Juan Basin. During initial landfill investigations, the upgradient area near GBR-32, GBR-48, GBR-49, and GBR-50 was identified as the "northern containment slug." Groundwater representative of this area contained TDS concentrations ranging from 2,125 milligrams per kilogram (mg/kg) to 6,068 mg/kg, sulfate concentrations ranging from 1,920 mg/kg to 5,830 mg/kg, and chloride concentrations ranging from 14.7 mg/kg to 2,110 mg/kg (Roy F. Weston, Inc., *Remedial Investigation Report for Lee Acres Landfill, Volume 1*).

Heavy metals, including chromium, iron, manganese, nickel, and selenium were detected in upgradient monitoring wells during the annual sampling in January 2012. Additionally, iron and manganese concentrations exceeded NMWQCC standards in on-site wells. Previous studies conducted for the Lee Acres Landfill identified chromium, iron, manganese, nickel, and selenium in groundwater sampled upgradient of the landfill. *The Remedial Investigation Report for Lee Acres Landfill, Volume 1* states that the upgradient background alluvial aquifer contains elevated levels of chromium and manganese and suggests an unidentified source that is unrelated to the landfill or the Site.

5.0 RECOMMENDATIONS

Western will continue to operate the remediation system and monitor groundwater as described in this report, including the activities below:

- Operate and maintain the remediation system to prevent migration of PSH;
- Use oil absorbent socks to recover PSH and monitor PSH weekly, replacing socks as needed;
- Monitor groundwater flow behavior quarterly by measuring depth to groundwater;
- Sample the system influent and effluent quarterly; and
- Sample groundwater monitoring and recovery wells annually, including SHS-8 south of the Site, to identify potential changes in water quality.

6.0 REFERENCES

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FIGURES

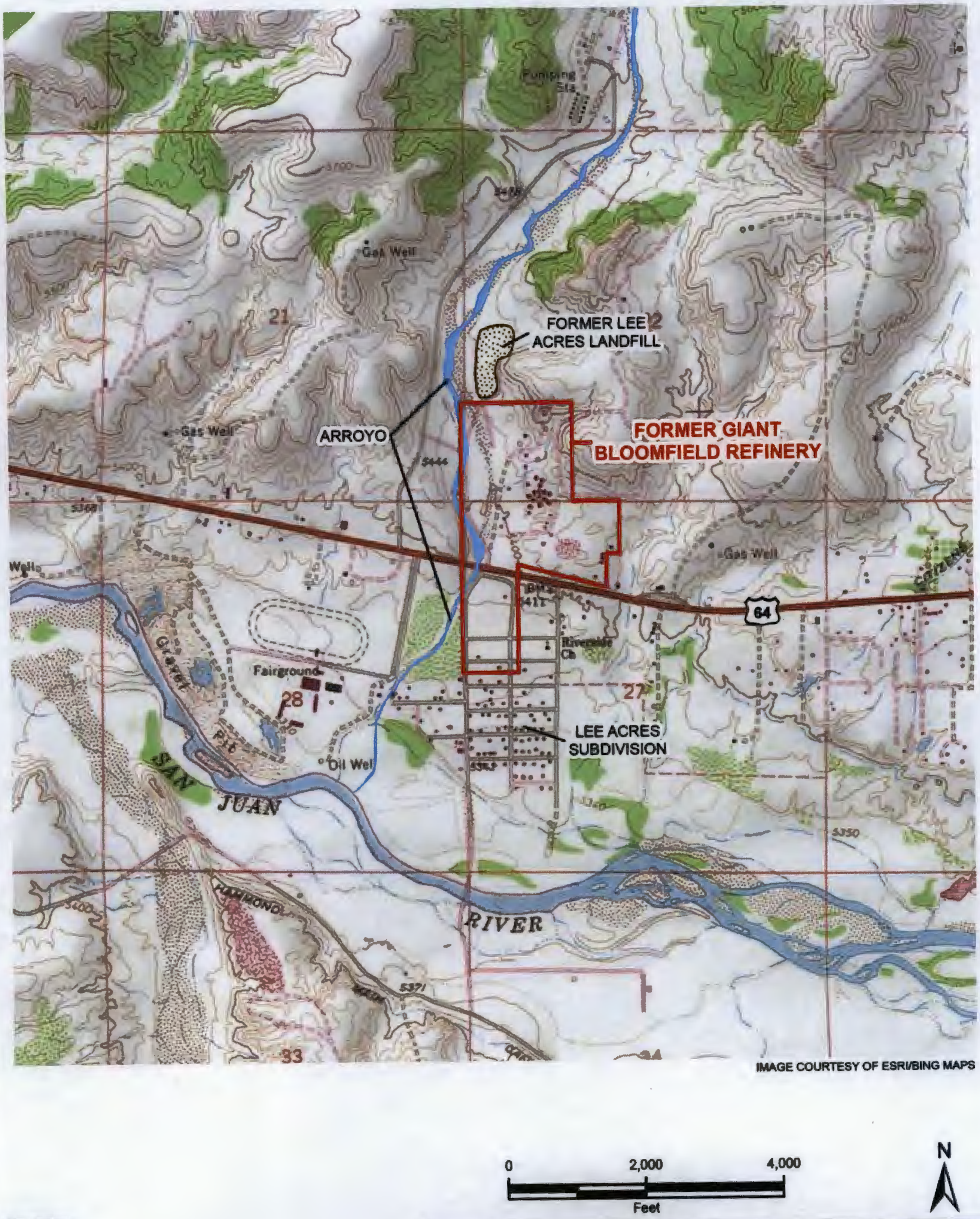


IMAGE COURTESY OF ESRI/BING MAPS

LEGEND

- 🟥 SITE LOCATION
- 🟦 ARROYO
- ▨ FORMER LEE ACRES LANDFILL

FIGURE 1
SITE LOCATION MAP
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.

P:\Western Refining\GIS\MXD\WR1009 GIANT\WR1009_GIANT_FIG01_SL.mxd

APPENDIX A

LABORATORY ANALYTICAL REPORTS

TABLE 3

GROUNDWATER ELEVATIONS AND THICKNESS OF PHASE-SEPARATED HYDROCARBONS
FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.

Well Number	Wellhead Elevation (feet)	Total Depth (feet)	January 2012				April 2012				July 2012				October 2012			
			Depth to Water (feet BTOC)	Depth to Product (feet)	PSH Thickness (feet)	Adjusted GWEL (feet)	Depth to Water (feet BTOC)	Depth to Product (feet)	PSH Thickness (feet)	Adjusted GWEL (feet)	Depth to Water (feet BTOC)	Depth to Product (feet)	PSH Thickness (feet)	Adjusted GWEL (feet)	Depth to Water (feet BTOC)	Depth to Product (feet)	PSH Thickness (feet)	Adjusted GWEL (feet)
GRW-1	5,394.30	73.35	41.02	-	-	5,353.28	40.99	-	-	5,353.31	40.80	-	-	5,353.50	41.29	-	-	5,353.01
GRW-2	5,391.28	61.00	51.94	-	-	5,339.34	50.98	-	-	5,340.30	49.31	-	-	5,341.97	49.15	-	-	5,342.13
GRW-3	5,388.77	58.30	50.28	-	-	5,338.49	45.82	-	-	5,342.95	T	-	-	-	45.02	-	-	5,343.75
GRW-4	5,390.02	60.00	43.50	-	-	5,346.52	51.81	-	-	5,338.21	51.59	-	-	5,338.43	50.99	-	-	5,339.03
GRW-5	5,390.56	68.30	63.68	-	-	5,326.88	65.53	-	-	5,325.03	T	-	-	-	66.84	-	-	5,323.72
GRW-6	5,390.81	53.80	43.51	-	-	5,347.30	43.49	-	-	5,347.32	43.75	-	-	5,347.06	53.81	-	-	5,337.00
GRW-9	5,395.70	54.40	37.72	-	-	5,357.98	36.66	-	-	5,359.04	34.40	-	-	5,361.30	37.70	-	-	5,358.00
GRW-10	5,395.02	66.02	T	-	-	-	46.67	-	-	5,348.35	45.65	-	-	5,349.37	46.42	-	-	5,348.60
GRW-11	5,397.85	64.00	40.61	-	-	5,357.24	35.31	-	-	5,362.54	T	-	-	-	60.54	-	-	5,337.31
GRW-12	5,397.24	48.00	41.95	-	-	5,355.29	47.97	-	-	5,349.27	T	-	-	-	53.62	-	-	5,343.62
GRW-13	5,396.90	61.30	56.09	-	-	5,340.81	56.86	-	-	5,340.04	55.72	-	-	5,341.18	55.31	-	-	5,341.59
GBR-5	5,395.07	47.08	30.29	-	-	5,364.78	29.90	-	-	5,365.17	29.15	-	-	5,365.92	30.25	-	-	5,364.82
GBR-7	5,395.85	51.65	32.21	-	-	5,363.64 †	31.86	-	-	5,363.99 †	31.75	-	-	5,364.10 †	32.24	-	-	5,363.61 †
GBR-8	5,390.50	50.90	43.19	-	-	5,347.31 †	43.48	-	-	5,347.02 †	43.65	-	-	5,346.85 †	43.92	-	-	5,346.58 †
GBR-9	5,389.92	67.22	43.47	-	-	5,346.45	47.56	-	-	5,342.36	47.93	-	-	5,341.99	48.09	-	-	5,341.83
GBR-10	5,390.57	47.56	47.30	-	-	5,343.27	47.30	-	-	5,343.27	47.30	-	-	5,343.27	47.30	-	-	5,343.27
GBR-11	5,389.43	51.87	43.15	-	-	5,346.28 †	43.24	-	-	5,346.19 †	43.48	-	-	5,345.95 †	43.72	-	-	5,345.71 †
GBR-13	5,393.04	45.47	43.08	-	-	5,349.96	43.94	-	-	5,349.10	43.45	-	-	5,349.59	43.84	-	-	5,349.20
GBR-15	5,397.99	58.42	39.10	-	-	5,358.89	38.34	-	-	5,359.65	39.98	-	-	5,358.01	39.65	-	-	5,358.34
GBR-17	5,402.69	43.20	38.67	-	-	5,364.02	38.59	-	-	5,364.10	38.79	-	-	5,363.90	38.54	-	-	5,364.15
GBR-18	5,421.68	47.85	37.35	-	-	5,384.33	36.91	-	-	5,384.77	37.41	-	-	5,384.27	37.67	-	-	5,384.01
GBR-19***	5,393.83	46.23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GBR-20	5,393.47	54.57	37.91	-	-	5,355.56 †	37.32	-	-	5,356.15 †	36.41	-	-	5,357.06 †	38.29	-	-	5,355.18 †
GBR-21D	5,400.19	49.77	40.81	-	-	5,359.38	40.27	-	-	5,359.92	41.25	-	-	5,358.94	41.06	-	-	5,359.13
GBR-21S	5,400.65	49.77	dry		-	-	dry	-	-	-	dry	-	-	-	dry	-	-	-
GBR-22	5,395.91	38.73	dry	-	-	- †	40.52	-	-	5,355.39 †	40.80	-	-	5,355.11 †	40.55	-	-	5,355.36 †
GBR-23	5,403.72	39.45	39.32	-	-	5,364.40 †	39.30	-	-	5,364.42 †	dry	-	-	- †	dry	-	-	- †
GBR-24D	5,396.77	51.40	34.32	-	-	5,362.45	34.33	-	-	5,362.44	34.57	-	-	5,362.20	34.44	-	-	5,362.33
GBR-24S	5,396.08	37.05	33.38	-	-	5,362.70	33.49	-	-	5,362.59	33.50	-	-	5,362.58	33.45	-	-	5,362.63
GBR-25	5,397.03	37.12	39.37	-	-	5,357.66 †	39.90	-	-	5,357.13 †	40.35	-	-	5,356.68 †	39.85	-	-	5,357.18 †
GBR-26	5,396.72	41.29	36.24	-	-	5,360.48 †	35.54	-	-	5,361.18 †	36.55	-	-	5,360.17 †	35.97	-	-	5,360.75 †
GBR-30	5,395.59	41.66	36.11	-	-	5,359.48	36.16	-	-	5,359.43	36.22	-	-	5,359.37	35.56	-	-	5,360.03
GBR-31	5,396.58	43.50	36.73	-	-	5,359.85	36.78	-	-	5,359.80	36.48	-	-	5,360.10	36.74	-	-	5,359.84
GBR-32	5,414.86	47.83	39.30	-	-	5,375.56	39.32	-	-	5,375.54	39.53	-	-	5,375.33	39.57	-	-	5,375.29
GBR-33	5,396.28	45.72	38.25	-	-	5,358.03	38.26	-	-	5,358.02	38.51	-	-	5,357.77	38.36	-	-	5,357.92
GBR-34	5,394.00	42.20	39.12	38.72	0.40	5,355.20 †	39.61	38.87	0.74	5,354.98 †	38.71	38.60	0.11	5,355.38 †	38.60	38.50	0.10	5,355.49 †
GBR-35	5,393.66	42.35	38.34	-	-	5,355.32	38.39	-	-	5,355.27	38.63	-	-	5,355.03	38.45	-	-	5,355.21
GBR-39	5,397.55	41.42	38.80	-	-	5,358.75	38.09	-	-	5,359.46	39.49	-	-	5,358.06	39.12	-	-	5,358.43
GBR-40	5,400.76	39.38	35.22	-	-	5,365.54	34.93	-	-	5,365.83	36.43	-	-	5,364.33	36.47	-	-	5,364.29
GBR-41	5,396.35	34.28	29.21	-	-	5,367.14	29.26	-	-	5,367.09	29.18	-	-	5,367.17	29.49	-	-	5,366.86
GBR-48	5,413.90	43.54	40.88	-	-	5,373.02	40.90	-	-	5,373.00	41.14	-	-	5,372.76	41.17	-	-	5,372.73
GBR-49	*	40.30	37.17	-	-	-	37.13	-	-	-	37.42	-	-	-	37.42	-	-	-
GBR-50	*	44.37	36.52	-	-	-	36.53	-	-	-	36.75	-	-	-	36.79	-	-	-
GBR-51	5,389.68	57.07	42.86	-	-	5,346.82	42.82	-	-	5,346.86	43.18	-	-	5,346.50	43.20	-	-	5,346.48
GBR-52	5,387.74	52.73	40.73	-	-	5,347.01	40.70	-	-	5,347.04	41.07	-	-	5,346.67	41.06	-	-	5,346.68

TABLE 3

GROUNDWATER ELEVATIONS AND THICKNESS OF PHASE-SEPARATED HYDROCARBONS
FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.

Well Number	Wellhead Elevation (feet)	Total Depth (feet)	January 2012				April 2012				July 2012				October 2012			
			Depth to Water (feet BTOC)	Depth to Product (feet)	PSH Thickness (feet)	Adjusted GWEL (feet)	Depth to Water (feet BTOC)	Depth to Product (feet)	PSH Thickness (feet)	Adjusted GWEL (feet)	Depth to Water (feet BTOC)	Depth to Product (feet)	PSH Thickness (feet)	Adjusted GWEL (feet)	Depth to Water (feet BTOC)	Depth to Product (feet)	PSH Thickness (feet)	Adjusted GWEL (feet)
SHS-1	5,383.54	50.40	40.37	-	-	5,343.17	40.28	-	-	5,343.26	40.74	-	-	5,342.80	40.84	-	-	5,342.70
SHS-2	5,381.66	44.56	41.03	-	-	5,340.63	40.95	-	-	5,340.71	41.19	-	-	5,340.47	41.28	41.27	0.01	5,340.39
SHS-3**	5,383.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SHS-4	5,383.62	52.16	42.68	-	-	5,340.94	42.65	-	-	5,340.97	42.98	-	-	5,340.64	43.11	-	-	5,340.51
SHS-5	5,378.36	47.85	39.79	-	-	5,338.57	39.67	-	-	5,338.69	40.11	-	-	5,338.25	40.29	-	-	5,338.07
SHS-6	5,378.17	52.78	39.50	-	-	5,338.67	39.38	-	-	5,338.79	39.84	-	-	5,338.33	40.03	-	-	5,338.14
SHS-8	5,380.25	50.92	40.23	-	-	5,340.02	40.15	-	-	5,340.10	40.59	-	-	5,339.66	40.76	40.75	0.01	5,339.50
SHS-9	5,380.79	46.25	39.30	-	-	5,341.49	39.27	-	-	5,341.52	39.57	-	-	5,341.22	39.76	-	-	5,341.03
SHS-10	5,373.80	45.80	36.86	-	-	5,336.94	36.69	-	-	5,337.11	37.70	-	-	5,336.10	38.23	-	-	5,335.57
SHS-12	5,373.94	52.41	40.34	-	-	5,333.60	40.12	-	-	5,333.82	40.82	-	-	5,333.12	∞	-	-	-
SHS-13	5,367.81	47.51	36.86	-	-	5,330.95	36.59	-	-	5,331.22	37.73	-	-	5,330.08	◊	-	-	-
SHS-14	5,367.07	52.71	35.09	-	-	5,331.98	34.78	-	-	5,332.29	35.76	-	-	5,331.31	36.28	-	-	5,330.79
SHS-15	5,366.21	47.78	33.94	-	-	5,332.27	33.54	-	-	5,332.67	34.67	-	-	5,331.54	35.26	-	-	5,330.95
SHS-16	5,362.58	42.20	31.73	-	-	5,330.85	31.42	-	-	5,331.16	32.32	-	-	5,330.26	32.77	-	-	5,329.81
SHS-17	5,364.35	46.21	33.64	-	-	5,330.71	33.36	-	-	5,330.99	34.16	-	-	5,330.19	34.57	-	-	5,329.78
SHS-18	5,373.64	47.36	40.35	-	-	5,333.29	40.07	-	-	5,333.57	40.93	-	-	5,332.71	41.42	-	-	5,332.22
SHS-19	5,378.89	52.40	39.47	-	-	5,339.42	39.32	-	-	5,339.57	39.82	-	-	5,339.07	40.02	-	-	5,338.87

Notes:
BTOC - below top of casing
D - designates the well screen is deep
GWEL - groundwater elevation
PSH - phase-separated hydrocarbon
S - designates the well screen is shallow
* Top-of-casing elevation is unknown
** Well is damaged by a tree root
*** Well was paved over in June 2010
Ͳ Indicates that water level was below groundwater pump
† Product Recovery socks in well, groundwater and product levels are not static
- indicates no GWEL or PSH measured
◊ Well damaged by a car
∞ Car on blocks parked over well
When PSH is detected, the GWEL is corrected using an estimated density correction factor of 0.88.

TABLE 4

ESTIMATED VOLUMES OF PHASE-SEPARATED HYDROCARBONS RECOVERED FROM GROUNDWATER MONITORING WELLS
FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.

Well Number	2009 Total	2010 Total	2011 Total	2012 Total	Cumulative Total
	(ounces)	(ounces)	(ounces)	(ounces)	(ounces)
GBR-7	0.1	0.0	24.7	42.5	**67.2**
GBR-8	no sock	no sock	23.8	51.85	**75.7**
GBR-11	no sock	no sock	15.8	34	**49.8**
GBR-20	no sock	17.0	25.2	164.9	**207.1**
GBR-22	0.2	0.0	18.7	280.95	**299.8**
GBR-23	38.4	48.2	8.5	38.2	**133.3**
GBR-25	9.0	45.6	59.5	117.3	**231.4**
GBR-26	17.9	0.0	10.2	60.35	**88.5**
GBR-34	12.8	63.2	713.8	1,297.40	**2,087.2**
GBR-34A	no sock	no sock	no sock	125.5	**125.5**
SHS-2	no sock	no sock	no sock	4.0	**4.0**
Annual Total (Ounces)	**78.3**	**174.0**	**900.13**	**2,216.95**	**3,369.42**
Annual Total (Gallons)	**0.61**	**1.36**	**7.03**	**17.32**	**26.32**

TABLE 5

2012 GROUNDWATER LABORATORY ANALYTICAL RESULTS
FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.

Analyte	NMWQCC Standard	Unit	INFLUENT				EFFLUENT				GRW-3	GRW-6	GBR-17	GBR-24D	GBR-30	GBR-31	GBR-32	GBR-48	GBR-49	GBR-50	GBR-51	GBR-52	SHS-8
			Jan 2012	Apr 2012	Jul 2012	Oct 2012	Jan 2012	Apr 2012	Jul 2012	Oct 2012	Jan 2012	Apr 2012*	Jan 2012	Jan 2012	Jan 2012	Jan 2012	Jan 2012	Jan 2012	Jan 2012	Jan 2012	Jan 2012	Jan 2012	Jan 2012
USEPA Method 8260B - Volatiles																							
benzene	10	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
toluene	750	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
ethylbenzene	750	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
methyl tert-butyl ether (MTBE)	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-trimethylbenzene	620	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3,5-trimethylbenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichloroethane (EDC)	10	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dibromoethane (EDB)	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
naphthalene	NE	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1-methylnaphthalene	NE	µg/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
2-methylnaphthalene	NE	µg/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
acetone	NE	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	11
bromobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
bromodichloromethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
bromoform	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
bromomethane	NE	µg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
2-butanone	NE	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
carbon disulfide	NE	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
carbon tetrachloride	10	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
chlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
chloroethane	NE	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
chloroform	100	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
chloromethane	NE	µg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
2-chlorotoluene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-chlorotoluene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-DCE	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,3-dichloropropene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dibromo-3-chloropropane	NE	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
dibromochloromethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
dibromomethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-dichlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-dichlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
dichlorodifluoromethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-dichloroethane	25	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-dichloroethene	5	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichloropropane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-dichloropropane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2,2-dichloropropane	NE	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-dichloropropene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
hexachlorobutadiene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-hexanone	NE	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
isopropylbenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-isopropyltoluene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-methyl-2-pentanone	NE	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
methylene chloride	100	µg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
n-butylbenzene	NE	µg/L	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
n-propylbenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
sec-butylbenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
styrene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
tert-butylbenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1,2-tetrachloroethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-tetrachloroethane	10	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
tetrachloroethene (PCE)	20	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.5	1.1	1.2	<1.0	<1.0	<1.0	<1.0
trans-1,2-DCE	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,3-dichloropropene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,3-trichlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-trichlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-trichloroethane	60	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-trichloroethane	10	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trichloroethene (TCE)	100	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trichlorofluoromethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,3-trichloropropane	NE	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
vinyl chloride	1	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
xylenes, total	620	µg/L	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5

TABLE 5

2012 GROUNDWATER LABORATORY ANALYTICAL RESULTS
FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.

Analyte	NMWQCC Standard	Unit	INFLUENT				EFFLUENT				GRW-3	GRW-6	GBR-17	GBR-24D	GBR-30	GBR-31	GBR-32	GBR-48	GBR-49	GBR-50	GBR-51	GBR-52	SHS-8
			Jan 2012	Apr 2012	Jul 2012	Oct 2012	Jan 2012	Apr 2012	Jul 2012	Oct 2012	Jan 2012	Apr 2012*	Jan 2012	Jan 2012	Jan 2012	Jan 2012	Jan 2012	Jan 2012	Jan 2012	Jan 2012	Jan 2012	Jan 2012	Jan 2012
USEPA Method 8270C: Polycylic Aromatic Hydrocarbons																							
naphthalene	30	µg/L	NT	NT	NT	NT	<0.50	NT	NT	NT	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NT	NT	NT	NT	NT	NT	NT
1-methylnaphthalene	NE	µg/L	NT	NT	NT	NT	<0.50	NT	NT	NT	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NT	NT	NT	NT	NT	NT	NT
2-methylnaphthalene	NE	µg/L	NT	NT	NT	NT	<0.50	NT	NT	NT	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NT	NT	NT	NT	NT	NT	NT
acenaphthylene	NE	µg/L	NT	NT	NT	NT	<0.50	NT	NT	NT	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NT	NT	NT	NT	NT	NT	NT
acenaphthene	NE	µg/L	NT	NT	NT	NT	<0.50	NT	NT	NT	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NT	NT	NT	NT	NT	NT	NT
fluorene	NE	µg/L	NT	NT	NT	NT	<0.50	NT	NT	NT	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NT	NT	NT	NT	NT	NT	NT
phenanthrene	NE	µg/L	NT	NT	NT	NT	<0.50	NT	NT	NT	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NT	NT	NT	NT	NT	NT	NT
anthracene	NE	µg/L	NT	NT	NT	NT	<0.50	NT	NT	NT	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NT	NT	NT	NT	NT	NT	NT
fluoranthene	NE	µg/L	NT	NT	NT	NT	<0.50	NT	NT	NT	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NT	NT	NT	NT	NT	NT	NT
pyrene	NE	µg/L	NT	NT	NT	NT	<0.50	NT	NT	NT	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NT	NT	NT	NT	NT	NT	NT
benz(a)anthracene	NE	µg/L	NT	NT	NT	NT	<0.50	NT	NT	NT	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NT	NT	NT	NT	NT	NT	NT
chrysene	NE	µg/L	NT	NT	NT	NT	<0.50	NT	NT	NT	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NT	NT	NT	NT	NT	NT	NT
benzo(b)fluoranthene	NE	µg/L	NT	NT	NT	NT	<0.50	NT	NT	NT	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NT	NT	NT	NT	NT	NT	NT
benzo(k)fluoranthene	NE	µg/L	NT	NT	NT	NT	<0.50	NT	NT	NT	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NT	NT	NT	NT	NT	NT	NT
benzo(a)pyrene	0.7	µg/L	NT	NT	NT	NT	<0.50	NT	NT	NT	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NT	NT	NT	NT	NT	NT	NT
dibenz(a,h)anthracene	NE	µg/L	NT	NT	NT	NT	<0.50	NT	NT	NT	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NT	NT	NT	NT	NT	NT	NT
benzo(g,h,i)perylene	NE	µg/L	NT	NT	NT	NT	<0.50	NT	NT	NT	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NT	NT	NT	NT	NT	NT	NT
indeno(1,2,3-cd)pyrene	NE	µg/L	NT	NT	NT	NT	<0.50	NT	NT	NT	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NT	NT	NT	NT	NT	NT	NT
USEPA Method 300.0: Anions																							
bromide	NE	mg/L	0.29	0.25	0.31	0.32	0.30	0.27	0.31	0.33	0.27	0.50	0.20	0.96	1.2	0.26	1.4	0.57	0.76	0.23	0.27	0.35	<0.10
chloride	250	mg/L	71	77	81	81	73	76	81	82	54	80	46	200	**390**	74	**500**	200	**260**	49	53	60	170
sulfate	600	mg/L	**1,700**	**1,500**	**1,500**	**1,600**	**1,600**	**1,600**	**1,600**	**1,600**	**1,300**	**1,800**	**1,400**	**2,000**	**1,700**	**1,700**	**2,800**	**1,700**	**1,800**	**1,800**	**1,600**	**1,800**	430
fluoride	1.6	mg/L	0.63	0.59	0.59	0.65	0.63	0.56	0.61	0.63	0.88	0.49	0.59	0.86	0.48	0.48	0.37	0.49	0.38	0.49	0.61	0.66	1.9
nitrate + nitrite as N	NE	mg/L	1.5	1.5	1.7	1.7	1.5	1.4	1.6	1.6	<1.0	<1.0	4.1	<1.0	2.4	1.3	5.8	6.8	<1.0	3.1	3.9	4.5	<1.0
phosphate, orthophosphate (As P)	NE	mg/L	0.0120	<10	<10	<10	0.0199	<10	<10	<10	0.0215	<0.1	0.105	0.366	0.236	0.138	0.0391	0.615	0.0683	0.0373	0.0788	0.0748	0.823
USEPA Method 200.7: Total Metals																							
barium	NE	mg/L	NT	NT	NT	NT	0.012	NT	NT	NT	NT	NT	NT	NT	NT	NT	0.020	0.069	0.013	0.012	NT	NT	NT
beryllium	NE	mg/L	NT	NT	NT	NT	<0.0020	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.0020	<0.0020	<0.0020	<0.0020	NT	NT	NT
cadmium	0.01	mg/L	NT	NT	NT	NT	<0.0020	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.0020	<0.0020	<0.0020	<0.0020	NT	NT	NT
calcium	NE	mg/L	410	360	380	360	390	370	370	370	290	350	350	450	480	440	560	370	500	400	410	480	150
chromium	0.05	mg/L	NT	NT	NT	NT	<0.0060	NT	NT	NT	NT	NT	NT	NT	NT	NT	0.030	**0.63**	0.018	0.0069	NT	NT	NT
copper	1.0	mg/L	NT	NT	NT	NT	<0.0060	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.0060	0.030	<0.0060	<0.0060	NT	NT	NT
iron	1.0	mg/L	0.20	0.023	0.067	0.025	<0.020	<0.020	<0.020	<0.020	**2.8**	0.47	**3.9**	**2.4**	**2.9**	**3.8**	0.88	**15**	0.23	0.72	**3.1**	**2.2**	**15**
lead	0.05	mg/L	NT	NT	NT	NT	<0.0050	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.0050	<0.0050	<0.0050	<0.0050	NT	NT	NT
magnesium	NE	mg/L	32	29	32	33	31	29	33	33	24	37	28	38	42	33	57	37	46	31	30	35	19
manganese	0.2	mg/L	**0.27**	0.0081	0.052	0.044	0.0078	0.0044	0.0035	0.0082	**0.67**	**1.8**	0.15	**1.7**	**0.29**	**0.27**	**0.58**	**0.83**	**0.34**	0.041	0.16	0.032	**2.5**
nickel	0.2	mg/L	NT	NT	NT	NT	0.040	NT	NT	NT	NT	NT	NT	NT	NT	NT	0.059	0.049	**0.24**	<0.010	NT	NT	NT
potassium	NE	mg/L	3.2	2.6	3.3	2.7	2.8	2.8	3.6	2.8	3.4	2.6	2.0	6.5	3.6	2.5	4.7	6.3	3.2	2.3	1.7	1.7	3.5
silver	0.05	mg/L	NT	NT	NT	NT	<0.0050	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.0050	<0.0050	<0.0050	<0.0050	NT	NT	NT
sodium	NE	mg/L	480	480	460	470	450	470	470	470	540	480	250	570	510	430	730	490	480	350	310	330	590
zinc	10	mg/L	NT	NT	NT	NT	0.10	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.010	0.029	0.025	<0.010	NT	NT	NT
USEPA Method 200.8: Total Metals																							
antimony	NE	mg/L	NT	NT	NT	NT	<0.0010	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.0025	<0.0025	<0.0025	<0.0025	NT	NT	NT
arsenic	0.1	mg/L	NT	NT	NT	NT	<0.0010	NT	NT	NT	NT	NT	NT	NT	NT	NT	0.0047	0.0051	<0.0025	<0.0025	NT	NT	NT
selenium	0.05	mg/L	NT	NT	NT	NT	0.0045	NT	NT	NT	NT	NT	NT	NT	NT	NT	**0.14**	**0.094**	0.0049	0.0081	NT	NT	NT
thallium	NE	mg/L	NT	NT	NT	NT	<0.0010	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.0025	<0.0025	<0.0025	<0.0025	NT	NT	NT
USEPA Method 245.1: Mercury																							
mercury	0.002	mg/L	NT	NT	NT	NT	<0.00020	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.0020	<0.00020	<0.00020	<0.00020	NT	NT	NT
USEPA Method 200.7: Hardness																							
hardness (as CaCO3)	NE	mg/L	1,100	NT	NT	1,000	1,100	NT	NT	1,100	810	1,000	990	1,300	1,400	1,200	1,600	1,100	1,400	1,100	1,200	1,300	480
USEPA Method SM 2320B: Alkalinity																							
alkalinity, total (As CaCO3)	NE	mg/L CaCO3	290	330	330	320	290	330	330	320	560	400	200	210	230	230	250	240	260	210	220	200	1,100
carbonate	NE	mg/L CaCO4	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
bicarbonate	NE	mg/L CaCO5	290	330	330	320	290	330	330	320	560	400	200	210	230	230	250	240	260	210	220	200	1,100
USEPA Method 120.1: Specific Conductance																							
specific conductance	NE	µmhos/cm	3,300	3,100	3,200	3,300	3,300	3,100	3,200	3,300	3,300	3,200	2,500	4,000	4,000	3,200	4,000	3,400	3,900	3,000	2,800	3,000	2,900
USEPA Method SM4500-H+B: pH																							
pH	6-9	pH units	7.50	7.60	7.60	7.50	7.57	7.65	7.52	7.49	7.51	7.60	7.49	7.63	7.14	7.42	7.21	7.36	7.47	7.28	7.45	7.44	7.22
USEPA Method SM2540C Modified: Total Dissolved Solids																							
total dissolved solids	1,000	mg/L	**2,830**	**2,770**	**2,780**	**2,750**	**2,810**	**2,780**	**2,770**	**2,780**	**2,660**	**2,740**	**2,150**	**3,320**	**3,240**	**2,760**	**4,290**	**2,940**	**3,470**	**2,730**	**2,440**	**2,720**	**2,040**

Notes:
BOLD - indicates concentration exceeds the NMWQCC standard
mg/L - milligrams per liter
NT - not tested
NMWQCC - New Mexico Water Quality Control Commission
µg/L - micrograms per liter
USEPA - United States Environmental Protection Agency
* GRW-6 was sampled in April instead of January due to maintenance issues

TABLE 1

2012 SAMPLING SCHEDULE
FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.

	Jan-12	Apr-12	Jul-12	Oct-12
System Influent	VOCs,GWC	VOCs, GWC	VOCs, GWC	VOCs, GWC
System Effluent	VOCs, GWC, PAHs, Metals	VOCs, GWC	VOCs, GWC	VOCs, GWC
GRW-3	VOCs,GWC,PAHs			
GRW-6		VOCs,GWC,PAHs		
GBR-17	VOCs,GWC,PAHs			
GBR-24D	VOCs,GWC,PAHs			
GBR-30	VOCs,GWC,PAHs			
GBR-31	VOCs,GWC,PAHs			
GBR-32	VOCs, GWC, Metals			
GBR-48	VOCs, GWC, Metals			
GBR-49	VOCs, GWC, Metals			
GBR-50	VOCs, GWC, Metals			
GBR-51	VOCs,GWC			
GBR-52	VOCs,GWC			
SHS-8	VOCs, GWC			

Notes:

GRW-6 was sampled in April 2012 due to the pump being temporilartly out of service during the January sampling event.

GWC - Ground Water Chemistry , PH, EC, TDS, alkalinity, hardness, anions (bromide, chloride, sulfate, flouride, nitrate/nitrite, phosphorus), cations (calcium, iron, magnesium, manganese, potassium, sodium)

Metals - barium, beryllium, cadmium, chromium, copper, lead, nickel, silver, zinc, antimony, arsenic, selenium, thallium, mercury
PAHs - polynuclear aromatic hydrocarbons
VOCs - volatile organic compounds

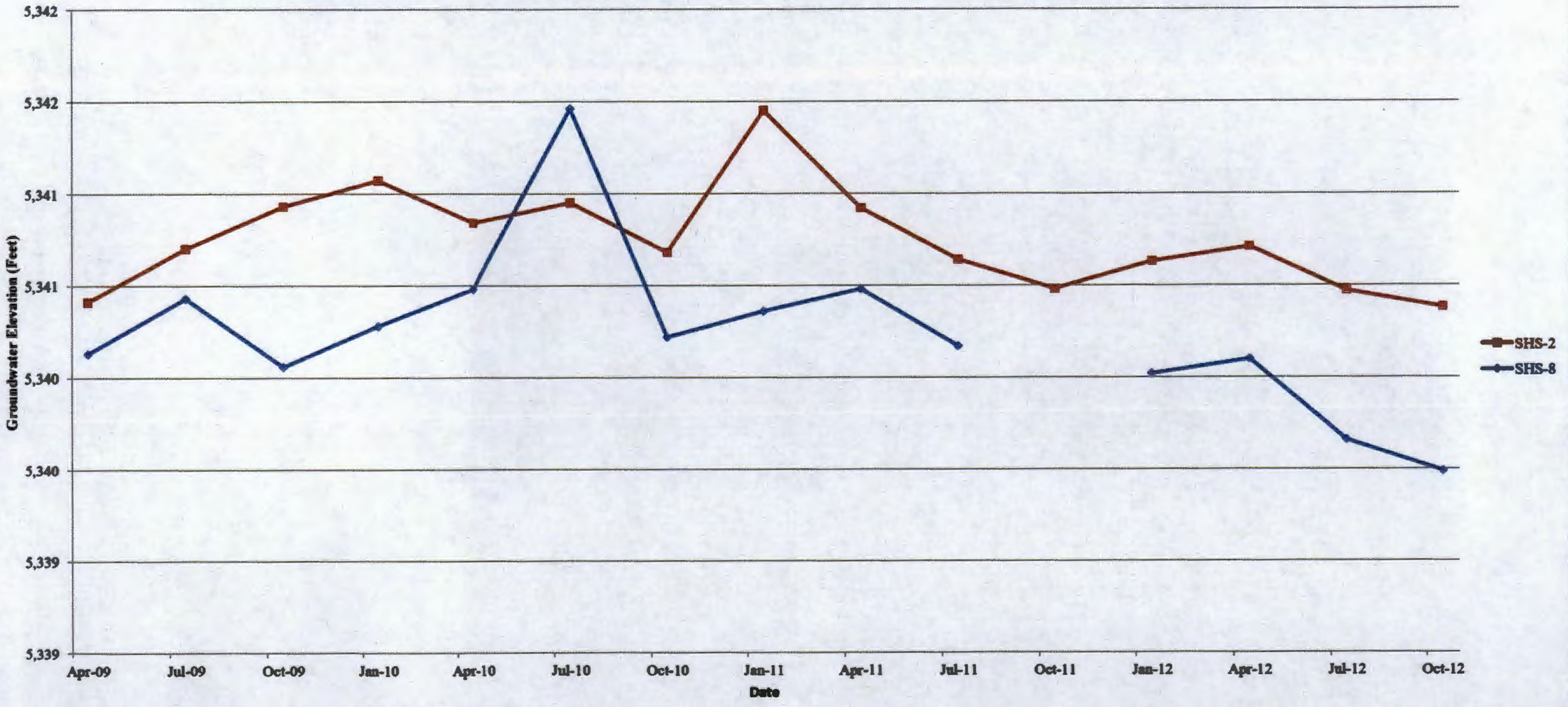
TABLE 2

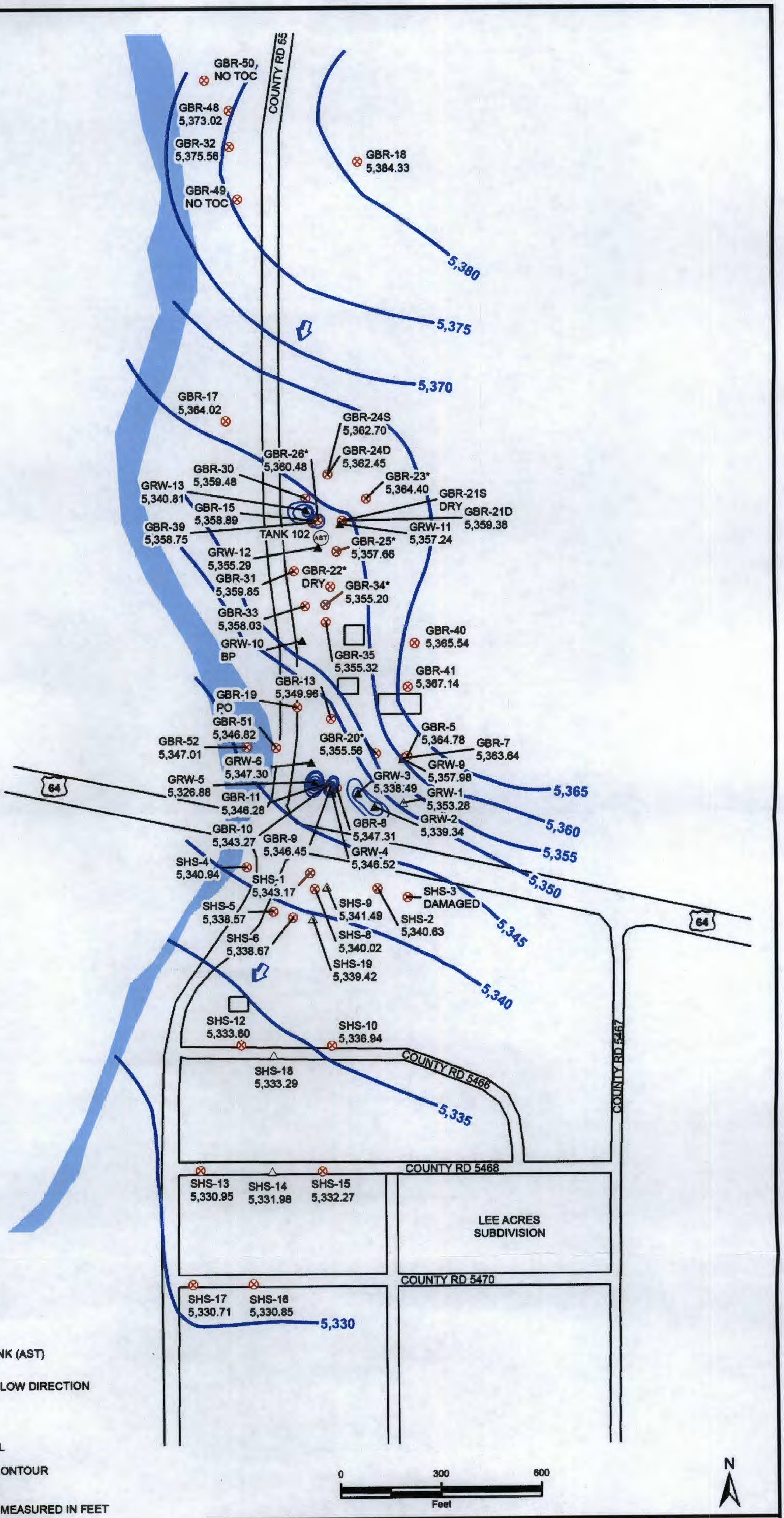
GROUNDWATER RECOVERY WELL VOLUME TABULATION
FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.

Well Number	Total Volume Pumped in 2011 (Gallons)	Total Volume Pumped in 2012 (Gallons)	Difference (Gallons)
GRW-2	37,232	86,086	48,854
GRW-3	76,932	82,446	5,514
GRW-4	80,309	65,700	-14,609
GRW-5	110,572	78,919	-31,653
GRW-6	53,528	102,215	48,687
GRW-10	845,062	1,038,356	193,294
GRW-11	216,499	143,855	-72,644
GRW-12	7,008	95,413	88,405
GRW-13	24,481	26,008	1,527
Total Volume Pumped (Gallons)	**1,451,623**	**1,718,998**	**267,375**

TABLES

FIGURE 11: GROUNDWATER ELEVATIONS IN SHS-2 AND SHS-8 (2009-2012)





LEGEND

⊗	MONITORING WELL
▲	ACTIVE RECOVERY WELL
△	INACTIVE RECOVERY WELL
(AST)	ABOVEGROUND STORAGE TANK (AST)
⇧	ESTIMATED GROUNDWATER FLOW DIRECTION
🟦	ARROYO
▨	FORMER LEE ACRES LANDFILL
—	GROUNDWATER ELEVATION CONTOUR CONTOUR INTERVAL = 5 FEET GROUNDWATER ELEVATIONS MEASURED IN FEET ABOVE MEAN SEA LEVEL IN JANUARY 2012

NO TOC: NO TOP OF CASING RECORDED
*: PRODUCT RECOVERY SOCKS IN WELL
BP: STATIC WATER BELOW GROUNDWATER PUMP
PO: PAVED OVER

FIGURE 7
GROUNDWATER POTENTIOMETRIC SURFACE MAP (JANUARY 2012)
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.

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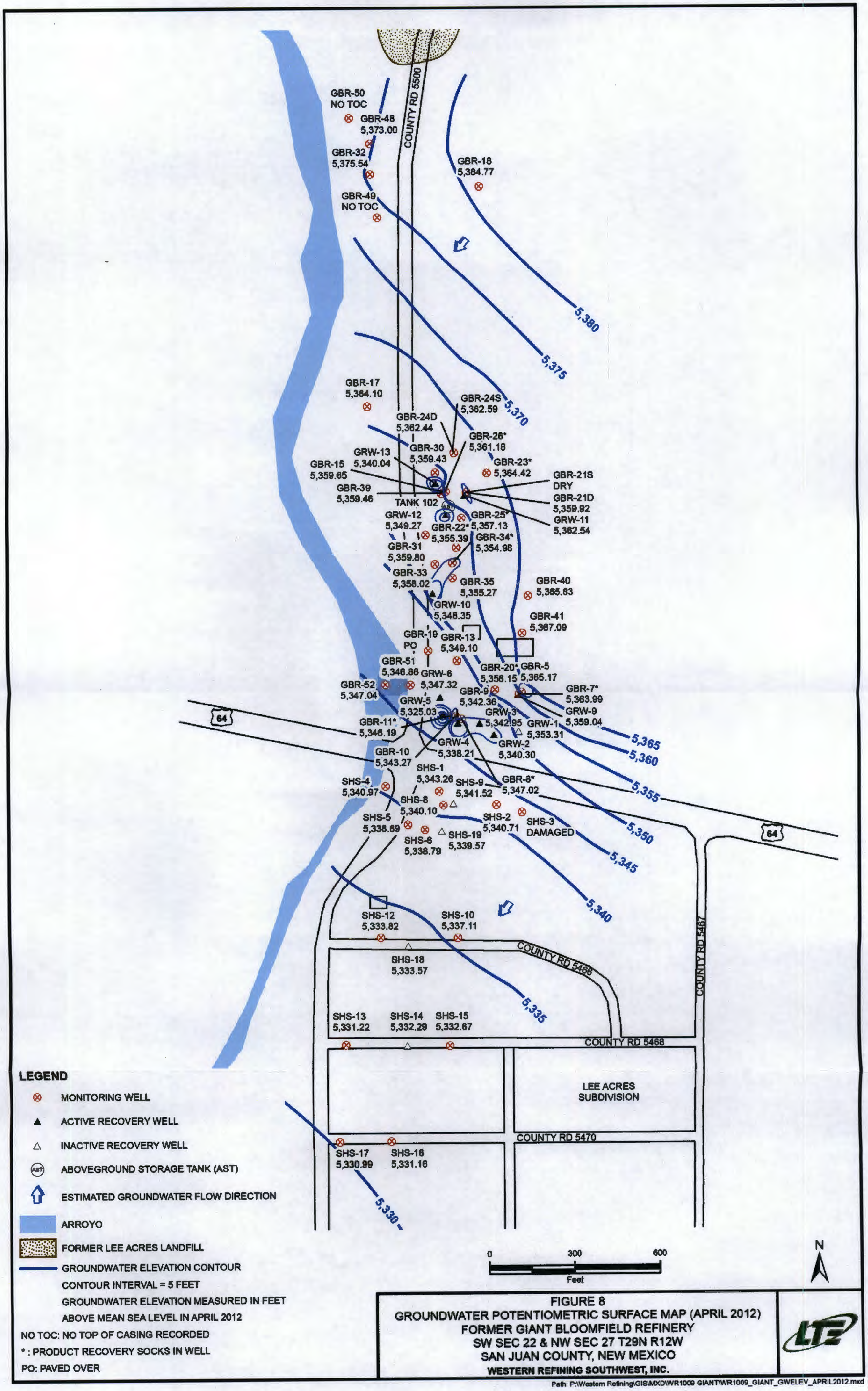

FIGURE 8
GROUNDWATER POTENTIOMETRIC SURFACE MAP (APRIL 2012)
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.

LTE

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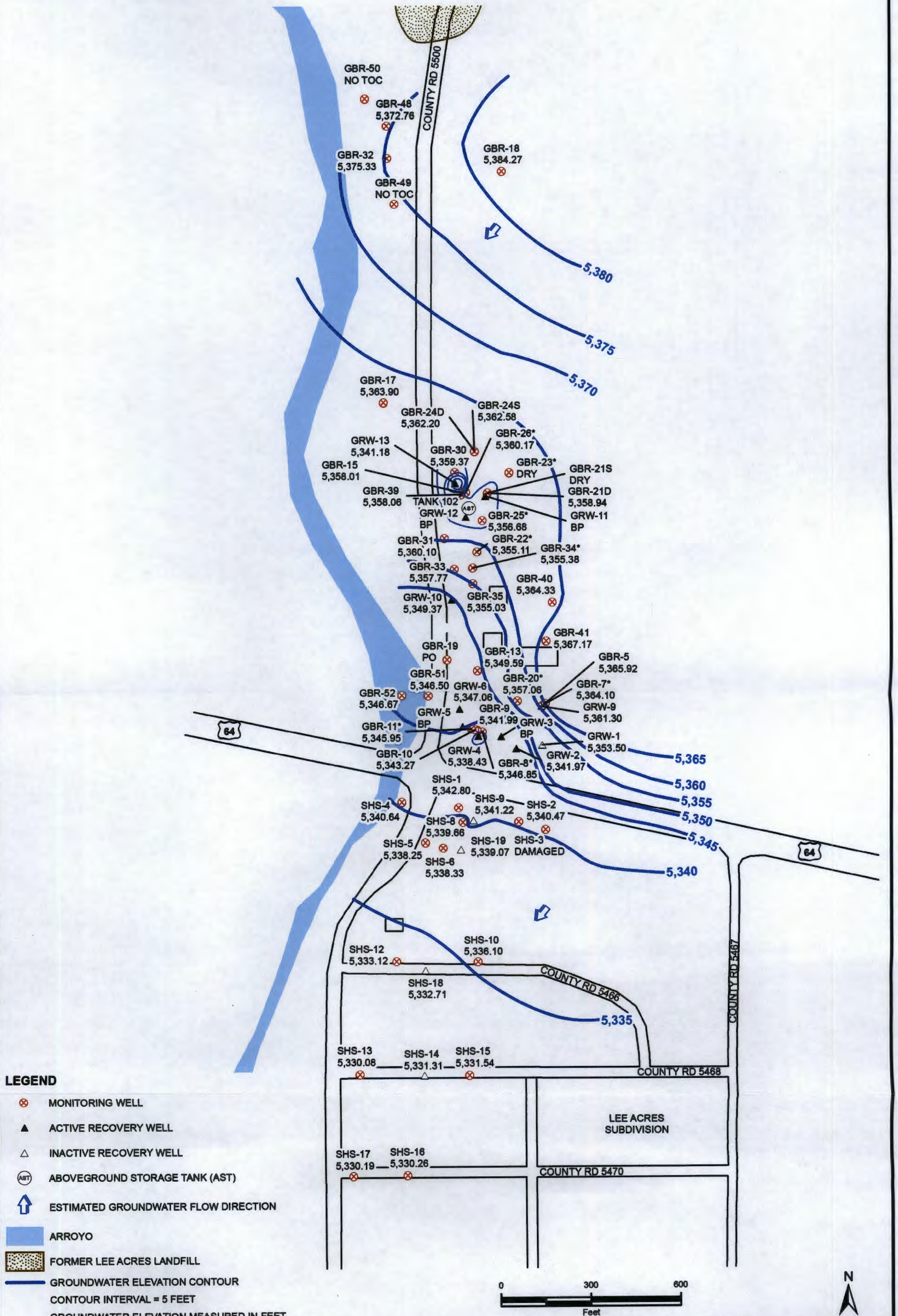

LEGEND

⊗ MONITORING WELL

▲ ACTIVE RECOVERY WELL

△ INACTIVE RECOVERY WELL

(AST) ABOVEGROUND STORAGE TANK (AST)

⇧ ESTIMATED GROUNDWATER FLOW DIRECTION

🟦 ARROYO

▨ FORMER LEE ACRES LANDFILL

— GROUNDWATER ELEVATION CONTOUR
CONTOUR INTERVAL = 5 FEET
GROUNDWATER ELEVATION MEASURED IN FEET
ABOVE MEAN SEA LEVEL IN JULY 2012

BP: WATER BELOW GROUNDWATER PUMP
NO TOC: NO TOP OF CASING RECORDED
* : PRODUCT RECOVERY SOCKS IN WELL
PO: PAVED OVER

FIGURE 9
GROUNDWATER POTENTIOMETRIC SURFACE MAP (JULY 2012)
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.

LTE

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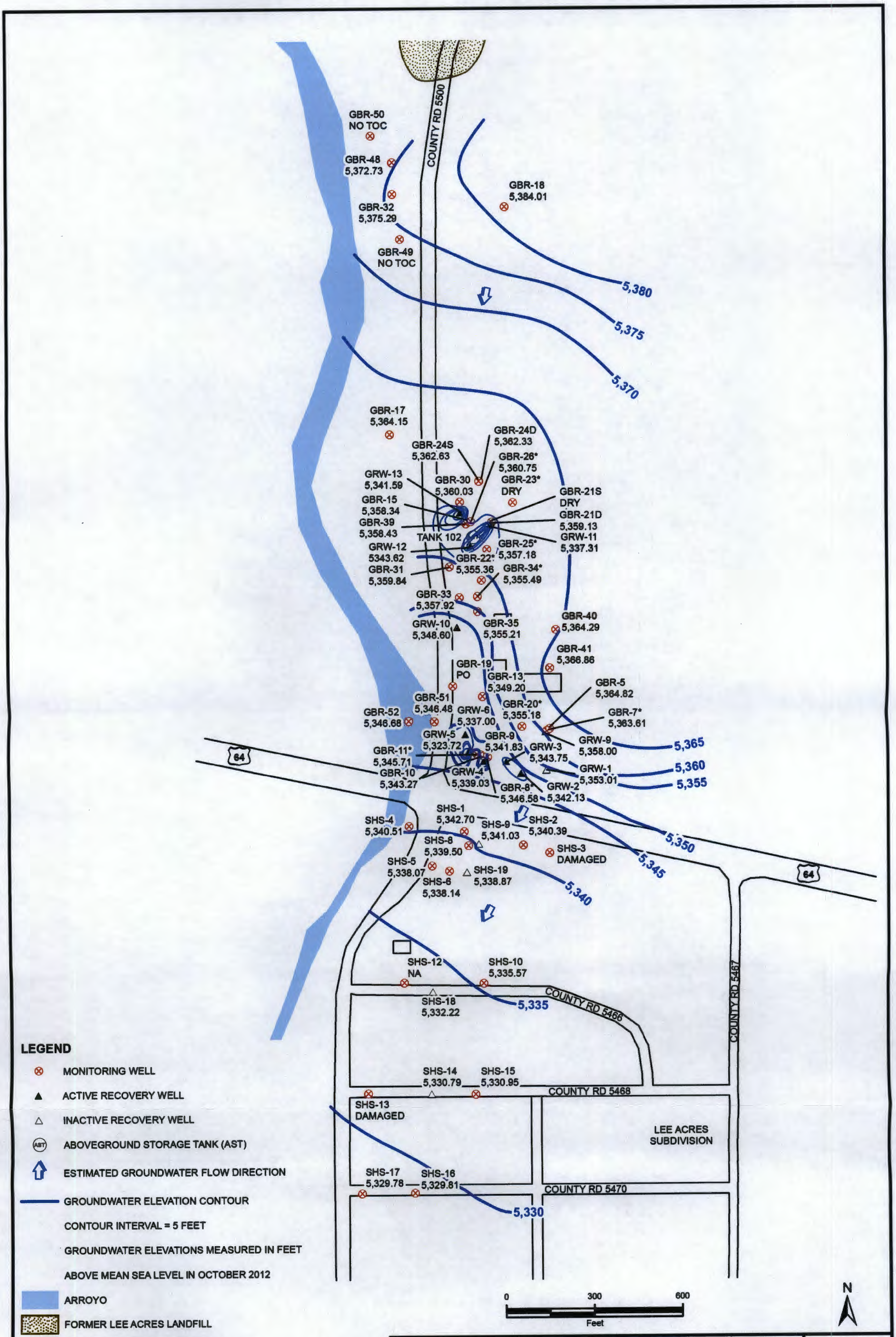

LEGEND

⊗ MONITORING WELL

▲ ACTIVE RECOVERY WELL

△ INACTIVE RECOVERY WELL

(AST) ABOVEGROUND STORAGE TANK (AST)

⇧ ESTIMATED GROUNDWATER FLOW DIRECTION

— GROUNDWATER ELEVATION CONTOUR

CONTOUR INTERVAL = 5 FEET

GROUNDWATER ELEVATIONS MEASURED IN FEET

ABOVE MEAN SEA LEVEL IN OCTOBER 2012

🟦 ARROYO

▨ FORMER LEE ACRES LANDFILL

*: PRODUCT RECOVERY SOCKS IN WELL
BP: STATIC WATER BELOW GROUNDWATER PUMP
NA: NOT ACCESSIBLE
NO TOC: NO TOP OF CASING RECORDED
PO: PAVED OVER

FIGURE 10
GROUNDWATER POTENTIOMETRIC SURFACE MAP (OCTOBER 2012)
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.

LTE

Path: P:\Western Refining\GIS\MXD\WR1009 GIANT\WR1009_GIANT_FIG01_GWELEV_OCTOBER2012.mxd

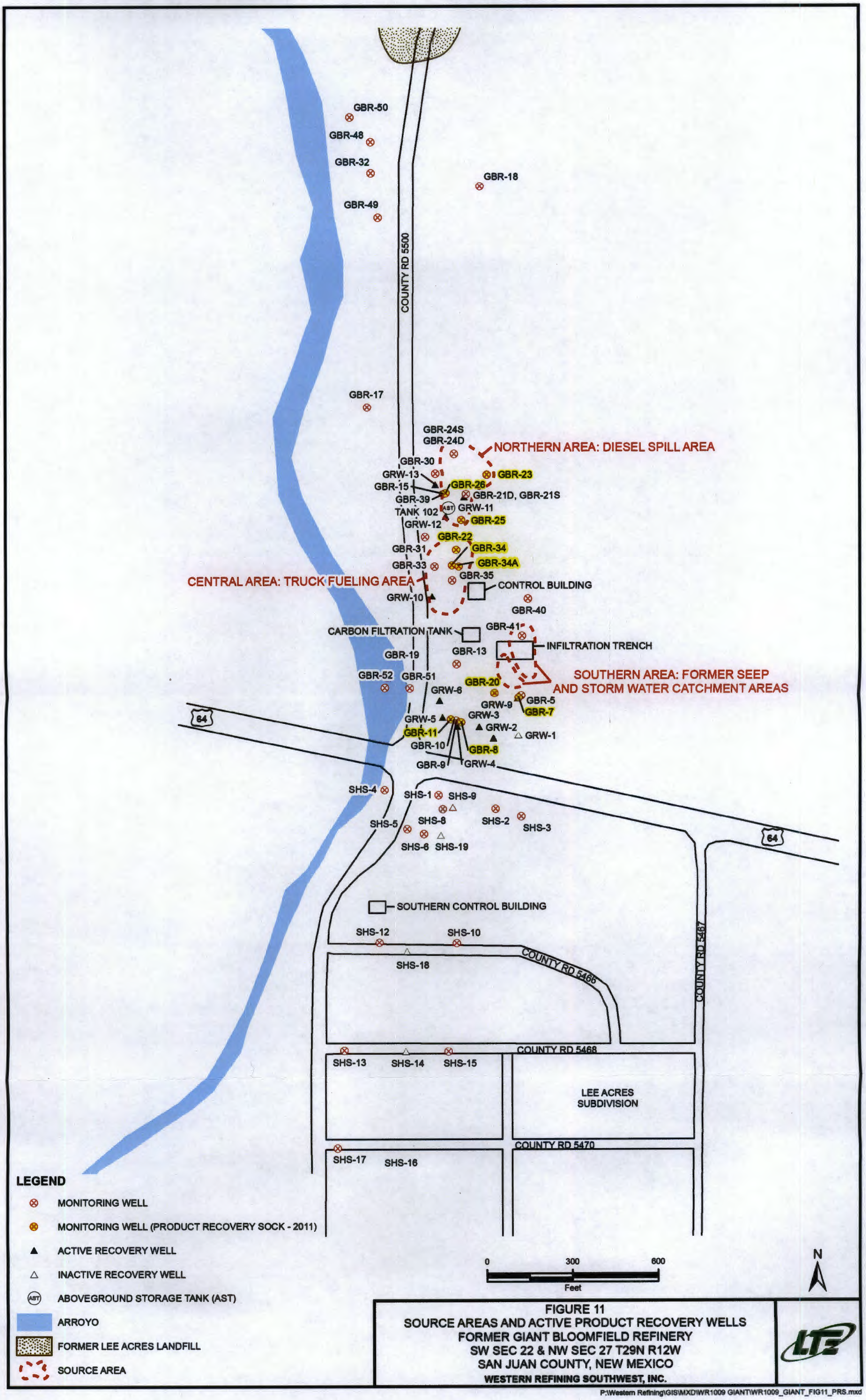

FIGURE 11
SOURCE AREAS AND ACTIVE PRODUCT RECOVERY WELLS
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.

LTE

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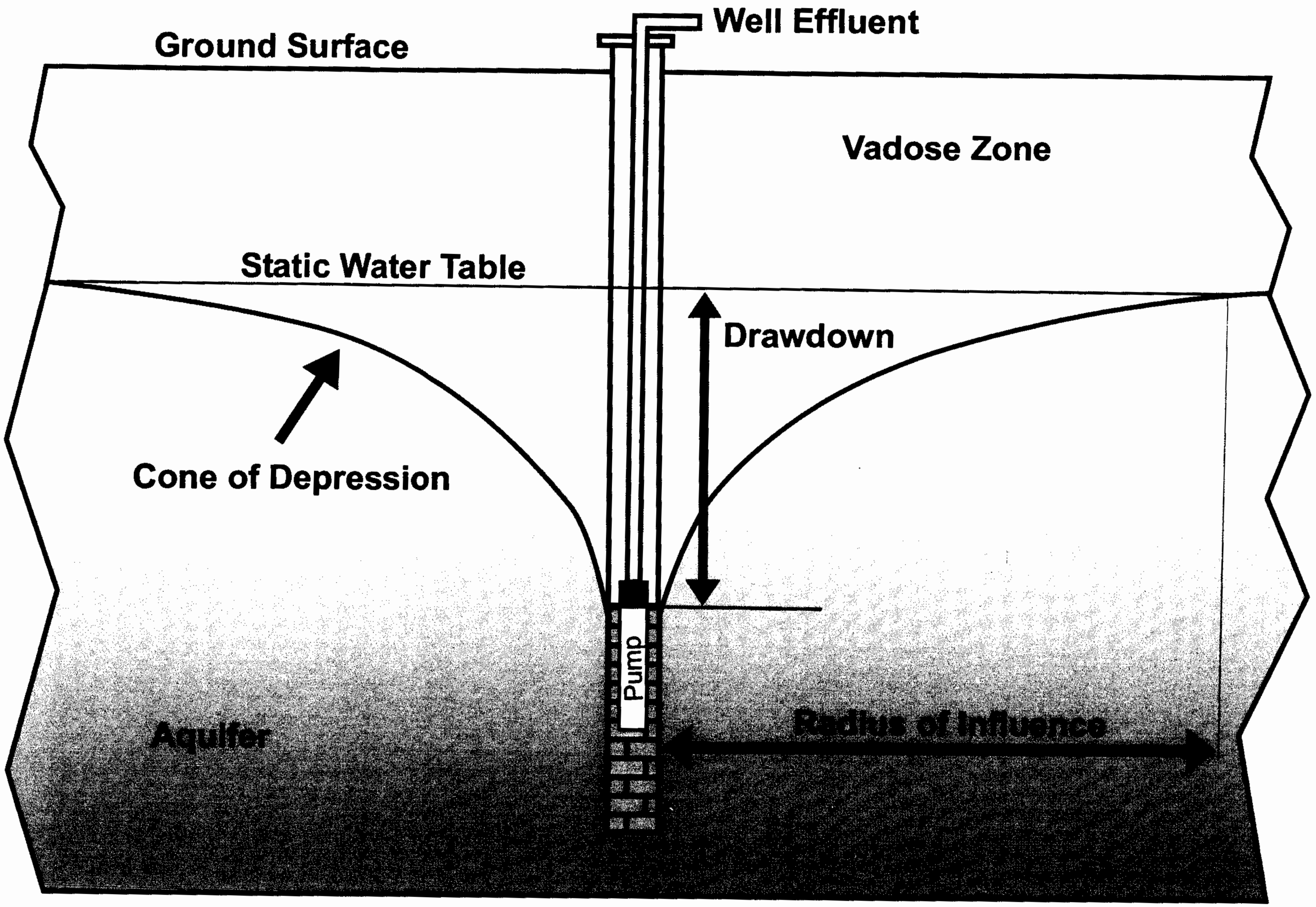


FIGURE 5
HYDRAULIC BARRIER
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
WESTERN REFINING SOUTHWEST, INC.

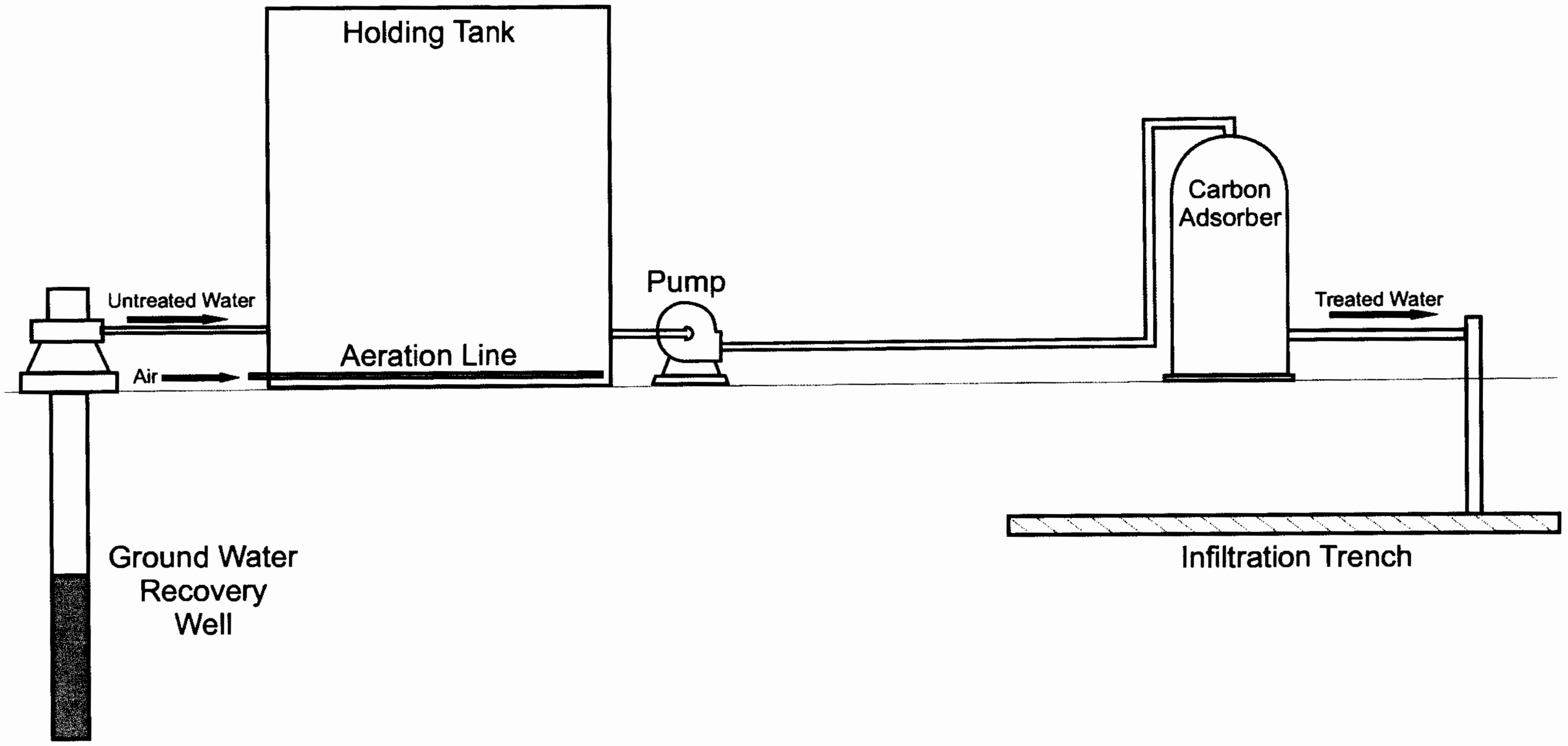


FIGURE6
SIMPLIFIED REPRESENTATION OF THE GROUNDWATER RECOVERY,
TREATMENT AND DISPOSAL SYSTEM
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
WESTERN REFINING SOUTHWEST, INC.

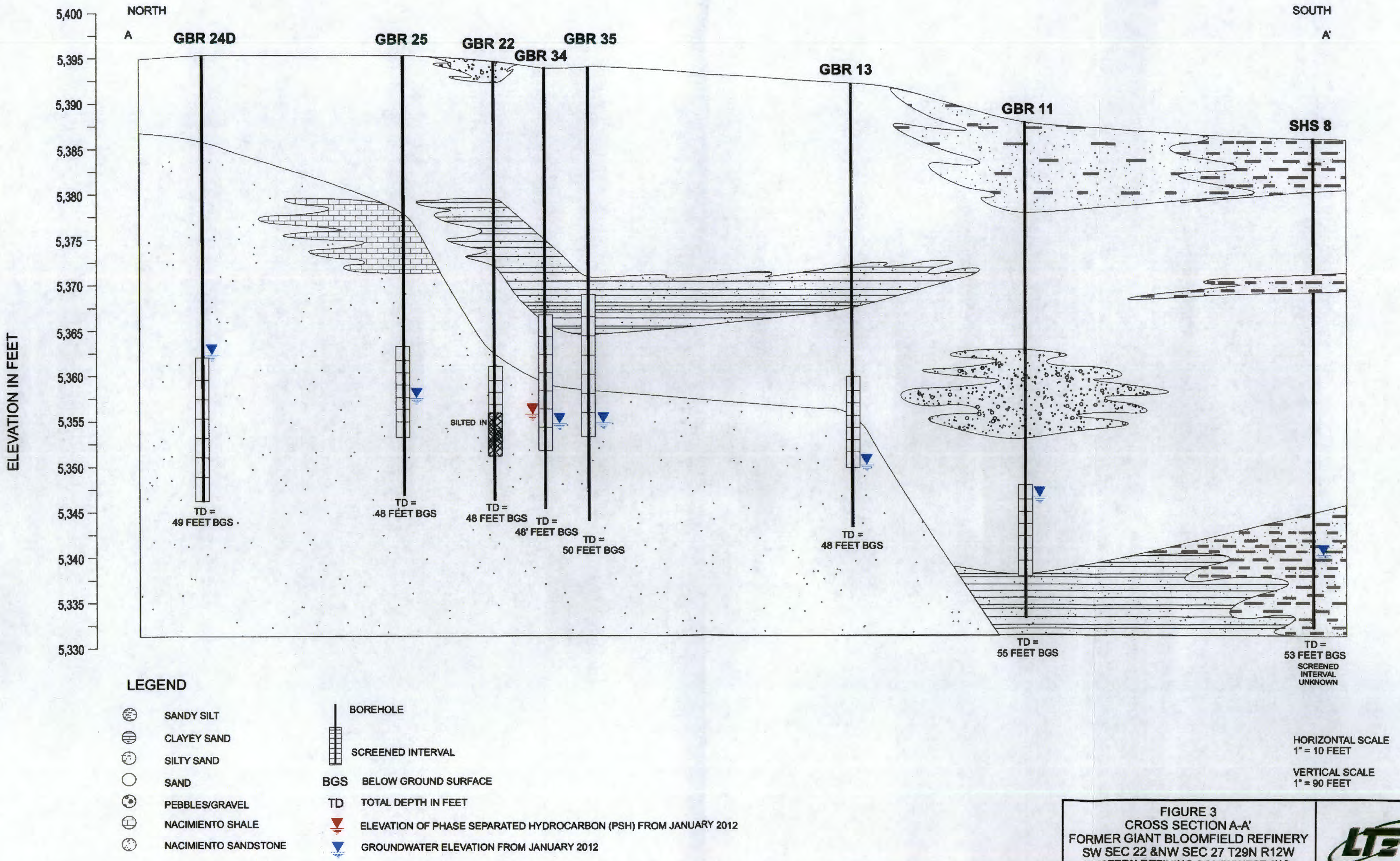
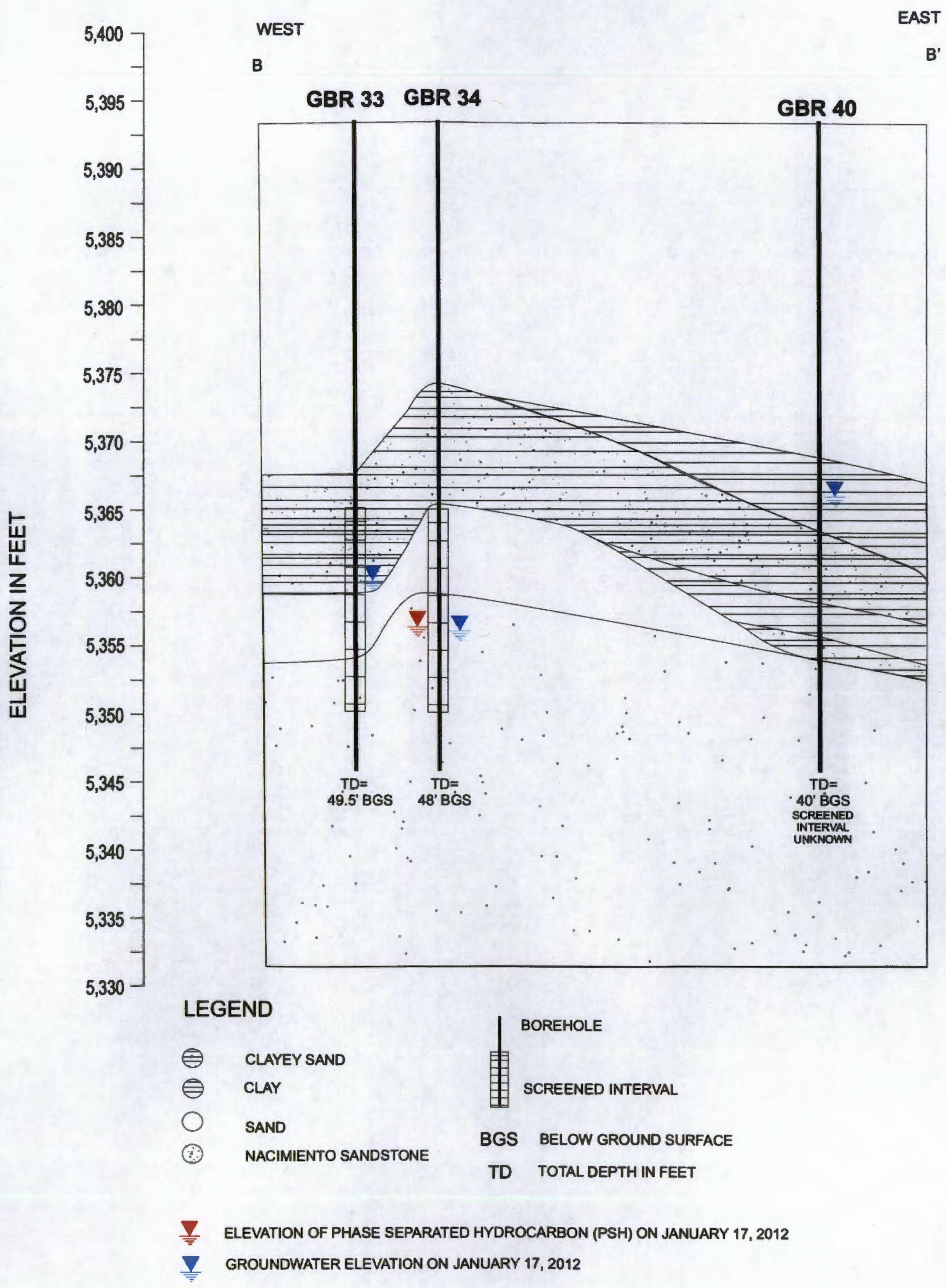


FIGURE 3
CROSS SECTION A-A'
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 &NW SEC 27 T29N R12W
WESTERN REFINING SOUTHWEST, INC.



HORIZONTAL SCALE
1" = 10 FEET

VERTICAL SCALE
1" = 90 FEET

FIGURE 4
CROSS SECTION B-B'
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 &NW SEC 27 T29N R12W
WESTERN REFINING SOUTHWEST, INC.

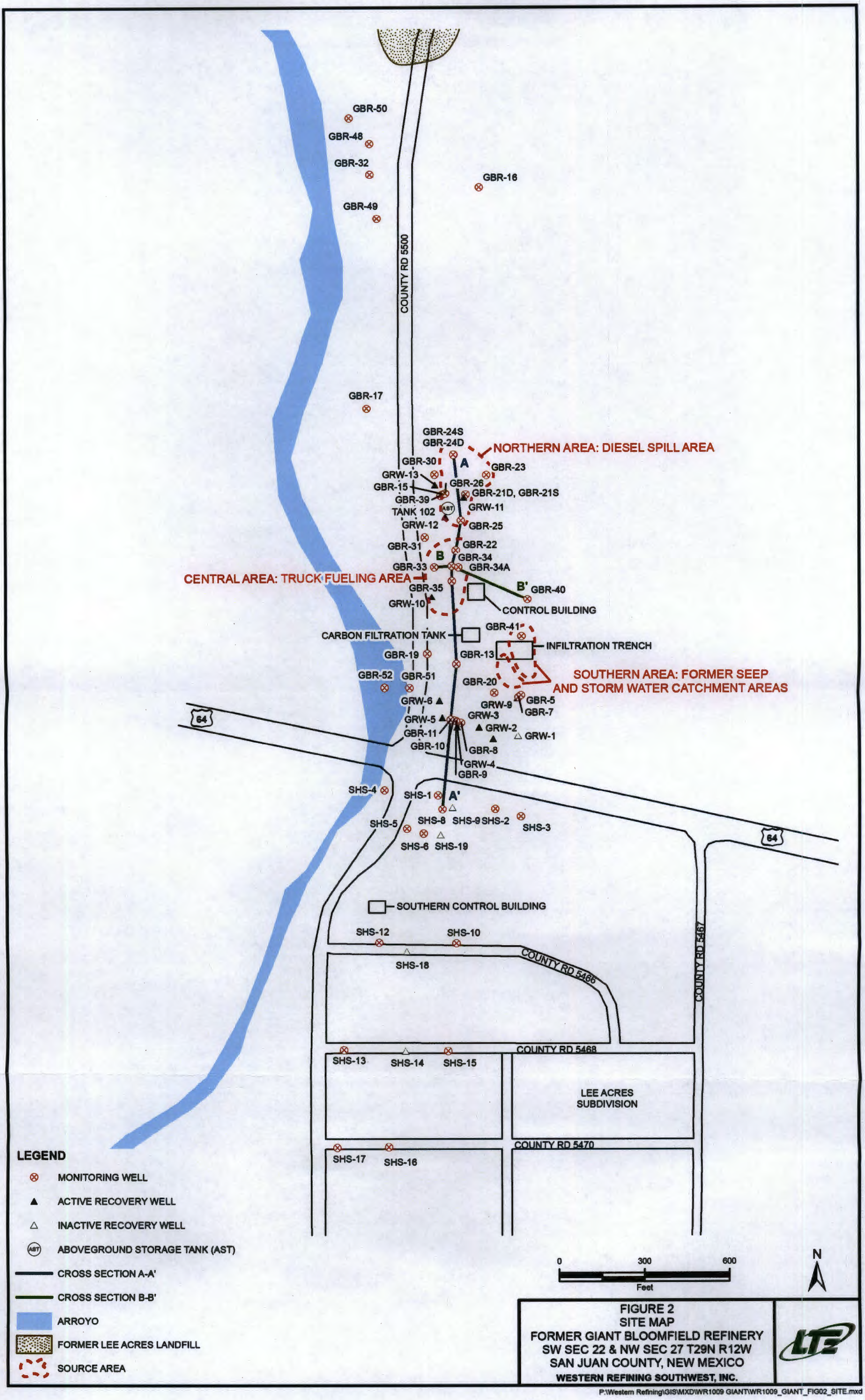


FIGURE 2
SITE MAP
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.

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**HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY**

*Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com*

February 07, 2012

Ashley Ager
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413
TEL: (970) 946-1093
FAX (505) 632-3911

RE: GBR

OrderNo.: 1201592

Dear Ashley Ager:

Hall Environmental Analysis Laboratory received 6 sample(s) on 1/20/2012 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative. Analytical results designated with a "J" qualifier are estimated and represent a detection above the Method Detection Limit (MDL) and less than the Reporting Limit (PQL). These analytes are not reviewed nor narrated as to whether they are laboratory artifacts.

Quality control data is within laboratory defined or method specified acceptance limits except if noted.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1201592**
Date Reported: **2/7/2012**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1201592-001
Matrix: AQUEOUS

Client Sample ID: GBR-52
Collection Date: 1/18/2012 10:52:00 AM
Received Date: 1/20/2012 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Fluoride	0.66	0.10		mg/L	1	1/20/2012 1:48:43 PM
Chloride	60	10		mg/L	20	1/20/2012 2:01:08 PM
Bromide	0.35	0.10		mg/L	1	1/20/2012 1:48:43 PM
Sulfate	1,800	25		mg/L	50	1/27/2012 6:16:15 AM
Nitrate+Nitrite as N	4.5	1.0		mg/L	5	1/31/2012 7:15:12 PM
EPA METHOD 200.7: METALS						Analyst: **RAG**
Calcium	480	5.0		mg/L	5	1/26/2012 1:39:02 PM
Iron	2.2	0.10	*	mg/L	5	1/26/2012 1:39:02 PM
Magnesium	35	1.0		mg/L	1	1/26/2012 1:36:34 PM
Manganese	0.032	0.0020		mg/L	1	1/26/2012 1:36:34 PM
Potassium	1.7	1.0		mg/L	1	1/26/2012 1:36:34 PM
Sodium	330	5.0		mg/L	5	1/26/2012 1:39:02 PM
SM2340B: HARDNESS						Analyst: **RAG**
Hardness (As CaCO3)	1,300	6.6		mg/L	1	1/26/2012 12:11:00 PM
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Benzene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
Toluene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
Ethylbenzene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
Naphthalene	ND	2.0		µg/L	1	1/23/2012 9:53:06 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/23/2012 9:53:06 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/23/2012 9:53:06 PM
Acetone	ND	10		µg/L	1	1/23/2012 9:53:06 PM
Bromobenzene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
Bromodichloromethane	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
Bromoform	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
Bromomethane	ND	3.0		µg/L	1	1/23/2012 9:53:06 PM
2-Butanone	ND	10		µg/L	1	1/23/2012 9:53:06 PM
Carbon disulfide	ND	10		µg/L	1	1/23/2012 9:53:06 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
Chlorobenzene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
Chloroethane	ND	2.0		µg/L	1	1/23/2012 9:53:06 PM
Chloroform	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
Chloromethane	ND	3.0		µg/L	1	1/23/2012 9:53:06 PM
2-Chlorotoluene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
4-Chlorotoluene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1201592-001
Matrix: AQUEOUS
Client Sample ID: GBR-52
Collection Date: 1/18/2012 10:52:00 AM
Received Date: 1/20/2012 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
cis-1,2-DCE	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/23/2012 9:53:06 PM
Dibromochloromethane	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
Dibromomethane	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/23/2012 9:53:06 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
2-Hexanone	ND	10		µg/L	1	1/23/2012 9:53:06 PM
Isopropylbenzene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/23/2012 9:53:06 PM
Methylene Chloride	ND	3.0		µg/L	1	1/23/2012 9:53:06 PM
n-Butylbenzene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
n-Propylbenzene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
sec-Butylbenzene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
Styrene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
tert-Butylbenzene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/23/2012 9:53:06 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
trans-1,2-DCE	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/23/2012 9:53:06 PM
Vinyl chloride	ND	1.0		µg/L	1	1/23/2012 9:53:06 PM
Xylenes, Total	ND	1.5		µg/L	1	1/23/2012 9:53:06 PM
Surr: 1,2-Dichloroethane-d4	76.5	70-130		%REC	1	1/23/2012 9:53:06 PM
Surr: 4-Bromofluorobenzene	88.7	70-130		%REC	1	1/23/2012 9:53:06 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: GBR-52
Project: GBR
Collection Date: 1/18/2012 10:52:00 AM
Lab ID: 1201592-001
Matrix: AQUEOUS
Received Date: 1/20/2012 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Surr: Dibromofluoromethane	81.8	69.8-130		%REC	1	1/23/2012 9:53:06 PM
Surr: Toluene-d8	82.5	70-130		%REC	1	1/23/2012 9:53:06 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JLF**
Conductivity	3,000	0.010		µmhos/cm	1	1/23/2012 3:18:19 PM
SM4500-H+B: PH						Analyst: **JLF**
pH	7.44	1.68	H	pH units	1	1/23/2012 3:18:19 PM
SM2320B: ALKALINITY						Analyst: **JLF**
Bicarbonate (As CaCO3)	200	20		mg/L CaCO3	1	1/23/2012 3:18:19 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/23/2012 3:18:19 PM
Total Alkalinity (as CaCO3)	200	20		mg/L CaCO3	1	1/23/2012 3:18:19 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2,720	20.0		mg/L	1	1/25/2012 5:31:00 PM

Qualifiers:				
	*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1201592-002
Matrix: AQUEOUS
Client Sample ID: GBR-48
Collection Date: 1/18/2012 11:55:00 AM
Received Date: 1/20/2012 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Fluoride	0.49	0.10		mg/L	1	1/20/2012 3:28:01 PM
Chloride	200	10		mg/L	20	1/20/2012 3:40:26 PM
Bromide	0.57	0.10		mg/L	1	1/20/2012 3:28:01 PM
Sulfate	1,700	25		mg/L	50	1/27/2012 6:33:40 AM
Nitrate+Nitrite as N	6.8	1.0		mg/L	5	1/31/2012 7:27:36 PM
EPA METHOD 200.7: METALS						Analyst: **RAG**
Barium	0.069	0.0020		mg/L	1	1/26/2012 1:41:54 PM
Beryllium	ND	0.0020		mg/L	1	1/26/2012 1:41:54 PM
Cadmium	ND	0.0020		mg/L	1	1/26/2012 1:41:54 PM
Calcium	370	5.0		mg/L	5	1/26/2012 1:44:33 PM
Chromium	0.63	0.0060	*	mg/L	1	1/26/2012 1:41:54 PM
Copper	0.030	0.0060		mg/L	1	1/26/2012 1:41:54 PM
Iron	15	1.0	*	mg/L	50	1/26/2012 3:10:59 PM
Lead	ND	0.0050		mg/L	1	1/26/2012 1:41:54 PM
Magnesium	37	1.0		mg/L	1	1/26/2012 1:41:54 PM
Manganese	0.83	0.0020	*	mg/L	1	1/26/2012 1:41:54 PM
Nickel	0.049	0.010		mg/L	1	1/26/2012 1:41:54 PM
Potassium	6.3	1.0		mg/L	1	1/26/2012 1:41:54 PM
Silver	ND	0.0050		mg/L	1	1/26/2012 1:41:54 PM
Sodium	490	5.0		mg/L	5	1/26/2012 1:44:33 PM
Zinc	0.029	0.010		mg/L	1	1/26/2012 1:41:54 PM
EPA 200.8: METALS						Analyst: **SNV**
Antimony	ND	0.0025		mg/L	2.5	1/26/2012 4:43:53 PM
Arsenic	0.0051	0.0025		mg/L	2.5	1/26/2012 4:43:53 PM
Selenium	0.094	0.0025	*	mg/L	2.5	1/26/2012 4:43:53 PM
Thallium	ND	0.0025		mg/L	2.5	1/26/2012 4:43:53 PM
EPA METHOD 245.1: MERCURY						Analyst: **JLF**
Mercury	ND	0.00020		mg/L	1	1/23/2012 4:05:55 PM
SM2340B: HARDNESS						Analyst: **RAG**
Hardness (As CaCO3)	1,100	6.6		mg/L	1	1/26/2012 12:11:00 PM
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Benzene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
Toluene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
Ethylbenzene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date Reported: **2/7/2012**

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1201592-002
Matrix: AQUEOUS
Client Sample ID: GBR-48
Collection Date: 1/18/2012 11:55:00 AM
Received Date: 1/20/2012 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Naphthalene	ND	2.0		µg/L	1	1/23/2012 10:21:04 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/23/2012 10:21:04 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/23/2012 10:21:04 PM
Acetone	ND	10		µg/L	1	1/23/2012 10:21:04 PM
Bromobenzene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
Bromodichloromethane	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
Bromoform	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
Bromomethane	ND	3.0		µg/L	1	1/23/2012 10:21:04 PM
2-Butanone	ND	10		µg/L	1	1/23/2012 10:21:04 PM
Carbon disulfide	ND	10		µg/L	1	1/23/2012 10:21:04 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
Chlorobenzene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
Chloroethane	ND	2.0		µg/L	1	1/23/2012 10:21:04 PM
Chloroform	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
Chloromethane	ND	3.0		µg/L	1	1/23/2012 10:21:04 PM
2-Chlorotoluene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
4-Chlorotoluene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
cis-1,2-DCE	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/23/2012 10:21:04 PM
Dibromochloromethane	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
Dibromomethane	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/23/2012 10:21:04 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
2-Hexanone	ND	10		µg/L	1	1/23/2012 10:21:04 PM
Isopropylbenzene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/23/2012 10:21:04 PM
Methylene Chloride	ND	3.0		µg/L	1	1/23/2012 10:21:04 PM
n-Butylbenzene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
n-Propylbenzene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
sec-Butylbenzene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
Styrene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1201592-002 **Matrix:** AQUEOUS

Client Sample ID: GBR-48
Collection Date: 1/18/2012 11:55:00 AM
Received Date: 1/20/2012 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
tert-Butylbenzene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/23/2012 10:21:04 PM
Tetrachloroethene (PCE)	1.1	1.0		µg/L	1	1/23/2012 10:21:04 PM
trans-1,2-DCE	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/23/2012 10:21:04 PM
Vinyl chloride	ND	1.0		µg/L	1	1/23/2012 10:21:04 PM
Xylenes, Total	ND	1.5		µg/L	1	1/23/2012 10:21:04 PM
Surr: 1,2-Dichloroethane-d4	79.4	70-130		%REC	1	1/23/2012 10:21:04 PM
Surr: 4-Bromofluorobenzene	87.4	70-130		%REC	1	1/23/2012 10:21:04 PM
Surr: Dibromofluoromethane	82.2	69.8-130		%REC	1	1/23/2012 10:21:04 PM
Surr: Toluene-d8	82.8	70-130		%REC	1	1/23/2012 10:21:04 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JLF**
Conductivity	3,400	0.010		µmhos/cm	1	1/23/2012 3:31:18 PM
SM4500-H+B: PH						Analyst: **JLF**
pH	7.36	1.68	H	pH units	1	1/23/2012 3:31:18 PM
SM2320B: ALKALINITY						Analyst: **JLF**
Bicarbonate (As CaCO3)	240	20		mg/L CaCO3	1	1/23/2012 3:31:18 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/23/2012 3:31:18 PM
Total Alkalinity (as CaCO3)	240	20		mg/L CaCO3	1	1/23/2012 3:31:18 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2,940	40.0		mg/L	1	1/25/2012 5:31:00 PM

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1201592-003 **Matrix:** AQUEOUS

Client Sample ID: GBR-50
Collection Date: 1/18/2012 12:55:00 PM
Received Date: 1/20/2012 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Fluoride	0.49	0.10		mg/L	1	1/20/2012 3:52:51 PM
Chloride	49	10		mg/L	20	1/20/2012 4:30:05 PM
Bromide	0.23	0.10		mg/L	1	1/20/2012 3:52:51 PM
Sulfate	1,800	25		mg/L	50	1/27/2012 6:51:04 AM
Nitrate+Nitrite as N	3.1	1.0		mg/L	5	1/31/2012 7:40:01 PM
EPA METHOD 200.7: METALS						Analyst: **RAG**
Barium	0.012	0.0020		mg/L	1	1/26/2012 1:46:54 PM
Beryllium	ND	0.0020		mg/L	1	1/26/2012 1:46:54 PM
Cadmium	ND	0.0020		mg/L	1	1/26/2012 1:46:54 PM
Calcium	400	5.0		mg/L	5	1/26/2012 1:49:24 PM
Chromium	0.0069	0.0060		mg/L	1	1/26/2012 1:46:54 PM
Copper	ND	0.0060		mg/L	1	1/26/2012 1:46:54 PM
Iron	0.72	0.020	*	mg/L	1	1/26/2012 1:46:54 PM
Lead	ND	0.0050		mg/L	1	1/26/2012 1:46:54 PM
Magnesium	31	1.0		mg/L	1	1/26/2012 1:46:54 PM
Manganese	0.041	0.0020		mg/L	1	1/26/2012 1:46:54 PM
Nickel	ND	0.010		mg/L	1	1/26/2012 1:46:54 PM
Potassium	2.3	1.0		mg/L	1	1/26/2012 1:46:54 PM
Silver	ND	0.0050		mg/L	1	1/26/2012 1:46:54 PM
Sodium	350	5.0		mg/L	5	1/26/2012 1:49:24 PM
Zinc	ND	0.010		mg/L	1	1/26/2012 1:46:54 PM
EPA 200.8: METALS						Analyst: **SNV**
Antimony	ND	0.0025		mg/L	2.5	1/26/2012 4:47:59 PM
Arsenic	ND	0.0025		mg/L	2.5	1/26/2012 4:47:59 PM
Selenium	0.0081	0.0025		mg/L	2.5	1/26/2012 4:47:59 PM
Thallium	ND	0.0025		mg/L	2.5	1/26/2012 4:47:59 PM
EPA METHOD 245.1: MERCURY						Analyst: **JLF**
Mercury	ND	0.00020		mg/L	1	1/23/2012 4:07:41 PM
SM2340B: HARDNESS						Analyst: **RAG**
Hardness (As CaCO3)	1,100	6.6		mg/L	1	1/26/2012 12:11:00 PM
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Benzene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
Toluene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
Ethylbenzene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM

Qualifiers:	*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-50
Project: GBR **Collection Date:** 1/18/2012 12:55:00 PM
Lab ID: 1201592-003 **Matrix:** AQUEOUS **Received Date:** 1/20/2012 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Naphthalene	ND	2.0		µg/L	1	1/24/2012 3:59:02 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/24/2012 3:59:02 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/24/2012 3:59:02 PM
Acetone	ND	10		µg/L	1	1/24/2012 3:59:02 PM
Bromobenzene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
Bromodichloromethane	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
Bromoform	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
Bromomethane	ND	3.0		µg/L	1	1/24/2012 3:59:02 PM
2-Butanone	ND	10		µg/L	1	1/24/2012 3:59:02 PM
Carbon disulfide	ND	10		µg/L	1	1/24/2012 3:59:02 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
Chlorobenzene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
Chloroethane	ND	2.0		µg/L	1	1/24/2012 3:59:02 PM
Chloroform	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
Chloromethane	ND	3.0		µg/L	1	1/24/2012 3:59:02 PM
2-Chlorotoluene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
4-Chlorotoluene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
cis-1,2-DCE	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/24/2012 3:59:02 PM
Dibromochloromethane	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
Dibromomethane	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/24/2012 3:59:02 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
2-Hexanone	ND	10		µg/L	1	1/24/2012 3:59:02 PM
Isopropylbenzene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/24/2012 3:59:02 PM
Methylene Chloride	ND	3.0		µg/L	1	1/24/2012 3:59:02 PM
n-Butylbenzene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
n-Propylbenzene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
sec-Butylbenzene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
Styrene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1201592-003
Matrix: AQUEOUS
Client Sample ID: GBR-50
Collection Date: 1/18/2012 12:55:00 PM
Received Date: 1/20/2012 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
tert-Butylbenzene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/24/2012 3:59:02 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
trans-1,2-DCE	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/24/2012 3:59:02 PM
Vinyl chloride	ND	1.0		µg/L	1	1/24/2012 3:59:02 PM
Xylenes, Total	ND	1.5		µg/L	1	1/24/2012 3:59:02 PM
Surr: 1,2-Dichloroethane-d4	78.8	70-130		%REC	1	1/24/2012 3:59:02 PM
Surr: 4-Bromofluorobenzene	90.6	70-130		%REC	1	1/24/2012 3:59:02 PM
Surr: Dibromofluoromethane	86.4	69.8-130		%REC	1	1/24/2012 3:59:02 PM
Surr: Toluene-d8	83.5	70-130		%REC	1	1/24/2012 3:59:02 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JLF**
Conductivity	3,000	0.010		µmhos/cm	1	1/23/2012 3:45:12 PM
SM4500-H+B: PH						Analyst: **JLF**
pH	7.28	1.68	H	pH units	1	1/23/2012 3:45:12 PM
SM2320B: ALKALINITY						Analyst: **JLF**
Bicarbonate (As CaCO3)	210	20		mg/L CaCO3	1	1/23/2012 3:45:12 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/23/2012 3:45:12 PM
Total Alkalinity (as CaCO3)	210	20		mg/L CaCO3	1	1/23/2012 3:45:12 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2,730	40.0		mg/L	1	1/25/2012 5:31:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1201592-004 **Matrix:** AQUEOUS

Client Sample ID: GBR-32
Collection Date: 1/18/2012 1:45:00 PM
Received Date: 1/20/2012 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Fluoride	0.37	0.10		mg/L	1	1/20/2012 5:07:20 PM
Chloride	500	50		mg/L	100	1/27/2012 7:25:52 AM
Bromide	1.4	0.10		mg/L	1	1/20/2012 5:07:20 PM
Sulfate	2,800	50		mg/L	100	1/27/2012 7:25:52 AM
Nitrate+Nitrite as N	5.8	1.0		mg/L	5	2/2/2012 12:52:46 AM
EPA METHOD 200.7: METALS						Analyst: **RAG**
Barium	0.020	0.0020		mg/L	1	1/26/2012 2:03:06 PM
Beryllium	ND	0.0020		mg/L	1	1/26/2012 2:03:06 PM
Cadmium	ND	0.0020		mg/L	1	1/26/2012 2:03:06 PM
Calcium	560	10		mg/L	10	1/26/2012 3:23:09 PM
Chromium	0.030	0.0060		mg/L	1	1/26/2012 2:03:06 PM
Copper	ND	0.0060		mg/L	1	1/26/2012 2:03:06 PM
Iron	0.88	0.020	*	mg/L	1	1/26/2012 2:03:06 PM
Lead	ND	0.0050		mg/L	1	1/26/2012 2:03:06 PM
Magnesium	57	1.0		mg/L	1	1/26/2012 2:03:06 PM
Manganese	0.50	0.0020	*	mg/L	1	1/26/2012 2:03:06 PM
Nickel	0.059	0.010		mg/L	1	1/26/2012 2:03:06 PM
Potassium	4.7	1.0		mg/L	1	1/26/2012 2:03:06 PM
Silver	ND	0.0050		mg/L	1	1/26/2012 2:03:06 PM
Sodium	730	10		mg/L	10	1/26/2012 3:23:09 PM
Zinc	ND	0.010		mg/L	1	1/26/2012 2:03:06 PM
EPA 200.8: METALS						Analyst: **SNV**
Antimony	ND	0.0025		mg/L	2.5	1/26/2012 4:52:04 PM
Arsenic	0.0047	0.0025		mg/L	2.5	1/26/2012 4:52:04 PM
Selenium	0.14	0.0050	*	mg/L	5	1/27/2012 1:58:33 PM
Thallium	ND	0.0025		mg/L	2.5	1/26/2012 4:52:04 PM
EPA METHOD 245.1: MERCURY						Analyst: **JLF**
Mercury	ND	0.00020		mg/L	1	1/23/2012 4:09:26 PM
SM2340B: HARDNESS						Analyst: **RAG**
Hardness (As CaCO3)	1,600	6.6		mg/L	1	1/26/2012 12:11:00 PM
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Benzene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
Toluene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
Ethylbenzene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date Reported: **2/7/2012**

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1201592-004
Matrix: AQUEOUS
Client Sample ID: GBR-32
Collection Date: 1/18/2012 1:45:00 PM
Received Date: 1/20/2012 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Naphthalene	ND	2.0		µg/L	1	1/24/2012 5:22:59 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/24/2012 5:22:59 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/24/2012 5:22:59 PM
Acetone	ND	10		µg/L	1	1/24/2012 5:22:59 PM
Bromobenzene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
Bromodichloromethane	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
Bromoform	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
Bromomethane	ND	3.0		µg/L	1	1/24/2012 5:22:59 PM
2-Butanone	ND	10		µg/L	1	1/24/2012 5:22:59 PM
Carbon disulfide	ND	10		µg/L	1	1/24/2012 5:22:59 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
Chlorobenzene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
Chloroethane	ND	2.0		µg/L	1	1/24/2012 5:22:59 PM
Chloroform	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
Chloromethane	ND	3.0		µg/L	1	1/24/2012 5:22:59 PM
2-Chlorotoluene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
4-Chlorotoluene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
cis-1,2-DCE	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/24/2012 5:22:59 PM
Dibromochloromethane	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
Dibromomethane	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/24/2012 5:22:59 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
2-Hexanone	ND	10		µg/L	1	1/24/2012 5:22:59 PM
Isopropylbenzene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/24/2012 5:22:59 PM
Methylene Chloride	ND	3.0		µg/L	1	1/24/2012 5:22:59 PM
n-Butylbenzene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
n-Propylbenzene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
sec-Butylbenzene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
Styrene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM

Qualifiers:				
	*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: GBR-32
Project: GBR
Collection Date: 1/18/2012 1:45:00 PM
Lab ID: 1201592-004
Matrix: AQUEOUS
Received Date: 1/20/2012 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
tert-Butylbenzene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/24/2012 5:22:59 PM
Tetrachloroethene (PCE)	1.5	1.0		µg/L	1	1/24/2012 5:22:59 PM
trans-1,2-DCE	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/24/2012 5:22:59 PM
Vinyl chloride	ND	1.0		µg/L	1	1/24/2012 5:22:59 PM
Xylenes, Total	ND	1.5		µg/L	1	1/24/2012 5:22:59 PM
Surr: 1,2-Dichloroethane-d4	77.8	70-130		%REC	1	1/24/2012 5:22:59 PM
Surr: 4-Bromofluorobenzene	91.8	70-130		%REC	1	1/24/2012 5:22:59 PM
Surr: Dibromofluoromethane	83.3	69.8-130		%REC	1	1/24/2012 5:22:59 PM
Surr: Toluene-d8	82.9	70-130		%REC	1	1/24/2012 5:22:59 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JLF**
Conductivity	4,800	0.010		µmhos/cm	1	1/23/2012 4:06:34 PM
SM4500-H+B: PH						Analyst: **JLF**
pH	7.21	1.68	H	pH units	1	1/23/2012 4:06:34 PM
SM2320B: ALKALINITY						Analyst: **JLF**
Bicarbonate (As CaCO3)	250	20		mg/L CaCO3	1	1/23/2012 4:06:34 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/23/2012 4:06:34 PM
Total Alkalinity (as CaCO3)	250	20		mg/L CaCO3	1	1/23/2012 4:06:34 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	4,290	40.0		mg/L	1	1/25/2012 5:31:00 PM

Qualifiers:				
	*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-17
Project: GBR **Collection Date:** 1/18/2012 2:55:00 PM
Lab ID: 1201592-005 **Matrix:** AQUEOUS **Received Date:** 1/20/2012 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Fluoride	0.59	0.10		mg/L	1	1/20/2012 5:32:09 PM
Chloride	46	10		mg/L	20	1/20/2012 5:44:34 PM
Bromide	0.20	0.10		mg/L	1	1/20/2012 5:32:09 PM
Sulfate	1,400	25		mg/L	50	1/27/2012 7:43:17 AM
Nitrate+Nitrite as N	4.1	1.0		mg/L	5	2/2/2012 1:05:11 AM
EPA METHOD 200.7: METALS						Analyst: **RAG**
Calcium	350	5.0		mg/L	5	1/26/2012 2:11:07 PM
Iron	3.9	0.10	*	mg/L	5	1/26/2012 2:11:07 PM
Magnesium	28	1.0		mg/L	1	1/26/2012 2:08:40 PM
Manganese	0.15	0.0020	*	mg/L	1	1/26/2012 2:08:40 PM
Potassium	2.0	1.0		mg/L	1	1/26/2012 2:08:40 PM
Sodium	250	5.0		mg/L	5	1/26/2012 2:11:07 PM
SM2340B: HARDNESS						Analyst: **RAG**
Hardness (As CaCO3)	990	6.6		mg/L	1	1/26/2012 12:11:00 PM
EPA METHOD 8270C: PAHS						Analyst: **JDC**
Naphthalene	ND	0.50		µg/L	1	1/23/2012 5:49:58 PM
1-Methylnaphthalene	ND	0.50		µg/L	1	1/23/2012 5:49:58 PM
2-Methylnaphthalene	ND	0.50		µg/L	1	1/23/2012 5:49:58 PM
Acenaphthylene	ND	0.50		µg/L	1	1/23/2012 5:49:58 PM
Acenaphthene	ND	0.50		µg/L	1	1/23/2012 5:49:58 PM
Fluorene	ND	0.50		µg/L	1	1/23/2012 5:49:58 PM
Phenanthrene	ND	0.50		µg/L	1	1/23/2012 5:49:58 PM
Anthracene	ND	0.50		µg/L	1	1/23/2012 5:49:58 PM
Fluoranthene	ND	0.50		µg/L	1	1/23/2012 5:49:58 PM
Pyrene	ND	0.50		µg/L	1	1/23/2012 5:49:58 PM
Benz(a)anthracene	ND	0.50		µg/L	1	1/23/2012 5:49:58 PM
Chrysene	ND	0.50		µg/L	1	1/23/2012 5:49:58 PM
Benzo(b)fluoranthene	ND	0.50		µg/L	1	1/23/2012 5:49:58 PM
Benzo(k)fluoranthene	ND	0.50		µg/L	1	1/23/2012 5:49:58 PM
Benzo(a)pyrene	ND	0.50		µg/L	1	1/23/2012 5:49:58 PM
Dibenz(a,h)anthracene	ND	0.50		µg/L	1	1/23/2012 5:49:58 PM
Benzo(g,h,i)perylene	ND	0.50		µg/L	1	1/23/2012 5:49:58 PM
Indeno(1,2,3-cd)pyrene	ND	0.50		µg/L	1	1/23/2012 5:49:58 PM
Surr: Benzo(e)pyrene	78.3	38-145		%REC	1	1/23/2012 5:49:58 PM
Surr: N-hexadecane	76.8	40-107		%REC	1	1/23/2012 5:49:58 PM
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Benzene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
Toluene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
Ethylbenzene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM

Qualifiers:				
	*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-17
Project: GBR **Collection Date:** 1/18/2012 2:55:00 PM
Lab ID: 1201592-005 **Matrix:** AQUEOUS **Received Date:** 1/20/2012 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
Naphthalene	ND	2.0		µg/L	1	1/24/2012 5:50:55 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/24/2012 5:50:55 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/24/2012 5:50:55 PM
Acetone	ND	10		µg/L	1	1/24/2012 5:50:55 PM
Bromobenzene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
Bromodichloromethane	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
Bromoform	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
Bromomethane	ND	3.0		µg/L	1	1/24/2012 5:50:55 PM
2-Butanone	ND	10		µg/L	1	1/24/2012 5:50:55 PM
Carbon disulfide	ND	10		µg/L	1	1/24/2012 5:50:55 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
Chlorobenzene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
Chloroethane	ND	2.0		µg/L	1	1/24/2012 5:50:55 PM
Chloroform	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
Chloromethane	ND	3.0		µg/L	1	1/24/2012 5:50:55 PM
2-Chlorotoluene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
4-Chlorotoluene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
cis-1,2-DCE	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/24/2012 5:50:55 PM
Dibromochloromethane	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
Dibromomethane	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/24/2012 5:50:55 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
2-Hexanone	ND	10		µg/L	1	1/24/2012 5:50:55 PM
Isopropylbenzene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/24/2012 5:50:55 PM
Methylene Chloride	ND	3.0		µg/L	1	1/24/2012 5:50:55 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1201592-005
Matrix: AQUEOUS

Client Sample ID: GBR-17
Collection Date: 1/18/2012 2:55:00 PM
Received Date: 1/20/2012 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
n-Butylbenzene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
n-Propylbenzene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
sec-Butylbenzene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
Styrene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
tert-Butylbenzene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/24/2012 5:50:55 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
trans-1,2-DCE	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/24/2012 5:50:55 PM
Vinyl chloride	ND	1.0		µg/L	1	1/24/2012 5:50:55 PM
Xylenes, Total	ND	1.5		µg/L	1	1/24/2012 5:50:55 PM
Surr: 1,2-Dichloroethane-d4	77.8	70-130		%REC	1	1/24/2012 5:50:55 PM
Surr: 4-Bromofluorobenzene	89.7	70-130		%REC	1	1/24/2012 5:50:55 PM
Surr: Dibromofluoromethane	86.0	69.8-130		%REC	1	1/24/2012 5:50:55 PM
Surr: Toluene-d8	83.6	70-130		%REC	1	1/24/2012 5:50:55 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JLF**
Conductivity	2,500	0.010		µmhos/cm	1	1/23/2012 5:05:35 PM
SM4500-H+B: PH						Analyst: **JLF**
pH	7.49	1.68	H	pH units	1	1/23/2012 5:05:35 PM
SM2320B: ALKALINITY						Analyst: **JLF**
Bicarbonate (As CaCO3)	200	20		mg/L CaCO3	1	1/23/2012 5:05:35 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/23/2012 5:05:35 PM
Total Alkalinity (as CaCO3)	200	20		mg/L CaCO3	1	1/23/2012 5:05:35 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2,150	40.0		mg/L	1	1/25/2012 5:31:00 PM

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Trip Blank
Project: GBR **Collection Date:**
Lab ID: 1201592-006 **Matrix:** TRIP BLANK **Received Date:** 1/20/2012 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Benzene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
Toluene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
Ethylbenzene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
Naphthalene	ND	2.0		µg/L	1	1/24/2012 6:18:51 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/24/2012 6:18:51 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/24/2012 6:18:51 PM
Acetone	ND	10		µg/L	1	1/24/2012 6:18:51 PM
Bromobenzene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
Bromodichloromethane	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
Bromoform	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
Bromomethane	ND	3.0		µg/L	1	1/24/2012 6:18:51 PM
2-Butanone	ND	10		µg/L	1	1/24/2012 6:18:51 PM
Carbon disulfide	ND	10		µg/L	1	1/24/2012 6:18:51 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
Chlorobenzene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
Chloroethane	ND	2.0		µg/L	1	1/24/2012 6:18:51 PM
Chloroform	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
Chloromethane	ND	3.0		µg/L	1	1/24/2012 6:18:51 PM
2-Chlorotoluene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
4-Chlorotoluene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
cis-1,2-DCE	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/24/2012 6:18:51 PM
Dibromochloromethane	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
Dibromomethane	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/24/2012 6:18:51 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
2-Hexanone	ND	10		µg/L	1	1/24/2012 6:18:51 PM

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: Trip Blank
Project: GBR
Collection Date:
Lab ID: 1201592-006
Matrix: TRIP BLANK
Received Date: 1/20/2012 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Isopropylbenzene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/24/2012 6:18:51 PM
Methylene Chloride	ND	3.0		µg/L	1	1/24/2012 6:18:51 PM
n-Butylbenzene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
n-Propylbenzene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
sec-Butylbenzene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
Styrene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
tert-Butylbenzene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/24/2012 6:18:51 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
trans-1,2-DCE	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/24/2012 6:18:51 PM
Vinyl chloride	ND	1.0		µg/L	1	1/24/2012 6:18:51 PM
Xylenes, Total	ND	1.5		µg/L	1	1/24/2012 6:18:51 PM
Surr: 1,2-Dichloroethane-d4	78.3	70-130		%REC	1	1/24/2012 6:18:51 PM
Surr: 4-Bromofluorobenzene	92.2	70-130		%REC	1	1/24/2012 6:18:51 PM
Surr: Dibromofluoromethane	87.4	69.8-130		%REC	1	1/24/2012 6:18:51 PM
Surr: Toluene-d8	84.2	70-130		%REC	1	1/24/2012 6:18:51 PM

Qualifiers:				
	*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	120124027
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1201592
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	120124027-001	**Sampling Date**	1/18/2012	**Date/Time Received**	1/24/2012 12:10 PM
Client Sample ID	1201592-001D / GBR-52	**Sampling Time**	10:52 AM		
Matrix	Water				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Total P	0.0748	mg/L	0.01	1/27/2012	CRW	SM4500PF	

Sample Number	120124027-002	**Sampling Date**	1/18/2012	**Date/Time Received**	1/24/2012 12:10 PM
Client Sample ID	1201592-002D / GBR-48	**Sampling Time**	11:55 AM		
Matrix	Water				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Total P	0.615	mg/L	0.1	1/27/2012	CRW	SM4500PF	

Sample Number	120124027-003	**Sampling Date**	1/18/2012	**Date/Time Received**	1/24/2012 12:10 PM
Client Sample ID	1201592-003D / GBR-50	**Sampling Time**	12:55 PM		
Matrix	Water				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Total P	0.0373	mg/L	0.01	1/27/2012	CRW	SM4500PF	

Sample Number	120124027-004	**Sampling Date**	1/18/2012	**Date/Time Received**	1/24/2012 12:10 PM
Client Sample ID	1201592-004D / GBR-32	**Sampling Time**	1:45 PM		
Matrix	Water				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Total P	0.0391	mg/L	0.01	1/27/2012	CRW	SM4500PF	

Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	120124027
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1201592
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	120124027-005	**Sampling Date**	1/18/2012	**Date/Time Received**	1/24/2012 12:10 PM
Client Sample ID	1201592-005D / GBR-17	**Sampling Time**	2:55 PM		
Matrix	Water				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Total P	0.105	mg/L	0.01	1/27/2012	CRW	SM4500PF	

Authorized Signature John W. Codd

John Coddington, Lab Manager

MCL	EPA's Maximum Contaminant Level
ND	Not Detected
PQL	Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1201592**

07-Feb-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID	**LCS-434**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Metals**
Client ID:	**LCSW**	Batch ID:	**434**	RunNo:	**599**
Prep Date:	**1/25/2012**	Analysis Date:	**1/26/2012**	SeqNo:	**17094** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.3	85	115			
Beryllium	0.50	0.0020	0.5000	0	101	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.5	85	115			
Calcium	49	1.0	50.00	0	98.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.5	85	115			
Copper	0.48	0.0060	0.5000	0	95.7	85	115			
Iron	0.51	0.020	0.5000	0	103	85	115			
Lead	0.49	0.0050	0.5000	0	97.1	85	115			
Magnesium	50	1.0	50.00	0	100	85	115			
Manganese	0.47	0.0020	0.5000	0	93.6	85	115			
Nickel	0.47	0.010	0.5000	0	93.0	85	115			
Potassium	48	1.0	50.00	0	95.9	85	115			
Silver	0.10	0.0050	0.1000	0	99.6	85	115			
Sodium	49	1.0	50.00	0	98.0	85	115			
Zinc	0.47	0.010	0.5000	0.001130	94.4	85	115			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1201592**

07-Feb-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID	**MB-434**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Metals**
Client ID:	**PBW**	Batch ID:	**434**	RunNo:	**617**
Prep Date:	**1/25/2012**	Analysis Date:	**1/26/2012**	SeqNo:	**17517** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0025								
Arsenic	ND	0.0025								
Selenium	ND	0.0025								
Thallium	ND	0.0025								

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1201592**

07-Feb-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **MB-394**		SampType: **MBLK**			TestCode: **EPA Method 245.1: Mercury**					
Client ID: **PBW**		Batch ID: **394**			RunNo: **533**					
Prep Date: **1/23/2012**		Analysis Date: **1/23/2012**			SeqNo: **15174**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID **LCS-394**		SampType: **LCS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID: **LCSW**		Batch ID: **394**			RunNo: **533**					
Prep Date: **1/23/2012**		Analysis Date: **1/23/2012**			SeqNo: **15175**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.8	80	120			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1201592**

07-Feb-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R511** RunNo: **511**
Prep Date: Analysis Date: **1/20/2012** SeqNo: **14477** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R511** RunNo: **511**
Prep Date: Analysis Date: **1/20/2012** SeqNo: **14478** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	98.3	90	110			
Chloride	4.7	0.50	5.000	0	94.5	90	110			
Bromide	2.4	0.10	2.500	0	95.7	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R511** RunNo: **511**
Prep Date: Analysis Date: **1/20/2012** SeqNo: **14527** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R511** RunNo: **511**
Prep Date: Analysis Date: **1/20/2012** SeqNo: **14528** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.8	90	110			
Chloride	4.7	0.50	5.000	0	94.2	90	110			
Bromide	2.4	0.10	2.500	0	95.7	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R627** RunNo: **627**
Prep Date: Analysis Date: **1/27/2012** SeqNo: **17775** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1201592**

07-Feb-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R627**	RunNo: **627**
Prep Date:	Analysis Date: **1/27/2012**	SeqNo: **17776** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	98.4	90	110			
Sulfate	10	0.50	10.00	0	101	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R690**	RunNo: **690**
Prep Date:	Analysis Date: **1/31/2012**	SeqNo: **19595** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R690**	RunNo: **690**
Prep Date:	Analysis Date: **1/31/2012**	SeqNo: **19596** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.7	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R714**	RunNo: **714**
Prep Date:	Analysis Date: **2/1/2012**	SeqNo: **20364** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R714**	RunNo: **714**
Prep Date:	Analysis Date: **2/1/2012**	SeqNo: **20365** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	100	90	110			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **5ml rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **PBW** Batch ID: **R531** RunNo: **531**

Prep Date: Analysis Date: **1/23/2012** SeqNo: **15103** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1201592

07-Feb-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **5ml rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R531**	RunNo: **531**	
Prep Date:	Analysis Date: **1/23/2012**	SeqNo: **15103**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	7.6		10.00		75.6	70	130			
Surr: 4-Bromofluorobenzene	8.9		10.00		89.1	70	130			
Surr: Dibromofluoromethane	8.0		10.00		79.5	69.8	130			
Surr: Toluene-d8	8.5		10.00		85.3	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **LCSW**	Batch ID: **R531**	RunNo: **531**	
Prep Date:	Analysis Date: **1/23/2012**	SeqNo: **15154**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	108	81.1	130			
Toluene	20	1.0	20.00	0	99.0	82.3	122			
Chlorobenzene	20	1.0	20.00	0	97.7	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	115	83.1	126			
Trichloroethene (TCE)	21	1.0	20.00	0	104	67.4	137			
Surr: 1,2-Dichloroethane-d4	8.4		10.00		84.2	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		90.0	70	130			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1201592**

07-Feb-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID	**100ng lcs**	SampType:	**LCS**	TestCode:	**EPA Method 8260B: VOLATILES**
Client ID:	**LCSW**	Batch ID:	**R531**	RunNo:	**531**
Prep Date:		Analysis Date:	**1/23/2012**	SeqNo:	**15154** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	8.8		10.00		87.8	69.8	130			
Surr: Toluene-d8	9.2		10.00		91.5	70	130			

Sample ID	**5ml rb**	SampType:	**MBLK**	TestCode:	**EPA Method 8260B: VOLATILES**
Client ID:	**PBW**	Batch ID:	**R560**	RunNo:	**560**
Prep Date:		Analysis Date:	**1/24/2012**	SeqNo:	**15890** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1201592**

07-Feb-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **5ml rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R560**	RunNo: **560**
Prep Date:	Analysis Date: **1/24/2012**	SeqNo: **15890** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	7.9		10.00		79.1	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.5	70	130			
Surr: Dibromofluoromethane	8.7		10.00		86.6	69.8	130			
Surr: Toluene-d8	8.3		10.00		82.6	70	130			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R560** RunNo: **560**
Prep Date: Analysis Date: **1/24/2012** SeqNo: **15892** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	81.1	130			
Toluene	19	1.0	20.00	0	94.6	82.3	122			
Chlorobenzene	20	1.0	20.00	0	98.3	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	110	83.1	126			
Trichloroethene (TCE)	20	1.0	20.00	0	99.4	67.4	137			
Surr: 1,2-Dichloroethane-d4	8.1		10.00		81.0	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.2	70	130			
Surr: Dibromofluoromethane	8.5		10.00		85.1	69.8	130			
Surr: Toluene-d8	8.4		10.00		83.6	70	130			

Sample ID **b3** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R560** RunNo: **560**
Prep Date: Analysis Date: **1/25/2012** SeqNo: **15973** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1201592**

07-Feb-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R560**	RunNo: **560**
Prep Date:	Analysis Date: **1/25/2012**	SeqNo: **15973** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	7.6		10.00		76.3	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		90.4	70	130			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1201592**

07-Feb-12

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **b3** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R560** RunNo: **560**
Prep Date: Analysis Date: **1/25/2012** SeqNo: **15973** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	8.6		10.00		85.5	69.8	130			
Surr: Toluene-d8	8.6		10.00		85.9	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R560** RunNo: **560**
Prep Date: Analysis Date: **1/25/2012** SeqNo: **16017** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	112	81.1	130			
Toluene	21	1.0	20.00	0	106	82.3	122			
Chlorobenzene	21	1.0	20.00	0	103	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	112	83.1	126			
Trichloroethene (TCE)	22	1.0	20.00	0	108	67.4	137			
Surr: 1,2-Dichloroethane-d4	7.7		10.00		77.2	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.0	70	130			
Surr: Dibromofluoromethane	8.9		10.00		88.8	69.8	130			
Surr: Toluene-d8	8.4		10.00		83.9	70	130			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **mb-388** SampType: **MBLK** TestCode: **EPA Method 8270C: PAHs**
Client ID: **PBW** Batch ID: **388** RunNo: **538**
Prep Date: **1/23/2012** Analysis Date: **1/23/2012** SeqNo: **15295** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	0.50								
2-Methylnaphthalene	ND	0.50								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: Benzo(e)pyrene	15		20.00		74.0	38	145			
Surr: N-hexadecane	58		87.60		66.6	40	107			

Sample ID **lcs-388** SampType: **LCS** TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSW** Batch ID: **388** RunNo: **538**
Prep Date: **1/23/2012** Analysis Date: **1/23/2012** SeqNo: **15296** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	11	0.50	20.00	0	56.5	33.9	106			
1-Methylnaphthalene	12	0.50	20.00	0	60.8	36.3	111			
2-Methylnaphthalene	12	0.50	20.00	0	61.3	36.5	105			
Acenaphthylene	11	0.50	20.00	0	53.8	28.4	122			
Acenaphthene	11	0.50	20.00	0	54.3	32.7	118			
Fluorene	11	0.50	20.00	0	57.2	39.1	119			
Phenanthrene	14	0.50	20.00	0	69.6	47.1	119			
Anthracene	13	0.50	20.00	0	65.9	51.1	117			
Fluoranthene	13	0.50	20.00	0	66.4	40	132			
Pyrene	12	0.50	20.00	0	59.4	43.9	123			
Benz(a)anthracene	13	0.50	20.00	0	62.8	35	163			
Chrysene	13	0.50	20.00	0	65.3	45.9	119			
Benzo(b)fluoranthene	13	0.50	20.00	0	67.1	36.5	137			
Benzo(k)fluoranthene	14	0.50	20.00	0	68.2	37.1	143			
Benzo(a)pyrene	14	0.50	20.00	0	71.7	26.7	144			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **lcs-388** SampType: **LCS** TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSW** Batch ID: **388** RunNo: **538**
Prep Date: **1/23/2012** Analysis Date: **1/23/2012** SeqNo: **15296** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dibenz(a,h)anthracene	14	0.50	20.00	0	71.7	31	146			
Benzo(g,h,i)perylene	13	0.50	20.00	0	64.9	30.9	150			
Indeno(1,2,3-cd)pyrene	14	0.50	20.00	0	69.9	35.2	169			
Surr: Benzo(e)pyrene	14		20.00		69.8	38	145			
Surr: N-hexadecane	50		87.60		56.7	40	107			

Sample ID **lcsd-388** SampType: **LCSD** TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSS02** Batch ID: **388** RunNo: **538**
Prep Date: **1/23/2012** Analysis Date: **1/23/2012** SeqNo: **15297** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	12	0.50	20.00	0	60.0	33.9	106	6.01	20	
1-Methylnaphthalene	13	0.50	20.00	0	63.9	36.3	111	4.97	20	
2-Methylnaphthalene	14	0.50	20.00	0	68.1	36.5	105	10.5	20	
Acenaphthylene	13	0.50	20.00	0	67.4	28.4	122	22.4	20	R
Acenaphthene	13	0.50	20.00	0	65.8	32.7	118	19.2	20	
Fluorene	14	0.50	20.00	0	67.6	39.1	119	16.7	20	
Phenanthrene	15	0.50	20.00	0	74.0	47.1	119	6.13	20	
Anthracene	15	0.50	20.00	0	74.3	51.1	117	12.0	20	
Fluoranthene	14	0.50	20.00	0	71.1	40	132	6.84	20	
Pyrene	14	0.50	20.00	0	71.2	43.9	123	18.1	20	
Benz(a)anthracene	14	0.50	20.00	0	71.7	35	163	13.2	20	
Chrysene	14	0.50	20.00	0	69.4	45.9	119	6.09	20	
Benzo(b)fluoranthene	14	0.50	20.00	0	71.3	36.5	137	6.07	20	
Benzo(k)fluoranthene	14	0.50	20.00	0	68.2	37.1	143	0	20	
Benzo(a)pyrene	14	0.50	20.00	0	71.1	26.7	144	0.840	20	
Dibenz(a,h)anthracene	15	0.50	20.00	0	73.7	31	146	2.75	20	
Benzo(g,h,i)perylene	14	0.50	20.00	0	71.4	30.9	150	9.54	20	
Indeno(1,2,3-cd)pyrene	14	0.50	20.00	0	71.8	35.2	169	2.68	20	
Surr: Benzo(e)pyrene	14		20.00		69.7	38	145	0	0	
Surr: N-hexadecane	57		87.60		65.1	40	107	0	0	

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1201592**

07-Feb-12

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **mb-1** SampType: **MBLK** TestCode: **SM2320B: Alkalinity**
Client ID: **PBW** Batch ID: **R540** RunNo: **540**
Prep Date: Analysis Date: **1/23/2012** SeqNo: **15324** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20								

Sample ID **lcs-1** SampType: **LCS** TestCode: **SM2320B: Alkalinity**
Client ID: **LCSW** Batch ID: **R540** RunNo: **540**
Prep Date: Analysis Date: **1/23/2012** SeqNo: **15325** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	81	20	80.00	5.600	94.1	88.1	104			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **MB-415**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**	
Client ID: **PBW**	Batch ID: **415**	RunNo: **577**	
Prep Date: **1/24/2012**	Analysis Date: **1/25/2012**	SeqNo: **16426**	Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID **LCS-415**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**	
Client ID: **LCSW**	Batch ID: **415**	RunNo: **577**	
Prep Date: **1/24/2012**	Analysis Date: **1/25/2012**	SeqNo: **16427**	Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1,000	20.0	1,000	0	100	80	120			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 01, 2012

Kelly Robinson
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4166
FAX (505) 632-3911

RE: GBR OrderNo.: 1201460

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 9 sample(s) on 1/17/2012 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative. Analytical results designated with a "J" qualifier are estimated and represent a detection above the Method Detection Limit (MDL) and less than the Reporting Limit (PQL). These analytes are not reviewed nor narrated as to whether they are laboratory artifacts.

Quality control data is within laboratory defined or method specified acceptance limits except if noted.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: SHS-8
Project: GBR
Collection Date: 1/13/2012 11:20:00 AM
Lab ID: 1201460-001
Matrix: AQUEOUS
Received Date: 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Fluoride	1.9	0.10		mg/L	1	1/17/2012 9:11:25 PM
Chloride	170	10		mg/L	20	1/17/2012 9:23:49 PM
Bromide	ND	0.10		mg/L	1	1/17/2012 9:11:25 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	1/18/2012 1:44:32 AM
Sulfate	430	10		mg/L	20	1/17/2012 9:23:49 PM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Calcium	150	20		mg/L	20	1/23/2012 8:34:36 AM
Iron	15	0.40	*	mg/L	20	1/23/2012 8:34:36 AM
Magnesium	19	1.0		mg/L	1	1/23/2012 8:31:48 AM
Manganese	2.3	0.010	*	mg/L	5	1/20/2012 8:33:53 AM
Potassium	3.5	1.0		mg/L	1	1/20/2012 8:31:15 AM
Sodium	590	20		mg/L	20	1/23/2012 8:34:36 AM
SM2340B: HARDNESS						Analyst: **ELS**
Hardness (As CaCO3)	460	6.6		mg/L	1	1/23/2012
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Benzene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
Toluene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
Ethylbenzene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
Naphthalene	ND	2.0		µg/L	1	1/20/2012 10:59:16 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/20/2012 10:59:16 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/20/2012 10:59:16 AM
Acetone	11	10		µg/L	1	1/20/2012 10:59:16 AM
Bromobenzene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
Bromodichloromethane	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
Bromoform	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
Bromomethane	ND	3.0		µg/L	1	1/20/2012 10:59:16 AM
2-Butanone	ND	10		µg/L	1	1/20/2012 10:59:16 AM
Carbon disulfide	ND	10		µg/L	1	1/20/2012 10:59:16 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
Chlorobenzene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
Chloroethane	ND	2.0		µg/L	1	1/20/2012 10:59:16 AM
Chloroform	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
Chloromethane	ND	3.0		µg/L	1	1/20/2012 10:59:16 AM
2-Chlorotoluene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
4-Chlorotoluene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** SHS-8
Project: GBR **Collection Date:** 1/13/2012 11:20:00 AM
Lab ID: 1201460-001 **Matrix:** AQUEOUS **Received Date:** 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: JDJ
cis-1,2-DCE	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/20/2012 10:59:16 AM
Dibromochloromethane	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
Dibromomethane	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/20/2012 10:59:16 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
2-Hexanone	ND	10		µg/L	1	1/20/2012 10:59:16 AM
Isopropylbenzene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/20/2012 10:59:16 AM
Methylene Chloride	ND	3.0		µg/L	1	1/20/2012 10:59:16 AM
n-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
n-Propylbenzene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
sec-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
Styrene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
tert-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/20/2012 10:59:16 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
trans-1,2-DCE	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/20/2012 10:59:16 AM
Vinyl chloride	ND	1.0		µg/L	1	1/20/2012 10:59:16 AM
Xylenes, Total	ND	1.5		µg/L	1	1/20/2012 10:59:16 AM
Surr: 1,2-Dichloroethane-d4	76.4	70-130		%REC	1	1/20/2012 10:59:16 AM
Surr: 4-Bromofluorobenzene	67.2	70-130	S	%REC	1	1/20/2012 10:59:16 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	SHS-8
Project:	GBR	**Collection Date:**	1/13/2012 11:20:00 AM
Lab ID:	1201460-001 **Matrix:** AQUEOUS	**Received Date:**	1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Surr: Dibromofluoromethane	87.0	69.8-130		%REC	1	1/20/2012 10:59:16 AM
Surr: Toluene-d8	89.1	70-130		%REC	1	1/20/2012 10:59:16 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JLF**
Conductivity	2,900	0.010		µmhos/cm	1	1/18/2012 5:52:44 PM
SM4500-H+B: PH						Analyst: **JLF**
pH	7.22	1.68	H	pH units	1	1/18/2012 5:52:44 PM
SM2320B: ALKALINITY						Analyst: **JLF**
Bicarbonate (As CaCO3)	1,100	20		mg/L CaCO3	1	1/18/2012 5:52:44 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/18/2012 5:52:44 PM
Total Alkalinity (as CaCO3)	1,100	20		mg/L CaCO3	1	1/18/2012 5:52:44 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2,040	40.0		mg/L	1	1/19/2012 1:37:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1201460-002
Matrix: AQUEOUS
Client Sample ID: GBR-51
Collection Date: 1/13/2012 1:15:00 PM
Received Date: 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Fluoride	0.61	0.10		mg/L	1	1/17/2012 9:36:15 PM
Chloride	53	10		mg/L	20	1/17/2012 9:48:39 PM
Bromide	0.27	0.10		mg/L	1	1/17/2012 9:36:15 PM
Nitrate+Nitrite as N	3.9	1.0		mg/L	5	1/18/2012 1:56:57 AM
Sulfate	1,600	25		mg/L	50	1/21/2012 4:57:24 AM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Calcium	410	10		mg/L	10	1/23/2012 8:48:53 AM
Iron	3.1	0.20	*	mg/L	10	1/23/2012 4:38:48 PM
Magnesium	30	1.0		mg/L	1	1/23/2012 8:46:20 AM
Manganese	0.16	0.0020	*	mg/L	1	1/20/2012 8:36:14 AM
Potassium	1.7	1.0		mg/L	1	1/20/2012 8:36:14 AM
Sodium	310	10		mg/L	10	1/23/2012 8:48:53 AM
SM2340B: HARDNESS						Analyst: **ELS**
Hardness (As CaCO3)	1,200	6.6		mg/L	1	1/23/2012
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Benzene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
Toluene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
Ethylbenzene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
Naphthalene	ND	2.0		µg/L	1	1/20/2012 1:48:57 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/20/2012 1:48:57 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/20/2012 1:48:57 PM
Acetone	ND	10		µg/L	1	1/20/2012 1:48:57 PM
Bromobenzene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
Bromodichloromethane	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
Bromoform	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
Bromomethane	ND	3.0		µg/L	1	1/20/2012 1:48:57 PM
2-Butanone	ND	10		µg/L	1	1/20/2012 1:48:57 PM
Carbon disulfide	ND	10		µg/L	1	1/20/2012 1:48:57 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
Chlorobenzene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
Chloroethane	ND	2.0		µg/L	1	1/20/2012 1:48:57 PM
Chloroform	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
Chloromethane	ND	3.0		µg/L	1	1/20/2012 1:48:57 PM
2-Chlorotoluene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
4-Chlorotoluene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-51
Project: GBR **Collection Date:** 1/13/2012 1:15:00 PM
Lab ID: 1201460-002 **Matrix:** AQUEOUS **Received Date:** 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
cis-1,2-DCE	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/20/2012 1:48:57 PM
Dibromochloromethane	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
Dibromomethane	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/20/2012 1:48:57 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
2-Hexanone	ND	10		µg/L	1	1/20/2012 1:48:57 PM
Isopropylbenzene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/20/2012 1:48:57 PM
Methylene Chloride	ND	3.0		µg/L	1	1/20/2012 1:48:57 PM
n-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
n-Propylbenzene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
sec-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
Styrene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
tert-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/20/2012 1:48:57 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
trans-1,2-DCE	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/20/2012 1:48:57 PM
Vinyl chloride	ND	1.0		µg/L	1	1/20/2012 1:48:57 PM
Xylenes, Total	ND	1.5		µg/L	1	1/20/2012 1:48:57 PM
Surr: 1,2-Dichloroethane-d4	77.5	70-130		%REC	1	1/20/2012 1:48:57 PM
Surr: 4-Bromofluorobenzene	86.2	70-130		%REC	1	1/20/2012 1:48:57 PM

Qualifiers:				
	*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: GBR-51
Project: GBR
Collection Date: 1/13/2012 1:15:00 PM
Lab ID: 1201460-002
Matrix: AQUEOUS
Received Date: 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Surr: Dibromofluoromethane	82.7	69.8-130		%REC	1	1/20/2012 1:48:57 PM
Surr: Toluene-d8	85.9	70-130		%REC	1	1/20/2012 1:48:57 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JLF**
Conductivity	2,800	0.010		µmhos/cm	1	1/18/2012 6:29:38 PM
SM4500-H+B: PH						Analyst: **JLF**
pH	7.45	1.68	H	pH units	1	1/18/2012 6:29:38 PM
SM2320B: ALKALINITY						Analyst: **JLF**
Bicarbonate (As CaCO3)	220	20		mg/L CaCO3	1	1/18/2012 6:29:38 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/18/2012 6:29:38 PM
Total Alkalinity (as CaCO3)	220	20		mg/L CaCO3	1	1/18/2012 6:29:38 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2,440	40.0		mg/L	1	1/19/2012 1:37:00 PM

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: GRW-3
Project: GBR
Collection Date: 1/12/2012 11:20:00 AM
Lab ID: 1201460-003
Matrix: AQUEOUS
Received Date: 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Fluoride	0.88	0.10		mg/L	1	1/17/2012 10:25:53 PM
Chloride	54	10		mg/L	20	1/17/2012 10:38:18 PM
Bromide	0.27	0.10		mg/L	1	1/17/2012 10:25:53 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	1/18/2012 2:09:22 AM
Sulfate	1,300	25		mg/L	50	1/21/2012 5:14:48 AM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Calcium	290	10		mg/L	10	1/23/2012 8:54:23 AM
Iron	2.8	0.20	*	mg/L	10	1/23/2012 4:53:55 PM
Magnesium	24	1.0		mg/L	1	1/23/2012 8:51:44 AM
Manganese	0.67	0.0020	*	mg/L	1	1/20/2012 8:41:03 AM
Potassium	3.4	1.0		mg/L	1	1/20/2012 8:41:03 AM
Sodium	540	10		mg/L	10	1/23/2012 8:54:23 AM
SM2340B: HARDNESS						Analyst: **ELS**
Hardness (As CaCO3)	810	6.6		mg/L	1	1/23/2012
EPA METHOD 8270C: PAHS						Analyst: **JDC**
Naphthalene	ND	0.50		µg/L	1	1/20/2012 10:22:51 AM
1-Methylnaphthalene	ND	0.50		µg/L	1	1/20/2012 10:22:51 AM
2-Methylnaphthalene	ND	0.50		µg/L	1	1/20/2012 10:22:51 AM
Acenaphthylene	ND	0.50		µg/L	1	1/20/2012 10:22:51 AM
Acenaphthene	ND	0.50		µg/L	1	1/20/2012 10:22:51 AM
Fluorene	ND	0.50		µg/L	1	1/20/2012 10:22:51 AM
Phenanthrene	ND	0.50		µg/L	1	1/20/2012 10:22:51 AM
Anthracene	ND	0.50		µg/L	1	1/20/2012 10:22:51 AM
Fluoranthene	ND	0.50		µg/L	1	1/20/2012 10:22:51 AM
Pyrene	ND	0.50		µg/L	1	1/20/2012 10:22:51 AM
Benz(a)anthracene	ND	0.50		µg/L	1	1/20/2012 10:22:51 AM
Chrysene	ND	0.50		µg/L	1	1/20/2012 10:22:51 AM
Benzo(b)fluoranthene	ND	0.50		µg/L	1	1/20/2012 10:22:51 AM
Benzo(k)fluoranthene	ND	0.50		µg/L	1	1/20/2012 10:22:51 AM
Benzo(a)pyrene	ND	0.50		µg/L	1	1/20/2012 10:22:51 AM
Dibenz(a,h)anthracene	ND	0.50		µg/L	1	1/20/2012 10:22:51 AM
Benzo(g,h,i)perylene	ND	0.50		µg/L	1	1/20/2012 10:22:51 AM
Indeno(1,2,3-cd)pyrene	ND	0.50		µg/L	1	1/20/2012 10:22:51 AM
Surr: Benzo(e)pyrene	74.4	38-145		%REC	1	1/20/2012 10:22:51 AM
Surr: N-hexadecane	63.3	40-107		%REC	1	1/20/2012 10:22:51 AM
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Benzene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
Toluene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
Ethylbenzene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM

Qualifiers:				
	*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: GRW-3
Project: GBR
Collection Date: 1/12/2012 11:20:00 AM
Lab ID: 1201460-003
Matrix: AQUEOUS
Received Date: 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: JDJ
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
Naphthalene	ND	2.0		µg/L	1	1/20/2012 2:16:58 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/20/2012 2:16:58 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/20/2012 2:16:58 PM
Acetone	ND	10		µg/L	1	1/20/2012 2:16:58 PM
Bromobenzene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
Bromodichloromethane	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
Bromoform	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
Bromomethane	ND	3.0		µg/L	1	1/20/2012 2:16:58 PM
2-Butanone	ND	10		µg/L	1	1/20/2012 2:16:58 PM
Carbon disulfide	ND	10		µg/L	1	1/20/2012 2:16:58 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
Chlorobenzene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
Chloroethane	ND	2.0		µg/L	1	1/20/2012 2:16:58 PM
Chloroform	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
Chloromethane	ND	3.0		µg/L	1	1/20/2012 2:16:58 PM
2-Chlorotoluene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
4-Chlorotoluene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
cis-1,2-DCE	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/20/2012 2:16:58 PM
Dibromochloromethane	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
Dibromomethane	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/20/2012 2:18:58 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/20/2012 2:16:58 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
2-Hexanone	ND	10		µg/L	1	1/20/2012 2:16:58 PM
Isopropylbenzene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/20/2012 2:16:58 PM
Methylene Chloride	ND	3.0		µg/L	1	1/20/2012 2:16:58 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: GRW-3
Project: GBR
Collection Date: 1/12/2012 11:20:00 AM
Lab ID: 1201460-003
Matrix: AQUEOUS
Received Date: 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
n-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
n-Propylbenzene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
sec-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
Styrene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
tert-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/20/2012 2:16:58 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
trans-1,2-DCE	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/20/2012 2:16:58 PM
Vinyl chloride	ND	1.0		µg/L	1	1/20/2012 2:16:58 PM
Xylenes, Total	ND	1.5		µg/L	1	1/20/2012 2:16:58 PM
Surr: 1,2-Dichloroethane-d4	75.0	70-130		%REC	1	1/20/2012 2:16:58 PM
Surr: 4-Bromofluorobenzene	84.6	70-130		%REC	1	1/20/2012 2:16:58 PM
Surr: Dibromofluoromethane	84.5	69.8-130		%REC	1	1/20/2012 2:16:58 PM
Surr: Toluene-d8	85.6	70-130		%REC	1	1/20/2012 2:16:58 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JLF**
Conductivity	3,300	0.010		µmhos/cm	1	1/18/2012 6:43:00 PM
SM4500-H+B: PH						Analyst: **JLF**
pH	7.51	1.68	H	pH units	1	1/18/2012 6:43:00 PM
SM2320B: ALKALINITY						Analyst: **JLF**
Bicarbonate (As CaCO3)	560	20		mg/L CaCO3	1	1/18/2012 6:43:00 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/18/2012 6:43:00 PM
Total Alkalinity (as CaCO3)	560	20		mg/L CaCO3	1	1/18/2012 6:43:00 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2,660	20.0		mg/L	1	1/19/2012 1:37:00 PM

Qualifiers:				
	*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: GBR-30
Project: GBR
Collection Date: 1/12/2012 12:27:00 PM
Lab ID: 1201460-004
Matrix: AQUEOUS
Received Date: 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Fluoride	0.48	0.10		mg/L	1	1/17/2012 10:50:43 PM
Chloride	390	10		mg/L	20	1/17/2012 11:03:08 PM
Bromide	1.2	0.10		mg/L	1	1/17/2012 10:50:43 PM
Nitrate+Nitrite as N	2.4	1.0		mg/L	5	1/18/2012 2:21:47 AM
Sulfate	1,700	25		mg/L	50	1/21/2012 5:32:13 AM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Calcium	480	10		mg/L	10	1/23/2012 9:01:53 AM
Iron	2.9	0.20	*	mg/L	10	1/23/2012 4:51:03 PM
Magnesium	42	1.0		mg/L	1	1/23/2012 8:59:13 AM
Manganese	0.29	0.0020	*	mg/L	1	1/20/2012 8:48:05 AM
Potassium	3.6	1.0		mg/L	1	1/20/2012 8:48:05 AM
Sodium	510	10		mg/L	10	1/23/2012 9:01:53 AM
SM2340B: HARDNESS						Analyst: **ELS**
Hardness (As CaCO3)	1,400	6.6		mg/L	1	1/23/2012
EPA METHOD 8270C: PAHS						Analyst: **JDC**
Naphthalene	ND	0.50		µg/L	1	1/20/2012 10:45:04 AM
1-Methylnaphthalene	ND	0.50		µg/L	1	1/20/2012 10:45:04 AM
2-Methylnaphthalene	ND	0.50		µg/L	1	1/20/2012 10:45:04 AM
Acenaphthylene	ND	0.50		µg/L	1	1/20/2012 10:45:04 AM
Acenaphthene	ND	0.50		µg/L	1	1/20/2012 10:45:04 AM
Fluorene	ND	0.50		µg/L	1	1/20/2012 10:45:04 AM
Phenanthrene	ND	0.50		µg/L	1	1/20/2012 10:45:04 AM
Anthracene	ND	0.50		µg/L	1	1/20/2012 10:45:04 AM
Fluoranthene	ND	0.50		µg/L	1	1/20/2012 10:45:04 AM
Pyrene	ND	0.50		µg/L	1	1/20/2012 10:45:04 AM
Benz(a)anthracene	ND	0.50		µg/L	1	1/20/2012 10:45:04 AM
Chrysene	ND	0.50		µg/L	1	1/20/2012 10:45:04 AM
Benzo(b)fluoranthene	ND	0.50		µg/L	1	1/20/2012 10:45:04 AM
Benzo(k)fluoranthene	ND	0.50		µg/L	1	1/20/2012 10:45:04 AM
Benzo(a)pyrene	ND	0.50		µg/L	1	1/20/2012 10:45:04 AM
Dibenz(a,h)anthracene	ND	0.50		µg/L	1	1/20/2012 10:45:04 AM
Benzo(g,h,i)perylene	ND	0.50		µg/L	1	1/20/2012 10:45:04 AM
Indeno(1,2,3-cd)pyrene	ND	0.50		µg/L	1	1/20/2012 10:45:04 AM
Surr: Benzo(e)pyrene	63.9	38-145		%REC	1	1/20/2012 10:45:04 AM
Surr: N-hexadecane	62.6	40-107		%REC	1	1/20/2012 10:45:04 AM
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Benzene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
Toluene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
Ethylbenzene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM

Qualifiers:	*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1201460-004
Matrix: AQUEOUS

Client Sample ID: GBR-30
Collection Date: 1/12/2012 12:27:00 PM
Received Date: 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: JDJ
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
Naphthalene	ND	2.0		µg/L	1	1/20/2012 2:45:00 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/20/2012 2:45:00 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/20/2012 2:45:00 PM
Acetone	ND	10		µg/L	1	1/20/2012 2:45:00 PM
Bromobenzene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
Bromodichloromethane	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
Bromoform	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
Bromomethane	ND	3.0		µg/L	1	1/20/2012 2:45:00 PM
2-Butanone	ND	10		µg/L	1	1/20/2012 2:45:00 PM
Carbon disulfide	ND	10		µg/L	1	1/20/2012 2:45:00 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
Chlorobenzene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
Chloroethane	ND	2.0		µg/L	1	1/20/2012 2:45:00 PM
Chloroform	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
Chloromethane	ND	3.0		µg/L	1	1/20/2012 2:45:00 PM
2-Chlorotoluene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
4-Chlorotoluene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
cis-1,2-DCE	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/20/2012 2:45:00 PM
Dibromochloromethane	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
Dibromomethane	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/20/2012 2:45:00 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
2-Hexanone	ND	10		µg/L	1	1/20/2012 2:45:00 PM
Isopropylbenzene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/20/2012 2:45:00 PM
Methylene Chloride	ND	3.0		µg/L	1	1/20/2012 2:45:00 PM

Analytical Report
Lab Order **1201460**
Date Reported: **2/1/2012**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1201460-004
Matrix: AQUEOUS
Client Sample ID: GBR-30
Collection Date: 1/12/2012 12:27:00 PM
Received Date: 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
n-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
n-Propylbenzene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
sec-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
Styrene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
tert-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/20/2012 2:45:00 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
trans-1,2-DCE	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/20/2012 2:45:00 PM
Vinyl chloride	ND	1.0		µg/L	1	1/20/2012 2:45:00 PM
Xylenes, Total	ND	1.5		µg/L	1	1/20/2012 2:45:00 PM
Surr: 1,2-Dichloroethane-d4	79.7	70-130		%REC	1	1/20/2012 2:45:00 PM
Surr: 4-Bromofluorobenzene	88.9	70-130		%REC	1	1/20/2012 2:45:00 PM
Surr: Dibromofluoromethane	85.9	69.8-130		%REC	1	1/20/2012 2:45:00 PM
Surr: Toluene-d8	88.6	70-130		%REC	1	1/20/2012 2:45:00 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JLF**
Conductivity	4,000	0.010		µmhos/cm	1	1/18/2012 7:05:08 PM
SM4500-H+B: PH						Analyst: **JLF**
pH	7.14	1.68	H	pH units	1	1/18/2012 7:05:08 PM
SM2320B: ALKALINITY						Analyst: **JLF**
Bicarbonate (As CaCO3)	230	20		mg/L CaCO3	1	1/18/2012 7:05:08 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/18/2012 7:05:08 PM
Total Alkalinity (as CaCO3)	230	20		mg/L CaCO3	1	1/18/2012 7:05:08 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	3,240	100		mg/L	1	1/19/2012 1:37:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: GBR-24D
Project: GBR
Collection Date: 1/12/2012 1:35:00 PM
Lab ID: 1201460-005
Matrix: AQUEOUS
Received Date: 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Fluoride	0.86	0.10		mg/L	1	1/17/2012 11:15:33 PM
Chloride	200	10		mg/L	20	1/17/2012 11:27:58 PM
Bromide	0.96	0.10		mg/L	1	1/17/2012 11:15:33 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	1/18/2012 2:34:12 AM
Sulfate	2,000	25		mg/L	50	1/21/2012 5:49:37 AM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Calcium	450	10		mg/L	10	1/23/2012 9:07:24 AM
Iron	2.4	0.20	*	mg/L	10	1/23/2012 4:48:07 PM
Magnesium	38	1.0		mg/L	1	1/23/2012 9:04:47 AM
Manganese	1.7	0.010	*	mg/L	5	1/20/2012 9:04:57 AM
Potassium	6.5	1.0		mg/L	1	1/20/2012 8:53:31 AM
Sodium	570	10		mg/L	10	1/23/2012 9:07:24 AM
SM2340B: HARDNESS						Analyst: **ELS**
Hardness (As CaCO3)	1,300	6.6		mg/L	1	1/23/2012
EPA METHOD 8270C: PAHS						Analyst: **JDC**
Naphthalene	ND	0.50		µg/L	1	1/20/2012 11:07:15 AM
1-Methylnaphthalene	ND	0.50		µg/L	1	1/20/2012 11:07:15 AM
2-Methylnaphthalene	ND	0.50		µg/L	1	1/20/2012 11:07:15 AM
Acenaphthylene	ND	0.50		µg/L	1	1/20/2012 11:07:15 AM
Acenaphthene	ND	0.50		µg/L	1	1/20/2012 11:07:15 AM
Fluorene	ND	0.50		µg/L	1	1/20/2012 11:07:15 AM
Phenanthrene	ND	0.50		µg/L	1	1/20/2012 11:07:15 AM
Anthracene	ND	0.50		µg/L	1	1/20/2012 11:07:15 AM
Fluoranthene	ND	0.50		µg/L	1	1/20/2012 11:07:15 AM
Pyrene	ND	0.50		µg/L	1	1/20/2012 11:07:15 AM
Benz(a)anthracene	ND	0.50		µg/L	1	1/20/2012 11:07:15 AM
Chrysene	ND	0.50		µg/L	1	1/20/2012 11:07:15 AM
Benzo(b)fluoranthene	ND	0.50		µg/L	1	1/20/2012 11:07:15 AM
Benzo(k)fluoranthene	ND	0.50		µg/L	1	1/20/2012 11:07:15 AM
Benzo(a)pyrene	ND	0.50		µg/L	1	1/20/2012 11:07:15 AM
Dibenz(a,h)anthracene	ND	0.50		µg/L	1	1/20/2012 11:07:15 AM
Benzo(g,h,i)perylene	ND	0.50		µg/L	1	1/20/2012 11:07:15 AM
Indeno(1,2,3-cd)pyrene	ND	0.50		µg/L	1	1/20/2012 11:07:15 AM
Surr: Benzo(e)pyrene	65.2	38-145		%REC	1	1/20/2012 11:07:15 AM
Surr: N-hexadecane	57.1	40-107		%REC	1	1/20/2012 11:07:15 AM
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Benzene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
Toluene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
Ethylbenzene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1201460-005
Matrix: AQUEOUS
Client Sample ID: GBR-24D
Collection Date: 1/12/2012 1:35:00 PM
Received Date: 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: JDJ
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
1,2-Dichloroethane (EDC)	1.3	1.0		µg/L	1	1/20/2012 3:13:00 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
Naphthalene	ND	2.0		µg/L	1	1/20/2012 3:13:00 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/20/2012 3:13:00 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/20/2012 3:13:00 PM
Acetone	ND	10		µg/L	1	1/20/2012 3:13:00 PM
Bromobenzene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
Bromodichloromethane	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
Bromoform	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
Bromomethane	ND	3.0		µg/L	1	1/20/2012 3:13:00 PM
2-Butanone	ND	10		µg/L	1	1/20/2012 3:13:00 PM
Carbon disulfide	ND	10		µg/L	1	1/20/2012 3:13:00 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
Chlorobenzene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
Chloroethane	ND	2.0		µg/L	1	1/20/2012 3:13:00 PM
Chloroform	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
Chloromethane	ND	3.0		µg/L	1	1/20/2012 3:13:00 PM
2-Chlorotoluene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
4-Chlorotoluene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
cis-1,2-DCE	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/20/2012 3:13:00 PM
Dibromochloromethane	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
Dibromomethane	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/20/2012 3:13:00 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
2-Hexanone	ND	10		µg/L	1	1/20/2012 3:13:00 PM
Isopropylbenzene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/20/2012 3:13:00 PM
Methylene Chloride	ND	3.0		µg/L	1	1/20/2012 3:13:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-24D
Project: GBR **Collection Date:** 1/12/2012 1:35:00 PM
Lab ID: 1201460-005 **Matrix:** AQUEOUS **Received Date:** 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
n-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
n-Propylbenzene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
sec-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
Styrene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
tert-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/20/2012 3:13:00 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
trans-1,2-DCE	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/20/2012 3:13:00 PM
Vinyl chloride	ND	1.0		µg/L	1	1/20/2012 3:13:00 PM
Xylenes, Total	ND	1.5		µg/L	1	1/20/2012 3:13:00 PM
Surr: 1,2-Dichloroethane-d4	77.9	70-130		%REC	1	1/20/2012 3:13:00 PM
Surr: 4-Bromofluorobenzene	91.4	70-130		%REC	1	1/20/2012 3:13:00 PM
Surr: Dibromofluoromethane	85.3	69.8-130		%REC	1	1/20/2012 3:13:00 PM
Surr: Toluene-d8	87.6	70-130		%REC	1	1/20/2012 3:13:00 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JLF**
Conductivity	4,000	0.010		µmhos/cm	1	1/18/2012 7:19:47 PM
SM4500-H+B: PH						Analyst: **JLF**
pH	7.63	1.68	H	pH units	1	1/18/2012 7:19:47 PM
SM2320B: ALKALINITY						Analyst: **JLF**
Bicarbonate (As CaCO3)	210	20		mg/L CaCO3	1	1/18/2012 7:19:47 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/18/2012 7:19:47 PM
Total Alkalinity (as CaCO3)	210	20		mg/L CaCO3	1	1/18/2012 7:19:47 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	3,320	100		mg/L	1	1/19/2012 1:37:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	Influent
Project:	GBR	**Collection Date:**	1/12/2012 2:20:00 PM
Lab ID:	1201460-006 **Matrix:** AQUEOUS	**Received Date:**	1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Fluoride	0.63	0.10		mg/L	1	1/17/2012 11:40:24 PM
Chloride	71	10		mg/L	20	1/17/2012 11:52:49 PM
Bromide	0.29	0.10		mg/L	1	1/17/2012 11:40:24 PM
Nitrate+Nitrite as N	1.5	1.0		mg/L	5	1/21/2012 7:51:29 AM
Sulfate	1,700	25		mg/L	50	1/24/2012 10:40:35 AM
EPA METHOD 200.7: METALS						Analyst: **RAG**
Calcium	410	5.0		mg/L	5	1/19/2012 3:31:53 PM
Iron	0.20	0.020		mg/L	1	1/19/2012 3:28:43 PM
Magnesium	32	1.0		mg/L	1	1/19/2012 3:28:43 PM
Manganese	0.27	0.0020	*	mg/L	1	1/19/2012 3:28:43 PM
Potassium	3.2	1.0		mg/L	1	1/19/2012 3:28:43 PM
Sodium	480	5.0		mg/L	5	1/19/2012 3:31:53 PM
SM2340B: HARDNESS						Analyst: **RAG**
Hardness (As CaCO3)	1,100	6.6		mg/L	1	1/19/2012 1:28:00 AM
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Benzene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
Toluene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
Ethylbenzene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
Naphthalene	ND	2.0		µg/L	1	1/20/2012 3:40:59 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/20/2012 3:40:59 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/20/2012 3:40:59 PM
Acetone	ND	10		µg/L	1	1/20/2012 3:40:59 PM
Bromobenzene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
Bromodichloromethane	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
Bromoform	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
Bromomethane	ND	3.0		µg/L	1	1/20/2012 3:40:59 PM
2-Butanone	ND	10		µg/L	1	1/20/2012 3:40:59 PM
Carbon disulfide	ND	10		µg/L	1	1/20/2012 3:40:59 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
Chlorobenzene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
Chloroethane	ND	2.0		µg/L	1	1/20/2012 3:40:59 PM
Chloroform	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
Chloromethane	ND	3.0		µg/L	1	1/20/2012 3:40:59 PM
2-Chlorotoluene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
4-Chlorotoluene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM

Qualifiers:				
	*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: Influent
Project: GBR
Collection Date: 1/12/2012 2:20:00 PM
Lab ID: 1201460-006
Matrix: AQUEOUS
Received Date: 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: JDJ
cis-1,2-DCE	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/20/2012 3:40:59 PM
Dibromochloromethane	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
Dibromomethane	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/20/2012 3:40:59 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
2-Hexanone	ND	10		µg/L	1	1/20/2012 3:40:59 PM
Isopropylbenzene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/20/2012 3:40:59 PM
Methylene Chloride	ND	3.0		µg/L	1	1/20/2012 3:40:59 PM
n-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
n-Propylbenzene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
sec-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
Styrene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
tert-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/20/2012 3:40:59 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
trans-1,2-DCE	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/20/2012 3:40:59 PM
Vinyl chloride	ND	1.0		µg/L	1	1/20/2012 3:40:59 PM
Xylenes, Total	ND	1.5		µg/L	1	1/20/2012 3:40:59 PM
Surr: 1,2-Dichloroethane-d4	73.2	70-130		%REC	1	1/20/2012 3:40:59 PM
Surr: 4-Bromofluorobenzene	86.6	70-130		%REC	1	1/20/2012 3:40:59 PM

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	Influent
Project:	GBR	**Collection Date:**	1/12/2012 2:20:00 PM
Lab ID:	1201460-006 **Matrix:** AQUEOUS	**Received Date:**	1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: JDJ
Surr: Dibromofluoromethane	81.9	69.8-130		%REC	1	1/20/2012 3:40:59 PM
Surr: Toluene-d8	82.4	70-130		%REC	1	1/20/2012 3:40:59 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: JLF
Conductivity	3,300	0.010		µmhos/cm	1	1/18/2012 7:33:27 PM
SM4500-H+B: PH						Analyst: JLF
pH	7.50	1.68	H	pH units	1	1/18/2012 7:33:27 PM
SM2320B: ALKALINITY						Analyst: JLF
Bicarbonate (As CaCO3)	290	20		mg/L CaCO3	1	1/18/2012 7:33:27 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/18/2012 7:33:27 PM
Total Alkalinity (as CaCO3)	290	20		mg/L CaCO3	1	1/18/2012 7:33:27 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	2,830	20.0		mg/L	1	1/19/2012 1:37:00 PM

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-31
Project: GBR **Collection Date:** 1/12/2012 3:40:00 PM
Lab ID: 1201460-007 **Matrix:** AQUEOUS **Received Date:** 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Fluoride	0.48	0.10		mg/L	1	1/18/2012 12:05:14 AM
Chloride	74	10		mg/L	20	1/18/2012 12:17:38 AM
Bromide	0.26	0.10		mg/L	1	1/18/2012 12:05:14 AM
Nitrate+Nitrite as N	1.3	1.0		mg/L	5	1/21/2012 8:08:53 AM
Sulfate	1,700	25		mg/L	50	1/24/2012 10:57:59 AM
EPA METHOD 200.7: METALS						Analyst: **RAG**
Calcium	440	10		mg/L	10	1/23/2012 4:44:59 PM
Iron	3.8	0.20	*	mg/L	10	1/23/2012 4:44:59 PM
Magnesium	33	1.0		mg/L	1	1/23/2012 9:10:18 AM
Manganese	0.27	0.0020	*	mg/L	1	1/20/2012 9:07:53 AM
Potassium	2.5	1.0		mg/L	1	1/20/2012 9:07:53 AM
Sodium	430	10		mg/L	10	1/23/2012 4:44:59 PM
SM2340B: HARDNESS						Analyst: **ELS**
Hardness (As CaCO3)	1,200	6.6		mg/L	1	1/23/2012
EPA METHOD 8270C: PAHS						Analyst: **JDC**
Naphthalene	ND	0.50		µg/L	1	1/20/2012 11:29:25 AM
1-Methylnaphthalene	ND	0.50		µg/L	1	1/20/2012 11:29:25 AM
2-Methylnaphthalene	ND	0.50		µg/L	1	1/20/2012 11:29:25 AM
Acenaphthylene	ND	0.50		µg/L	1	1/20/2012 11:29:25 AM
Acenaphthene	ND	0.50		µg/L	1	1/20/2012 11:29:25 AM
Fluorene	ND	0.50		µg/L	1	1/20/2012 11:29:25 AM
Phenanthrene	ND	0.50		µg/L	1	1/20/2012 11:29:25 AM
Anthracene	ND	0.50		µg/L	1	1/20/2012 11:29:25 AM
Fluoranthene	ND	0.50		µg/L	1	1/20/2012 11:29:25 AM
Pyrene	ND	0.50		µg/L	1	1/20/2012 11:29:25 AM
Benz(a)anthracene	ND	0.50		µg/L	1	1/20/2012 11:29:25 AM
Chrysene	ND	0.50		µg/L	1	1/20/2012 11:29:25 AM
Benzo(b)fluoranthene	ND	0.50		µg/L	1	1/20/2012 11:29:25 AM
Benzo(k)fluoranthene	ND	0.50		µg/L	1	1/20/2012 11:29:25 AM
Benzo(a)pyrene	ND	0.50		µg/L	1	1/20/2012 11:29:25 AM
Dibenz(a,h)anthracene	ND	0.50		µg/L	1	1/20/2012 11:29:25 AM
Benzo(g,h,i)perylene	ND	0.50		µg/L	1	1/20/2012 11:29:25 AM
Indeno(1,2,3-cd)pyrene	ND	0.50		µg/L	1	1/20/2012 11:29:25 AM
Surr: Benzo(e)pyrene	69.8	38-145		%REC	1	1/20/2012 11:29:25 AM
Surr: N-hexadecane	72.3	40-107		%REC	1	1/20/2012 11:29:25 AM
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Benzene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
Toluene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
Ethylbenzene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-31
Project: GBR **Collection Date:** 1/12/2012 3:40:00 PM
Lab ID: 1201460-007 **Matrix:** AQUEOUS **Received Date:** 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: JDJ
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
Naphthalene	ND	2.0		µg/L	1	1/20/2012 4:08:59 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/20/2012 4:08:59 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/20/2012 4:08:59 PM
Acetone	ND	10		µg/L	1	1/20/2012 4:08:59 PM
Bromobenzene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
Bromodichloromethane	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
Bromoform	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
Bromomethane	ND	3.0		µg/L	1	1/20/2012 4:08:59 PM
2-Butanone	ND	10		µg/L	1	1/20/2012 4:08:59 PM
Carbon disulfide	ND	10		µg/L	1	1/20/2012 4:08:59 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
Chlorobenzene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
Chloroethane	ND	2.0		µg/L	1	1/20/2012 4:08:59 PM
Chloroform	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
Chloromethane	ND	3.0		µg/L	1	1/20/2012 4:08:59 PM
2-Chlorotoluene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
4-Chlorotoluene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
cis-1,2-DCE	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/20/2012 4:08:59 PM
Dibromochloromethane	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
Dibromomethane	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/20/2012 4:08:59 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
2-Hexanone	ND	10		µg/L	1	1/20/2012 4:08:59 PM
Isopropylbenzene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/20/2012 4:08:59 PM
Methylene Chloride	ND	3.0		µg/L	1	1/20/2012 4:08:59 PM

Qualifiers:				
	*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-31
Project: GBR **Collection Date:** 1/12/2012 3:40:00 PM
Lab ID: 1201460-007 **Matrix:** AQUEOUS **Received Date:** 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
n-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
n-Propylbenzene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
sec-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
Styrene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
tert-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/20/2012 4:08:59 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
trans-1,2-DCE	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/20/2012 4:08:59 PM
Vinyl chloride	ND	1.0		µg/L	1	1/20/2012 4:08:59 PM
Xylenes, Total	ND	1.5		µg/L	1	1/20/2012 4:08:59 PM
Surr: 1,2-Dichloroethane-d4	77.3	70-130		%REC	1	1/20/2012 4:08:59 PM
Surr: 4-Bromofluorobenzene	91.3	70-130		%REC	1	1/20/2012 4:08:59 PM
Surr: Dibromofluoromethane	85.9	69.8-130		%REC	1	1/20/2012 4:08:59 PM
Surr: Toluene-d8	82.2	70-130		%REC	1	1/20/2012 4:08:59 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JLF**
Conductivity	3,200	0.010		µmhos/cm	1	1/18/2012 7:49:17 PM
SM4500-H+B: PH						Analyst: **JLF**
pH	7.42	1.68	H	pH units	1	1/18/2012 7:49:17 PM
SM2320B: ALKALINITY						Analyst: **JLF**
Bicarbonate (As CaCO3)	230	20		mg/L CaCO3	1	1/18/2012 7:49:17 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/18/2012 7:49:17 PM
Total Alkalinity (as CaCO3)	230	20		mg/L CaCO3	1	1/18/2012 7:49:17 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2,760	40.0		mg/L	1	1/19/2012 1:37:00 PM

Qualifiers:				
	*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-49
Project: GBR **Collection Date:** 1/12/2012 4:40:00 PM
Lab ID: 1201460-008 **Matrix:** AQUEOUS **Received Date:** 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: BRM
Fluoride	0.38	0.10		mg/L	1	1/18/2012 12:54:53 AM
Chloride	260	10		mg/L	20	1/18/2012 1:07:18 AM
Bromide	0.76	0.10		mg/L	1	1/18/2012 12:54:53 AM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	1/21/2012 8:26:18 AM
Sulfate	2,000	25		mg/L	50	1/21/2012 7:16:40 AM
EPA METHOD 200.7: METALS						Analyst: ELS
Barium	0.013	0.0020		mg/L	1	1/20/2012 9:12:46 AM
Beryllium	ND	0.0020		mg/L	1	1/20/2012 9:12:46 AM
Cadmium	ND	0.0020		mg/L	1	1/20/2012 9:12:46 AM
Calcium	500	10		mg/L	10	1/23/2012 9:38:18 AM
Chromium	0.018	0.0060		mg/L	1	1/20/2012 9:12:46 AM
Copper	ND	0.0060		mg/L	1	1/20/2012 9:12:46 AM
Iron	0.23	0.020		mg/L	1	1/24/2012 11:59:47 AM
Lead	ND	0.0050		mg/L	1	1/20/2012 9:12:46 AM
Magnesium	46	1.0		mg/L	1	1/23/2012 9:35:08 AM
Manganese	0.34	0.0020	*	mg/L	1	1/20/2012 9:12:46 AM
Nickel	0.24	0.010	*	mg/L	1	1/20/2012 9:12:46 AM
Potassium	3.2	1.0		mg/L	1	1/20/2012 9:12:46 AM
Silver	ND	0.0050		mg/L	1	1/20/2012 9:12:46 AM
Sodium	480	10		mg/L	10	1/23/2012 9:38:18 AM
Zinc	0.025	0.010		mg/L	1	1/24/2012 11:59:47 AM
EPA 200.8: METALS						Analyst: SNV
Antimony	ND	0.0025		mg/L	2.5	1/19/2012 3:58:56 PM
Arsenic	ND	0.0025		mg/L	2.5	1/19/2012 3:58:56 PM
Selenium	0.0049	0.0025		mg/L	2.5	1/19/2012 3:58:56 PM
Thallium	ND	0.0025		mg/L	2.5	1/19/2012 3:58:56 PM
EPA METHOD 245.1: MERCURY						Analyst: JLF
Mercury	ND	0.00020		mg/L	1	1/19/2012 2:41:19 PM
SM2340B: HARDNESS						Analyst: ELS
Hardness (As CaCO3)	1,400	6.6		mg/L	1	1/23/2012
EPA METHOD 8260B: VOLATILES						Analyst: JDJ
Benzene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
Toluene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
Ethylbenzene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1201460-008
Matrix: AQUEOUS
Client Sample ID: GBR-49
Collection Date: 1/12/2012 4:40:00 PM
Received Date: 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: JDJ
Naphthalene	ND	2.0		µg/L	1	1/20/2012 4:36:58 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/20/2012 4:36:58 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/20/2012 4:36:58 PM
Acetone	ND	10		µg/L	1	1/20/2012 4:36:58 PM
Bromobenzene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
Bromodichloromethane	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
Bromoform	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
Bromomethane	ND	3.0		µg/L	1	1/20/2012 4:36:58 PM
2-Butanone	ND	10		µg/L	1	1/20/2012 4:36:58 PM
Carbon disulfide	ND	10		µg/L	1	1/20/2012 4:36:58 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
Chlorobenzene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
Chloroethane	ND	2.0		µg/L	1	1/20/2012 4:36:58 PM
Chloroform	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
Chloromethane	ND	3.0		µg/L	1	1/20/2012 4:36:58 PM
2-Chlorotoluene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
4-Chlorotoluene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
cis-1,2-DCE	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/20/2012 4:36:58 PM
Dibromochloromethane	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
Dibromomethane	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/20/2012 4:36:58 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
2-Hexanone	ND	10		µg/L	1	1/20/2012 4:36:58 PM
Isopropylbenzene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/20/2012 4:36:58 PM
Methylene Chloride	ND	3.0		µg/L	1	1/20/2012 4:36:58 PM
n-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
n-Propylbenzene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
sec-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
Styrene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-49
Project: GBR **Collection Date:** 1/12/2012 4:40:00 PM
Lab ID: 1201460-008 **Matrix:** AQUEOUS **Received Date:** 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: JDJ
tert-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/20/2012 4:36:58 PM
Tetrachloroethene (PCE)	1.2	1.0		µg/L	1	1/20/2012 4:36:58 PM
trans-1,2-DCE	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/20/2012 4:36:58 PM
Vinyl chloride	ND	1.0		µg/L	1	1/20/2012 4:36:58 PM
Xylenes, Total	ND	1.5		µg/L	1	1/20/2012 4:36:58 PM
Surr: 1,2-Dichloroethane-d4	77.8	70-130		%REC	1	1/20/2012 4:36:58 PM
Surr: 4-Bromofluorobenzene	91.2	70-130		%REC	1	1/20/2012 4:36:58 PM
Surr: Dibromofluoromethane	80.6	69.8-130		%REC	1	1/20/2012 4:36:58 PM
Surr: Toluene-d8	81.3	70-130		%REC	1	1/20/2012 4:36:58 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: JLF
Conductivity	3,900	0.010		µmhos/cm	1	1/18/2012 8:04:21 PM
SM4500-H+B: PH						Analyst: JLF
pH	7.47	1.68	H	pH units	1	1/18/2012 8:04:21 PM
SM2320B: ALKALINITY						Analyst: JLF
Bicarbonate (As CaCO3)	260	20		mg/L CaCO3	1	1/18/2012 8:04:21 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/18/2012 8:04:21 PM
Total Alkalinity (as CaCO3)	260	20		mg/L CaCO3	1	1/18/2012 8:04:21 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	3,470	100		mg/L	1	1/19/2012 1:37:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: Effluent
Project: GBR
Collection Date: 1/12/2012 11:45:00 AM
Lab ID: 1201460-009
Matrix: AQUEOUS
Received Date: 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Fluoride	0.63	0.10		mg/L	1	1/18/2012 1:19:43 AM
Chloride	73	10		mg/L	20	1/18/2012 1:32:08 AM
Bromide	0.30	0.10		mg/L	1	1/18/2012 1:19:43 AM
Nitrate+Nitrite as N	1.5	1.0		mg/L	5	1/21/2012 8:43:43 AM
Sulfate	1,600	25		mg/L	50	1/21/2012 7:34:05 AM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Barium	0.012	0.0020		mg/L	1	1/20/2012 9:18:46 AM
Beryllium	ND	0.0020		mg/L	1	1/20/2012 9:18:46 AM
Cadmium	ND	0.0020		mg/L	1	1/20/2012 9:18:46 AM
Calcium	390	10		mg/L	10	1/23/2012 8:28:48 AM
Chromium	ND	0.0060		mg/L	1	1/20/2012 9:18:46 AM
Copper	ND	0.0060		mg/L	1	1/20/2012 9:18:46 AM
Iron	ND	0.020		mg/L	1	1/23/2012 8:25:36 AM
Lead	ND	0.0050		mg/L	1	1/20/2012 9:18:46 AM
Magnesium	31	1.0		mg/L	1	1/23/2012 8:25:36 AM
Manganese	0.0078	0.0020		mg/L	1	1/20/2012 9:18:46 AM
Nickel	0.040	0.010		mg/L	1	1/20/2012 9:18:46 AM
Potassium	2.8	1.0		mg/L	1	1/20/2012 9:18:46 AM
Silver	ND	0.0050		mg/L	1	1/20/2012 9:18:46 AM
Sodium	450	10		mg/L	10	1/23/2012 8:28:48 AM
Zinc	0.10	0.010		mg/L	1	1/23/2012 4:32:30 PM
EPA 200.8: METALS						Analyst: **SNV**
Antimony	ND	0.0010		mg/L	1	1/20/2012 11:36:57 AM
Arsenic	ND	0.0010		mg/L	1	1/20/2012 11:36:57 AM
Selenium	0.0045	0.0010		mg/L	1	1/20/2012 11:36:57 AM
Thallium	ND	0.0010		mg/L	1	1/20/2012 11:36:57 AM
EPA METHOD 245.1: MERCURY						Analyst: **JLF**
Mercury	ND	0.00020		mg/L	1	1/19/2012 2:43:06 PM
SM2340B: HARDNESS						Analyst: **ELS**
Hardness (As CaCO3)	1,100	6.6		mg/L	1	1/23/2012
EPA METHOD 8270C: PAHS						Analyst: **JDC**
Naphthalene	ND	0.50		µg/L	1	1/20/2012 11:51:35 AM
1-Methylnaphthalene	ND	0.50		µg/L	1	1/20/2012 11:51:35 AM
2-Methylnaphthalene	ND	0.50		µg/L	1	1/20/2012 11:51:35 AM
Acenaphthylene	ND	0.50		µg/L	1	1/20/2012 11:51:35 AM
Acenaphthene	ND	0.50		µg/L	1	1/20/2012 11:51:35 AM
Fluorene	ND	0.50		µg/L	1	1/20/2012 11:51:35 AM
Phenanthrene	ND	0.50		µg/L	1	1/20/2012 11:51:35 AM
Anthracene	ND	0.50		µg/L	1	1/20/2012 11:51:35 AM

Qualifiers:				
	*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: Effluent
Project: GBR
Collection Date: 1/12/2012 11:45:00 AM
Lab ID: 1201460-009
Matrix: AQUEOUS
Received Date: 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: PAHS						Analyst: JDC
Fluoranthene	ND	0.50		µg/L	1	1/20/2012 11:51:35 AM
Pyrene	ND	0.50		µg/L	1	1/20/2012 11:51:35 AM
Benz(a)anthracene	ND	0.50		µg/L	1	1/20/2012 11:51:35 AM
Chrysene	ND	0.50		µg/L	1	1/20/2012 11:51:35 AM
Benzo(b)fluoranthene	ND	0.50		µg/L	1	1/20/2012 11:51:35 AM
Benzo(k)fluoranthene	ND	0.50		µg/L	1	1/20/2012 11:51:35 AM
Benzo(a)pyrene	ND	0.50		µg/L	1	1/20/2012 11:51:35 AM
Dibenz(a,h)anthracene	ND	0.50		µg/L	1	1/20/2012 11:51:35 AM
Benzo(g,h,i)perylene	ND	0.50		µg/L	1	1/20/2012 11:51:35 AM
Indeno(1,2,3-cd)pyrene	ND	0.50		µg/L	1	1/20/2012 11:51:35 AM
Surr: Benzo(e)pyrene	50.8	38-145		%REC	1	1/20/2012 11:51:35 AM
Surr: N-hexadecane	45.3	40-107		%REC	1	1/20/2012 11:51:35 AM
EPA METHOD 8260B: VOLATILES						Analyst: JDJ
Benzene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
Toluene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
Ethylbenzene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
Naphthalene	ND	2.0		µg/L	1	1/20/2012 5:04:55 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/20/2012 5:04:55 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/20/2012 5:04:55 PM
Acetone	ND	10		µg/L	1	1/20/2012 5:04:55 PM
Bromobenzene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
Bromodichloromethane	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
Bromoform	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
Bromomethane	ND	3.0		µg/L	1	1/20/2012 5:04:55 PM
2-Butanone	ND	10		µg/L	1	1/20/2012 5:04:55 PM
Carbon disulfide	ND	10		µg/L	1	1/20/2012 5:04:55 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
Chlorobenzene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
Chloroethane	ND	2.0		µg/L	1	1/20/2012 5:04:55 PM
Chloroform	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
Chloromethane	ND	3.0		µg/L	1	1/20/2012 5:04:55 PM
2-Chlorotoluene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
4-Chlorotoluene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
cis-1,2-DCE	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/20/2012 5:04:55 PM

Qualifiers:				
	*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Effluent
Project: GBR **Collection Date:** 1/12/2012 11:45:00 AM
Lab ID: 1201460-009 **Matrix:** AQUEOUS **Received Date:** 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Dibromochloromethane	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
Dibromomethane	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/20/2012 5:04:55 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
2-Hexanone	ND	10		µg/L	1	1/20/2012 5:04:55 PM
Isopropylbenzene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/20/2012 5:04:55 PM
Methylene Chloride	ND	3.0		µg/L	1	1/20/2012 5:04:55 PM
n-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
n-Propylbenzene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
sec-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
Styrene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
tert-Butylbenzene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/20/2012 5:04:55 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
trans-1,2-DCE	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/20/2012 5:04:55 PM
Vinyl chloride	ND	1.0		µg/L	1	1/20/2012 5:04:55 PM
Xylenes, Total	ND	1.5		µg/L	1	1/20/2012 5:04:55 PM
Surr: 1,2-Dichloroethane-d4	72.8	70-130		%REC	1	1/20/2012 5:04:55 PM
Surr: 4-Bromofluorobenzene	98.9	70-130		%REC	1	1/20/2012 5:04:55 PM
Surr: Dibromofluoromethane	81.2	69.8-130		%REC	1	1/20/2012 5:04:55 PM
Surr: Toluene-d8	88.5	70-130		%REC	1	1/20/2012 5:04:55 PM

Qualifiers:				
	*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Effluent
Project: GBR **Collection Date:** 1/12/2012 11:45:00 AM
Lab ID: 1201460-009 **Matrix:** AQUEOUS **Received Date:** 1/17/2012 2:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JLF**
Conductivity	3,300	0.010		µmhos/cm	1	1/18/2012 8:19:22 PM
SM4500-H+B: PH						Analyst: **JLF**
pH	7.57	1.68	H	pH units	1	1/18/2012 8:19:22 PM
SM2320B: ALKALINITY						Analyst: **JLF**
Bicarbonate (As CaCO3)	290	20		mg/L CaCO3	1	1/18/2012 8:19:22 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/18/2012 8:19:22 PM
Total Alkalinity (as CaCO3)	290	20		mg/L CaCO3	1	1/18/2012 8:19:22 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2,810	20.0		mg/L	1	1/19/2012 1:37:00 PM

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	120119017
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1201460
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	120119017-001	**Sampling Date**	1/13/2012	**Date/Time Received**	1/19/2012	1:40 PM
Client Sample ID	1201460-001D / SHS-8	**Sampling Time**	11:20 AM			
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Total P	0.823	mg/L	0.1	1/27/2012	CRW	SM4500PF	

Sample Number	120119017-002	**Sampling Date**	1/13/2012	**Date/Time Received**	1/19/2012	1:40 PM
Client Sample ID	1201460-002D / GBR-51	**Sampling Time**	1:15 PM			
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Total P	0.0788	mg/L	0.01	1/27/2012	CRW	SM4500PF	

Sample Number	120119017-003	**Sampling Date**	1/12/2011	**Date/Time Received**	1/19/2012	1:40 PM
Client Sample ID	1201460-003D / GRW-3	**Sampling Time**	11:20 AM			
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Total P	0.0215	mg/L	0.01	1/27/2012	CRW	SM4500PF	

Sample Number	120119017-004	**Sampling Date**	1/12/2011	**Date/Time Received**	1/19/2012	1:40 PM
Client Sample ID	1201460-004D / GBR-30	**Sampling Time**	12:27 PM			
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Total P	0.236	mg/L	0.01	1/27/2012	CRW	SM4500PF	

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	120119017
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1201460
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	120119017-005	**Sampling Date**	1/12/2011	**Date/Time Received**	1/19/2012	1:40 PM
Client Sample ID	1201460-005D / GBR-24D	**Sampling Time**	1:35 PM			
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Total P	0.366	mg/L	0.01	1/27/2012	CRW	SM4500PF	

Sample Number	120119017-006	**Sampling Date**	1/12/2011	**Date/Time Received**	1/19/2012	1:40 PM
Client Sample ID	1201460-006D / INFLUENT	**Sampling Time**	2:20 PM			
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Total P	0.0120	mg/L	0.01	1/27/2012	CRW	SM4500PF	

Sample Number	120119017-007	**Sampling Date**	1/12/2011	**Date/Time Received**	1/19/2012	1:40 PM
Client Sample ID	1201460-007D / GBR-31	**Sampling Time**	3:40 PM			
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Total P	0.138	mg/L	0.01	1/27/2012	CRW	SM4500PF	

Sample Number	120119017-008	**Sampling Date**	1/12/2011	**Date/Time Received**	1/19/2012	1:40 PM
Client Sample ID	1201460-008D / GBR-49	**Sampling Time**	4:40 PM			
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Total P	0.0683	mg/L	0.01	1/27/2012	CRW	SM4500PF	

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	120119017
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1201460
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	120119017-009	**Sampling Date**	1/12/2011	**Date/Time Received**	1/19/2012 1:40 PM
Client Sample ID	1201460-009D / EFFLUENT	**Sampling Time**	11:45 AM		
Matrix	Water	**Sample Location**			
Comments					

Parameter	**Result**	**Units**	**PQL**	**Analysis Date**	**Analyst**	**Method**	**Qualifier**
Total P	0.0199	mg/L	0.01	1/27/2012	CRW	SM4500PF	

Authorized Signature

John Coddington, Lab Manager

MCL	EPA's Maximum Contaminant Level
ND	Not Detected
PQL	Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1201460

01-Feb-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **R478** RunNo: **478**
Prep Date: Analysis Date: **1/19/2012** SeqNo: **13672** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **R478** RunNo: **478**
Prep Date: Analysis Date: **1/19/2012** SeqNo: **13673** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0.04481	98.9	85	115			
Iron	0.48	0.020	0.5000	0	96.9	85	115			
Magnesium	49	1.0	50.00	0.04440	97.9	85	115			
Manganese	0.48	0.0020	0.5000	0	95.5	85	115			
Potassium	47	1.0	50.00	0	94.9	85	115			
Sodium	48	1.0	50.00	0	96.0	85	115			

Sample ID **MB-345** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **345** RunNo: **479**
Prep Date: **1/19/2012** Analysis Date: **1/20/2012** SeqNo: **13725** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Lead	ND	0.0050								
Manganese	ND	0.0020								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-345** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **345** RunNo: **479**
Prep Date: **1/19/2012** Analysis Date: **1/20/2012** SeqNo: **13726** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.46	0.0020	0.5000	0	92.7	85	115			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **LCS-345** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **345** RunNo: **479**
Prep Date: **1/19/2012** Analysis Date: **1/20/2012** SeqNo: **13726** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.49	0.0020	0.5000	0	97.9	85	115			
Cadmium	0.47	0.0020	0.5000	0	94.7	85	115			
Chromium	0.47	0.0060	0.5000	0.0003700	93.1	85	115			
Copper	0.47	0.0060	0.5000	0.001600	94.2	85	115			
Lead	0.47	0.0050	0.5000	0	93.0	85	115			
Manganese	0.45	0.0020	0.5000	0	90.4	85	115			
Nickel	0.44	0.010	0.5000	0	88.2	85	115			
Potassium	50	1.0	50.00	0.1014	101	85	115			
Silver	0.096	0.0050	0.1000	0	95.5	85	115			
Zinc	0.45	0.010	0.5000	0.0006200	90.8	85	115			

Sample ID **MB-345** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **345** RunNo: **518**
Prep Date: **1/19/2012** Analysis Date: **1/23/2012** SeqNo: **14729** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Magnesium	ND	1.0								
Sodium	ND	1.0								

Sample ID **LCS-345** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **345** RunNo: **518**
Prep Date: **1/19/2012** Analysis Date: **1/23/2012** SeqNo: **14730** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	51	1.0	50.00	0	101	85	115			
Iron	0.49	0.020	0.5000	0	98.2	85	115			
Magnesium	51	1.0	50.00	0	102	85	115			
Sodium	50	1.0	50.00	0.08349	99.7	85	115			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **MB-345** SampType: **MBLK** TestCode: **EPA 200.8: Metals**

Client ID: **PBW** Batch ID: **345** RunNo: **477**

Prep Date: **1/19/2012** Analysis Date: **1/19/2012** SeqNo: **13707** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0025								
Arsenic	ND	0.0025								
Selenium	ND	0.0025								
Thallium	ND	0.0025								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Metals**

Client ID: **PBW** Batch ID: **R513** RunNo: **513**

Prep Date: Analysis Date: **1/20/2012** SeqNo: **14582** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Thallium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Metals**

Client ID: **LCSW** Batch ID: **R513** RunNo: **513**

Prep Date: Analysis Date: **1/20/2012** SeqNo: **14583** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	96.7	85	115			
Arsenic	0.025	0.0010	0.02500	0	98.9	85	115			
Selenium	0.026	0.0010	0.02500	0	104	85	115			
Thallium	0.024	0.0010	0.02500	0	97.5	85	115			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1201460**

01-Feb-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **MB-351**		SampType: **MBLK**			TestCode: **EPA Method 245.1: Mercury**					
Client ID: **PBW**		Batch ID: **351**			RunNo: **468**					
Prep Date: **1/19/2012**		Analysis Date: **1/19/2012**			SeqNo: **13830**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID **LCS-351**		SampType: **LCS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID: **LCSW**		Batch ID: **351**			RunNo: **468**					
Prep Date: **1/19/2012**		Analysis Date: **1/19/2012**			SeqNo: **13831**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.7	80	120			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R435** RunNo: **435**
Prep Date: Analysis Date: **1/17/2012** SeqNo: **12628** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Nitrate+Nitrite as N	ND	0.20								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R435** RunNo: **435**
Prep Date: Analysis Date: **1/17/2012** SeqNo: **12629** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	98.9	90	110			
Chloride	4.7	0.50	5.000	0	94.6	90	110			
Bromide	2.4	0.10	2.500	0	96.0	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	95.8	90	110			
Sulfate	9.7	0.50	10.00	0	96.5	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R519** RunNo: **519**
Prep Date: Analysis Date: **1/20/2012** SeqNo: **14798** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R519** RunNo: **519**
Prep Date: Analysis Date: **1/20/2012** SeqNo: **14799** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.7	0.50	10.00	0	97.5	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.9	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R574** RunNo: **574**
Prep Date: Analysis Date: **1/24/2012** SeqNo: **16269** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	ND	0.50								

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1201460

01-Feb-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R574**	RunNo: **574**
Prep Date:	Analysis Date: **1/24/2012**	SeqNo: **16270** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.5	0.50	10.00	0	94.6	90	110			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1201460

01-Feb-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID 5ml rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R486	RunNo: 486
Prep Date:	Analysis Date: 1/20/2012	SeqNo: 13958 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1201460
01-Feb-12

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **5ml rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R486** RunNo: **486**
Prep Date: Analysis Date: **1/20/2012** SeqNo: **13958** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	7.3		10.00		72.8	70	130			
Surr: 4-Bromofluorobenzene	8.3		10.00		82.8	70	130			
Surr: Dibromofluoromethane	8.0		10.00		80.3	69.8	130			
Surr: Toluene-d8	8.3		10.00		83.4	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R486** RunNo: **486**
Prep Date: Analysis Date: **1/20/2012** SeqNo: **13959** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	81.1	130			
Toluene	21	1.0	20.00	0	105	82.3	122			
Chlorobenzene	21	1.0	20.00	0	105	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	113	83.1	126			
Trichloroethene (TCE)	20	1.0	20.00	0	99.1	67.4	137			
Surr: 1,2-Dichloroethane-d4	7.3		10.00		73.3	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.1	70	130			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R486** RunNo: **486**
Prep Date: Analysis Date: **1/20/2012** SeqNo: **13959** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	8.0		10.00		80.4	69.8	130			
Surr: Toluene-d8	9.2		10.00		91.8	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R486** RunNo: **486**
Prep Date: Analysis Date: **1/20/2012** SeqNo: **14361** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	109	81.1	130			
Toluene	22	1.0	20.00	0	110	82.3	122			
Chlorobenzene	21	1.0	20.00	0	107	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	116	83.1	126			
Trichloroethene (TCE)	21	1.0	20.00	0	106	67.4	137			
Surr: 1,2-Dichloroethane-d4	8.1		10.00		81.1	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.2	70	130			
Surr: Dibromofluoromethane	8.3		10.00		82.8	69.8	130			
Surr: Toluene-d8	9.1		10.00		91.1	70	130			

Sample ID **b9** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R486** RunNo: **486**
Prep Date: Analysis Date: **1/20/2012** SeqNo: **15528** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

WO#: 1201460

Hall Environmental Analysis Laboratory, Inc.

01-Feb-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **b9**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R486**	RunNo: **486**
Prep Date:	Analysis Date: **1/20/2012**	SeqNo: **15528** Units: **µg/L**

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

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **b9**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R486**	RunNo: **486**
Prep Date:	Analysis Date: **1/20/2012**	SeqNo: **15528** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	7.8		10.00		77.8	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		92.9	70	130			
Surr: Dibromofluoromethane	8.3		10.00		83.4	69.8	130			
Surr: Toluene-d8	8.1		10.00		81.4	70	130			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1201460

01-Feb-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **mb-320** SampType: **MBLK** TestCode: **EPA Method 8270C: PAHs**

Client ID: **PBW** Batch ID: **320** RunNo: **485**

Prep Date: **1/18/2012** Analysis Date: **1/20/2012** SeqNo: **13946** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	0.50								
2-Methylnaphthalene	ND	0.50								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: Benzo(e)pyrene	15		20.00		74.9	38	145			
Surr: N-hexadecane	54		87.60		61.3	40	107			

Sample ID **lcs-320** SampType: **LCS** TestCode: **EPA Method 8270C: PAHs**

Client ID: **LCSW** Batch ID: **320** RunNo: **485**

Prep Date: **1/18/2012** Analysis Date: **1/20/2012** SeqNo: **13947** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	12	0.50	20.00	0	60.3	33.9	106			
1-Methylnaphthalene	12	0.50	20.00	0	60.0	36.3	111			
2-Methylnaphthalene	13	0.50	20.00	0	63.7	36.5	105			
Acenaphthylene	12	0.50	20.00	0	59.6	28.4	122			
Acenaphthene	13	0.50	20.00	0	63.0	32.7	118			
Fluorene	12	0.50	20.00	0	62.5	39.1	119			
Phenanthrene	13	0.50	20.00	0	66.9	47.1	119			
Anthracene	14	0.50	20.00	0	69.1	51.1	117			
Fluoranthene	14	0.50	20.00	0	70.9	40	132			
Pyrene	13	0.50	20.00	0	63.1	43.9	123			
Benz(a)anthracene	12	0.50	20.00	0	62.5	35	163			
Chrysene	13	0.50	20.00	0	67.1	45.9	119			
Benzo(b)fluoranthene	14	0.50	20.00	0	68.1	36.5	137			
Benzo(k)fluoranthene	14	0.50	20.00	0	72.0	37.1	143			
Benzo(a)pyrene	14	0.50	20.00	0	69.6	26.7	144			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1201460

01-Feb-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **lcs-320** SampType: **LCS** TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSW** Batch ID: **320** RunNo: **485**
Prep Date: **1/18/2012** Analysis Date: **1/20/2012** SeqNo: **13947** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dibenz(a,h)anthracene	14	0.50	20.00	0	72.0	31	146			
Benzo(g,h,i)perylene	13	0.50	20.00	0	66.3	30.9	150			
Indeno(1,2,3-cd)pyrene	13	0.50	20.00	0	65.6	35.2	169			
Surr: Benzo(e)pyrene	14		20.00		67.9	38	145			
Surr: N-hexadecane	53		87.60		61.0	40	107			

Sample ID **lcsd-320** SampType: **LCSD** TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSS02** Batch ID: **320** RunNo: **485**
Prep Date: **1/18/2012** Analysis Date: **1/20/2012** SeqNo: **13948** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	12	0.50	20.00	0	61.9	33.9	106	2.62	20	
1-Methylnaphthalene	12	0.50	20.00	0	61.9	36.3	111	3.12	20	
2-Methylnaphthalene	14	0.50	20.00	0	67.7	36.5	105	6.09	20	
Acenaphthylene	12	0.50	20.00	0	58.8	28.4	122	1.35	20	
Acenaphthene	12	0.50	20.00	0	59.6	32.7	118	5.55	20	
Fluorene	12	0.50	20.00	0	60.1	39.1	119	3.92	20	
Phenanthrene	15	0.50	20.00	0	76.3	47.1	119	13.1	20	
Anthracene	15	0.50	20.00	0	75.3	51.1	117	8.59	20	
Fluoranthene	14	0.50	20.00	0	71.7	40	132	1.12	20	
Pyrene	15	0.50	20.00	0	73.5	43.9	123	15.2	20	
Benz(a)anthracene	15	0.50	20.00	0	73.4	35	163	16.0	20	
Chrysene	15	0.50	20.00	0	74.7	45.9	119	10.7	20	
Benzo(b)fluoranthene	15	0.50	20.00	0	75.3	36.5	137	10.0	20	
Benzo(k)fluoranthene	15	0.50	20.00	0	76.6	37.1	143	6.19	20	
Benzo(a)pyrene	15	0.50	20.00	0	77.3	26.7	144	10.5	20	
Dibenz(a,h)anthracene	15	0.50	20.00	0	75.2	31	146	4.35	20	
Benzo(g,h,i)perylene	14	0.50	20.00	0	71.3	30.9	150	7.27	20	
Indeno(1,2,3-cd)pyrene	14	0.50	20.00	0	70.7	35.2	169	7.48	20	
Surr: Benzo(e)pyrene	15		20.00		74.0	38	145	0	0	
Surr: N-hexadecane	52		87.60		59.3	40	107	0	0	

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1201460**

01-Feb-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **mb-1**	SampType: **MBLK**		TestCode: **SM2320B: Alkalinity**						
Client ID: **PBW**	Batch ID: **R459**		RunNo: **459**						
Prep Date:	Analysis Date: **1/18/2012**		SeqNo: **13288**		Units: **mg/L CaCO3**				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20								

Sample ID **lcs-1**	SampType: **LCS**		TestCode: **SM2320B: Alkalinity**						
Client ID: **LCSW**	Batch ID: **R459**		RunNo: **459**						
Prep Date:	Analysis Date: **1/18/2012**		SeqNo: **13289**		Units: **mg/L CaCO3**				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	81	20	80.00	5.680	94.0	88.1	104			

Sample ID **mb-2**	SampType: **MBLK**		TestCode: **SM2320B: Alkalinity**						
Client ID: **PBW**	Batch ID: **R459**		RunNo: **459**						
Prep Date:	Analysis Date: **1/18/2012**		SeqNo: **13312**		Units: **mg/L CaCO3**				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20								

Sample ID **lcs-2**	SampType: **LCS**		TestCode: **SM2320B: Alkalinity**						
Client ID: **LCSW**	Batch ID: **R459**		RunNo: **459**						
Prep Date:	Analysis Date: **1/18/2012**		SeqNo: **13313**		Units: **mg/L CaCO3**				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	81	20	80.00	0	101	88.1	104			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1201460**

01-Feb-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID	**MB-315**	SampType:	**MBLK**	TestCode:	**SM2540C MOD: Total Dissolved Solids**
Client ID:	**PBW**	Batch ID:	**315**	RunNo:	**465**
Prep Date:	**1/18/2012**	Analysis Date:	**1/19/2012**	SeqNo:	**13377** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	**LCS-315**	SampType:	**LCS**	TestCode:	**SM2540C MOD: Total Dissolved Solids**
Client ID:	**LCSW**	Batch ID:	**315**	RunNo:	**465**
Prep Date:	**1/18/2012**	Analysis Date:	**1/19/2012**	SeqNo:	**13378** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1,020	20.0	1,000	0	103	80	120			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Southwest, Inc Bloomfield Work Order Number: 1201460

Logged by: Anne Thorne 1/17/2012 2:35:00 PM

Completed By: Anne Thorne 1/17/2012

Reviewed By: 1/17/2012

Chain of Custody

1. Were seals intact? Yes ☐ No ☐ Not Present ☑
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered?

Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☑ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☑ No ☐ No VOA Vials ☐
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

\# of preserved bottles checked for pH: 27
(<2 or >12 unless noted)
Adjusted?
Checked by:

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

19. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
2	1.4	Good	Not Present			

Chain-of-Custody Record

Client: Western Refining

Kelly Robinson

Mailing Address: 111 CR 4990

Bloomfield NM 87413

Phone #: 505-632-4166

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name: GBR

Project #:

Project Manager: Ashley Ager

Sampler: Devin Hencmann

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type		BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	See Attached list				Air Bubbles (Y or N)
1/13/12	1120	GW	SHS-8		Varios	-1												X				
1/13/12	1315	GW	GBR-51		Various	-2												X				
1/12/12	1120	GW	GRW-3		Various	-3												X				
1/12/12	1227	GW	GBR-30		Various	-4												X				
1/12/12	1335	GW	GBR-24D		Various	-5												X				
[illegible]		~~GW~~	~~GBR-30~~ DH																			
1/12/12	1420	GW	Influent		Various	-6												X				
1/12/12	1540	GW	GBR-31		Various	-7												X				
1/12/12	1640	GW	GBR-49		Various	-8												X				
1/12/12	1145	GW	Effluent		Various	-9												X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
1/13/12	1720	D		1/13/12	1720
1/16/12	649	Christ Walter		01/17/12	1435

Remarks: Please forward Results to aager@ltenv.com

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.

TABLE 1

2012 SAMPLING SCHEDULE
FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING

Sample ID	ANNUALLY (Jan)
System Influent	VOC GWC
System Effluent	VOC GWC METALS PAH
GRW-3	VOC GWC PAH
GRW-6	VOC GWC PAH
GBR-17	VOC GWC PAH
GBR-24D	VOC GWC PAH
GBR-30	VOC GWC PAH
GBR-31	VOC GWC PAH
GBR-32	VOC GWC METALS
GBR-48	VOC GWC METALS
GBR-49	VOC GWC METALS
GBR-50	VOC GWC METALS
GBR-51	VOC GWC
GBR-52	VOC GWC
SHS-8	VOC GWC

Notes:

VOC
method 8260

PAH
method 8270

GWC
- pH
- EC
- TDS
- alkalinity
- hardness
- anions
  - bromide
  - chloride
  - sulfate
  - fluoride
  - nitrate/nitrite
  - phosporus
- cations
  - calcium
  - iron
  - magnesium
  - manganese
  - potassium
  - sodium

Metals
- barium
- beryllium
- cadmium
- chromium
- copper
- lead
- nickel
- silver
- zinc
- antimony
- arsenic
- selenium
- thallium
- mercury

**HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY**

*Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com*

May 10, 2012

Ashley Ager
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413
TEL: (970) 946-1093
FAX (505) 632-3911

RE: GBR

OrderNo.: 1204A78

Dear Ashley Ager:

Hall Environmental Analysis Laboratory received 1 sample(s) on 4/28/2012 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: GRW-6
Project: GBR
Collection Date: 4/27/2012 12:29:00 PM
Lab ID: 1204A78-001
Matrix: AQUEOUS
Received Date: 4/28/2012

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Fluoride	0.49	0.10		mg/L	1	5/7/2012 6:14:22 PM
Chloride	80	10		mg/L	20	4/30/2012 4:18:52 PM
Bromide	0.50	0.10		mg/L	1	4/30/2012 4:07:38 PM
Sulfate	1,900	25		mg/L	50	5/7/2012 6:26:47 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	4/30/2012 8:35:07 PM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Calcium	350	5.0		mg/L	5	5/8/2012 10:40:20 AM
Iron	0.47	0.020	*	mg/L	1	5/4/2012 12:41:53 PM
Magnesium	37	1.0		mg/L	1	5/4/2012 12:41:53 PM
Manganese	1.0	0.010	*	mg/L	5	5/8/2012 10:40:20 AM
Potassium	2.6	1.0		mg/L	1	5/4/2012 12:41:53 PM
Sodium	480	5.0		mg/L	5	5/8/2012 10:40:20 AM
SM2340B: HARDNESS						Analyst: **ELS**
Hardness (As CaCO3)	1,000	6.6		mg/L	1	5/8/2012
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**
Acenaphthene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Acenaphthylene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Aniline	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Anthracene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Azobenzene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Benz(a)anthracene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Benzo(a)pyrene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Benzo(b)fluoranthene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Benzo(g,h,i)perylene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Benzo(k)fluoranthene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Benzoic acid	ND	20		µg/L	1	5/9/2012 8:05:41 PM
Benzyl alcohol	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Bis(2-chloroethyl)ether	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Bis(2-ethylhexyl)phthalate	16	10	B	µg/L	1	5/9/2012 8:05:41 PM
4-Bromophenyl phenyl ether	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Butyl benzyl phthalate	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Carbazole	ND	10		µg/L	1	5/9/2012 8:05:41 PM
4-Chloro-3-methylphenol	ND	10		µg/L	1	5/9/2012 8:05:41 PM
4-Chloroaniline	ND	10		µg/L	1	5/9/2012 8:05:41 PM
2-Chloronaphthalene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
2-Chlorophenol	ND	10		µg/L	1	5/9/2012 8:05:41 PM
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Chrysene	ND	10		µg/L	1	5/9/2012 8:05:41 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: GRW-6
Project: GBR
Collection Date: 4/27/2012 12:29:00 PM
Lab ID: 1204A78-001
Matrix: AQUEOUS
Received Date: 4/28/2012

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**
Di-n-butyl phthalate	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Di-n-octyl phthalate	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Dibenz(a,h)anthracene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Dibenzofuran	ND	10		µg/L	1	5/9/2012 8:05:41 PM
1,2-Dichlorobenzene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
1,3-Dichlorobenzene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
1,4-Dichlorobenzene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
3,3´-Dichlorobenzidine	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Diethyl phthalate	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Dimethyl phthalate	ND	10		µg/L	1	5/9/2012 8:05:41 PM
2,4-Dichlorophenol	ND	20		µg/L	1	5/9/2012 8:05:41 PM
2,4-Dimethylphenol	ND	10		µg/L	1	5/9/2012 8:05:41 PM
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	5/9/2012 8:05:41 PM
2,4-Dinitrophenol	ND	20		µg/L	1	5/9/2012 8:05:41 PM
2,4-Dinitrotoluene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
2,6-Dinitrotoluene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Fluoranthene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Fluorene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Hexachlorobenzene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Hexachlorobutadiene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Hexachlorocyclopentadiene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Hexachloroethane	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Isophorone	ND	10		µg/L	1	5/9/2012 8:05:41 PM
1-Methylnaphthalene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
2-Methylnaphthalene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
2-Methylphenol	ND	10		µg/L	1	5/9/2012 8:05:41 PM
3+4-Methylphenol	ND	10		µg/L	1	5/9/2012 8:05:41 PM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	5/9/2012 8:05:41 PM
N-Nitrosodimethylamine	ND	10		µg/L	1	5/9/2012 8:05:41 PM
N-Nitrosodiphenylamine	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Naphthalene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
2-Nitroaniline	ND	10		µg/L	1	5/9/2012 8:05:41 PM
3-Nitroaniline	ND	10		µg/L	1	5/9/2012 8:05:41 PM
4-Nitroaniline	ND	20		µg/L	1	5/9/2012 8:05:41 PM
Nitrobenzene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
2-Nitrophenol	ND	10		µg/L	1	5/9/2012 8:05:41 PM
4-Nitrophenol	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Pentachlorophenol	ND	20		µg/L	1	5/9/2012 8:05:41 PM
Phenanthrene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Phenol	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Pyrene	ND	10		µg/L	1	5/9/2012 8:05:41 PM

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: GRW-6
Project: GBR
Collection Date: 4/27/2012 12:29:00 PM
Lab ID: 1204A78-001
Matrix: AQUEOUS
Received Date: 4/28/2012

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**
Pyridine	ND	10		µg/L	1	5/9/2012 8:05:41 PM
1,2,4-Trichlorobenzene	ND	10		µg/L	1	5/9/2012 8:05:41 PM
2,4,5-Trichlorophenol	ND	10		µg/L	1	5/9/2012 8:05:41 PM
2,4,6-Trichlorophenol	ND	10		µg/L	1	5/9/2012 8:05:41 PM
Surr: 2,4,6-Tribromophenol	86.8	44.2-126		%REC	1	5/9/2012 8:05:41 PM
Surr: 2-Fluorobiphenyl	74.5	37-114		%REC	1	5/9/2012 8:05:41 PM
Surr: 2-Fluorophenol	73.7	23.4-98		%REC	1	5/9/2012 8:05:41 PM
Surr: 4-Terphenyl-d14	84.5	41.3-116		%REC	1	5/9/2012 8:05:41 PM
Surr: Nitrobenzene-d5	80.2	39.5-118		%REC	1	5/9/2012 8:05:41 PM
Surr: Phenol-d5	63.8	20.9-95.9		%REC	1	5/9/2012 8:05:41 PM
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Benzene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
Toluene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
Ethylbenzene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
Naphthalene	ND	2.0		µg/L	1	4/30/2012 5:13:45 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	4/30/2012 5:13:45 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	4/30/2012 5:13:45 PM
Acetone	ND	10		µg/L	1	4/30/2012 5:13:45 PM
Bromobenzene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
Bromodichloromethane	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
Bromoform	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
Bromomethane	ND	3.0		µg/L	1	4/30/2012 5:13:45 PM
2-Butanone	ND	10		µg/L	1	4/30/2012 5:13:45 PM
Carbon disulfide	ND	10		µg/L	1	4/30/2012 5:13:45 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
Chlorobenzene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
Chloroethane	ND	2.0		µg/L	1	4/30/2012 5:13:45 PM
Chloroform	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
Chloromethane	ND	3.0		µg/L	1	4/30/2012 5:13:45 PM
2-Chlorotoluene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
4-Chlorotoluene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
cis-1,2-DCE	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/30/2012 5:13:45 PM
Dibromochloromethane	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
Dibromomethane	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GRW-6
Project: GBR **Collection Date:** 4/27/2012 12:29:00 PM
Lab ID: 1204A78-001 **Matrix:** AQUEOUS **Received Date:** 4/28/2012

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	4/30/2012 5:13:45 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
2-Hexanone	ND	10		µg/L	1	4/30/2012 5:13:45 PM
Isopropylbenzene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	4/30/2012 5:13:45 PM
Methylene Chloride	ND	3.0		µg/L	1	4/30/2012 5:13:45 PM
n-Butylbenzene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
n-Propylbenzene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
sec-Butylbenzene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
Styrene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
tert-Butylbenzene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/30/2012 5:13:45 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
trans-1,2-DCE	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/30/2012 5:13:45 PM
Vinyl chloride	ND	1.0		µg/L	1	4/30/2012 5:13:45 PM
Xylenes, Total	ND	1.5		µg/L	1	4/30/2012 5:13:45 PM
Surr: 1,2-Dichloroethane-d4	110	70-130		%REC	1	4/30/2012 5:13:45 PM
Surr: 4-Bromofluorobenzene	106	70-130		%REC	1	4/30/2012 5:13:45 PM
Surr: Dibromofluoromethane	129	69.8-130		%REC	1	4/30/2012 5:13:45 PM
Surr: Toluene-d8	95.1	70-130		%REC	1	4/30/2012 5:13:45 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JLF**
Conductivity	3,200	0.010		µmhos/cm	1	4/30/2012 5:07:34 PM

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GRW-6
Project: GBR **Collection Date:** 4/27/2012 12:29:00 PM
Lab ID: 1204A78-001 **Matrix:** AQUEOUS **Received Date:** 4/28/2012

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
SM4500-H+B: PH						Analyst: **JLF**
pH	7.60	1.68	H	pH units	1	4/30/2012 5:07:34 PM
SM2320B: ALKALINITY						Analyst: **JLF**
Bicarbonate (As CaCO3)	400	20		mg/L CaCO3	1	4/30/2012 5:07:34 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	4/30/2012 5:07:34 PM
Total Alkalinity (as CaCO3)	400	20		mg/L CaCO3	1	4/30/2012 5:07:34 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2,740	20.0		mg/L	1	5/3/2012 6:10:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

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

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

May 07, 2012

ESC Sample # : L572703-01

Date Received : May 01, 2012
Description :

Site ID :

Sample ID : 1204A78-001E GRW-6

Project # :

Collected By :
Collection Date : 04/27/12 12:29

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Phosphorus,Total	BDL	0.10	mg/l	365.1	05/07/12	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: 05/07/12 14:42 Printed: 05/07/12 15:44

ESC
L·A·B S·C·I·E·N·C·E·S

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

Tax I.D. 62-0814289

Est. 1970

Hall Environmental Analysis Laboratory
Anne Thorne
4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report
Level II

L572703

May 07, 2012

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Phosphorus,Total	< .1	mg/l			WG590996	05/07/12 12:33

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Phosphorus,Total	mg/l	0.380	0.380	1.32	20	L572731-01	WG590996
Phosphorus,Total	mg/l	0	0	0	20	L572140-01	WG590996

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Phosphorus,Total	mg/l	1	0.965	96.5	90-110	WG590996

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Phosphorus,Total	mg/l	0.969	0.965	97.0	90-110	0.414	20	WG590996

Matrix Spike

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Phosphorus,Total	mg/l	2.32	0	2.5	92.8	90-110	L572585-01	WG590996

Matrix Spike Duplicate

Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Phosphorus,Total	mg/l	2.31	2.32	92.4	90-110	0.432	20	L572585-01	WG590996

Batch number /Run number / Sample number cross reference

WG590996: R2158833: L572703-01

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1204A78**

10-May-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Metals**
Client ID:	**PBW**	Batch ID:	**R2590**	RunNo:	**2590**
Prep Date:		Analysis Date:	**5/4/2012**	SeqNo:	**72017** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Metals**
Client ID:	**LCSW**	Batch ID:	**R2590**	RunNo:	**2590**
Prep Date:		Analysis Date:	**5/4/2012**	SeqNo:	**72018** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.50	0.020	0.5000	0	99.8	85	115			
Magnesium	52	1.0	50.00	0	104	85	115			
Potassium	51	1.0	50.00	0	101	85	115			

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Metals**
Client ID:	**PBW**	Batch ID:	**R2627**	RunNo:	**2627**
Prep Date:		Analysis Date:	**5/8/2012**	SeqNo:	**73176** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Manganese	ND	0.0020								
Sodium	ND	1.0								

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Metals**
Client ID:	**LCSW**	Batch ID:	**R2627**	RunNo:	**2627**
Prep Date:		Analysis Date:	**5/8/2012**	SeqNo:	**73177** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	54	1.0	50.00	0	109	85	115			
Manganese	0.47	0.0020	0.5000	0	93.6	85	115			
Sodium	53	1.0	50.00	0	106	85	115			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R2479** RunNo: **2479**
Prep Date: Analysis Date: **4/30/2012** SeqNo: **68815** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R2479** RunNo: **2479**
Prep Date: Analysis Date: **4/30/2012** SeqNo: **68816** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.3	0.20	3.500	0	93.2	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R2486** RunNo: **2486**
Prep Date: Analysis Date: **4/30/2012** SeqNo: **69053** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Bromide	ND	0.10								

Sample ID **LCS-b** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R2486** RunNo: **2486**
Prep Date: Analysis Date: **4/30/2012** SeqNo: **69069** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	5.1	0.50	5.000	0	102	90	110			
Bromide	2.6	0.10	2.500	0	105	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R2623** RunNo: **2623**
Prep Date: Analysis Date: **5/7/2012** SeqNo: **72905** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R2623** RunNo: **2623**
Prep Date: Analysis Date: **5/7/2012** SeqNo: **72906** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.47	0.10	0.5000	0	93.8	90	110			
Sulfate	9.3	0.50	10.00	0	93.3	90	110			

QC SUMMARY REPORT

WO#: **1204A78**

Hall Environmental Analysis Laboratory, Inc.

10-May-12

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **5ml rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R2475** RunNo: **2475**
Prep Date: Analysis Date: **4/30/2012** SeqNo: **68775** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1204A78**

10-May-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **5ml rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **PBW** Batch ID: **R2475** RunNo: **2475**

Prep Date: Analysis Date: **4/30/2012** SeqNo: **68775** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.9	70	130			
Surr: Dibromofluoromethane	12		10.00		119	69.8	130			
Surr: Toluene-d8	9.6		10.00		96.4	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **LCSW** Batch ID: **R2475** RunNo: **2475**

Prep Date: Analysis Date: **4/30/2012** SeqNo: **68776** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	114	84.1	126			
Toluene	21	1.0	20.00	0	103	80	120			
Chlorobenzene	21	1.0	20.00	0	103	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	105	83	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	76.2	119			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.1	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.7	70	130			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R2475**	RunNo: **2475**
Prep Date:	Analysis Date: **4/30/2012**	SeqNo: **68776** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	12		10.00		118	69.8	130			
Surr: Toluene-d8	9.9		10.00		98.8	70	130			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

WO#: 1204A78

Hall Environmental Analysis Laboratory, Inc.

10-May-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID	**mb-1787**	SampType:	**MBLK**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**PBW**	Batch ID:	**1787**	RunNo:	**2671**
Prep Date:	**5/3/2012**	Analysis Date:	**5/9/2012**	SeqNo:	**74256** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	13	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	5.0								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	5.0								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
2,6-Dinitrotoluene	ND	10								

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1204A78**

10-May-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **mb-1787** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **PBW** Batch ID: **1787** RunNo: **2671**

Prep Date: **5/3/2012** Analysis Date: **5/9/2012** SeqNo: **74256** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	5.0								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	5.0								
3+4-Methylphenol	ND	5.0								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	20								
Nitrobenzene	ND	5.0								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	5.0								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	5.0								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2,4,6-Tribromophenol	160		200.0		81.0	44.2	126			
Surr: 2-Fluorobiphenyl	74		100.0		74.1	37	114			
Surr: 2-Fluorophenol	150		200.0		73.3	23.4	98			
Surr: 4-Terphenyl-d14	81		100.0		80.8	41.3	116			
Surr: Nitrobenzene-d5	80		100.0		79.5	39.5	118			
Surr: Phenol-d5	120		200.0		57.6	20.9	95.9			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **lcs-1787** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **LCSW** Batch ID: **1787** RunNo: **2671**

Prep Date: **5/3/2012** Analysis Date: **5/9/2012** SeqNo: **74257** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	84	10	100.0	0	84.0	38.2	99.4			
4-Chloro-3-methylphenol	88	10	100.0	0	88.0	35.5	108			
2-Chlorophenol	86	10	100.0	0	86.2	29.8	106			
1,4-Dichlorobenzene	84	5.0	100.0	0	84.0	32.6	91.5			
2,4-Dinitrotoluene	81	5.0	100.0	0	81.5	44.7	112			
N-Nitrosodi-n-propylamine	97	10	100.0	0	96.8	38.5	105			
4-Nitrophenol	63	10	100.0	0	63.3	11.6	73.1			
Pentachlorophenol	80	5.0	100.0	0	80.0	20.2	93			
Phenol	74	10	100.0	0	73.9	23	66.1			S
Pyrene	80	10	100.0	0	79.6	40.1	101			
1,2,4-Trichlorobenzene	85	10	100.0	0	85.4	37.7	99.1			
Surr: 2,4,6-Tribromophenol	100		100.0		103	44.2	126			
Surr: 2-Fluorobiphenyl	86		100.0		85.7	37	114			
Surr: 2-Fluorophenol	80		100.0		79.9	23.4	98			
Surr: 4-Terphenyl-d14	93		100.0		93.5	41.3	116			
Surr: Nitrobenzene-d5	79		100.0		79.1	39.5	118			
Surr: Phenol-d5	67		100.0		66.6	20.9	95.9			

Sample ID **lcs-1787** SampType: **LCS4** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **BatchQC** Batch ID: **1787** RunNo: **2671**

Prep Date: **5/3/2012** Analysis Date: **5/9/2012** SeqNo: **74258** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	84	10	100.0	0	84.0	38.2	99.4			
Acenaphthylene	82	10	100.0	0	82.1	37.5	123			
Aniline	78	10	100.0	0	77.7	16.9	115			
Anthracene	93	10	100.0	0	93.3	31.4	133			
Azobenzene	95	10	100.0	0	94.6	31	127			
Benz(a)anthracene	82	10	100.0	0	82.3	43.4	117			
Benzo(a)pyrene	77	10	100.0	0	76.6	44.1	118			
Benzo(b)fluoranthene	81	10	100.0	0	80.6	43.3	122			
Benzo(g,h,i)perylene	80	10	100.0	0	80.1	37.7	116			
Benzo(k)fluoranthene	79	10	100.0	0	79.4	47	117			
Benzoic acid	62	20	100.0	0	61.9	6.52	105			
Benzyl alcohol	90	10	100.0	0	90.1	29.2	120			
Bis(2-chloroethoxy)methane	82	10	100.0	0	81.8	42.2	116			
Bis(2-chloroethyl)ether	92	10	100.0	0	92.3	33.7	114			
Bis(2-chloroisopropyl)ether	100	10	100.0	0	101	28.2	121			
Bis(2-ethylhexyl)phthalate	93	10	100.0	0	93.1	30.9	130			B
4-Bromophenyl phenyl ether	90	10	100.0	0	90.0	18.1	148			
Butyl benzyl phthalate	85	10	100.0	0	85.3	39.1	125			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

WO#: **1204A78**

Hall Environmental Analysis Laboratory, Inc.

10-May-12

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **lcs-1787**	SampType: **LCS4**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **BatchQC**	Batch ID: **1787**	RunNo: **2671**			
Prep Date: **5/3/2012**	Analysis Date: **5/9/2012**	SeqNo: **74258**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Carbazole	89	10	100.0	0	88.7	35.9	129			
4-Chloro-3-methylphenol	88	10	100.0	0	88.0	35.5	108			
4-Chloroaniline	80	10	100.0	0	79.5	38.3	115			
2-Chloronaphthalene	90	10	100.0	0	89.7	38.8	113			
2-Chlorophenol	86	10	100.0	0	86.2	29.8	106			
4-Chlorophenyl phenyl ether	83	10	100.0	0	82.6	43.3	118			
Chrysene	78	10	100.0	0	77.8	42.8	119			
Di-n-butyl phthalate	96	10	100.0	0	95.9	23.3	142			
Di-n-octyl phthalate	85	10	100.0	0	84.7	31	132			
Dibenz(a,h)anthracene	77	10	100.0	0	77.1	45.4	113			
Dibenzofuran	79	10	100.0	0	78.6	40.1	123			
1,2-Dichlorobenzene	85	5.0	100.0	0	84.7	27.4	101			
1,3-Dichlorobenzene	82	10	100.0	0	81.5	24.3	96.8			
1,4-Dichlorobenzene	84	5.0	100.0	0	84.0	32.6	91.5			
3,3´-Dichlorobenzidine	81	10	100.0	0	80.7	32.1	131			
Diethyl phthalate	88	10	100.0	0	87.7	44.9	117			
Dimethyl phthalate	86	10	100.0	0	85.8	43.2	126			
2,4-Dichlorophenol	79	20	100.0	0	79.2	43.5	111			
2,4-Dimethylphenol	86	10	100.0	0	85.7	38.4	115			
4,6-Dinitro-2-methylphenol	72	20	100.0	0	71.6	27.9	133			
2,4-Dinitrophenol	58	5.0	100.0	0	58.1	23.1	118			
2,4-Dinitrotoluene	81	5.0	100.0	0	81.5	44.7	112			
2,6-Dinitrotoluene	78	10	100.0	0	78.2	46.9	121			
Fluoranthene	82	10	100.0	0	82.2	34.2	133			
Fluorene	78	10	100.0	0	78.3	45.5	112			
Hexachlorobenzene	87	5.0	100.0	0	87.1	30	130			
Hexachlorobutadiene	80	10	100.0	0	80.3	22.7	116			
Hexachlorocyclopentadiene	74	10	100.0	0	74.4	21.8	106			
Hexachloroethane	75	5.0	100.0	0	75.1	23.2	97.8			
Indeno(1,2,3-cd)pyrene	78	10	100.0	0	78.3	37.9	117			
Isophorone	87	10	100.0	0	86.7	42.5	122			
1-Methylnaphthalene	92	10	100.0	0	91.8	35	110			
2-Methylnaphthalene	90	10	100.0	0	89.9	37.6	119			
2-Methylphenol	86	5.0	100.0	0	86.3	36.1	105			
3+4-Methylphenol	83	5.0	100.0	0	83.4	35.7	92.5			
N-Nitrosodi-n-propylamine	97	10	100.0	0	96.8	38.5	105			
N-Nitrosodimethylamine	92	10	100.0	0	91.6	26.9	96			
N-Nitrosodiphenylamine	91	10	100.0	0	90.9	30	167			
Naphthalene	85	10	100.0	0	84.7	31.6	117			
2-Nitroaniline	76	10	100.0	0	75.6	41.5	120			
3-Nitroaniline	77	10	100.0	0	77.5	48.4	107			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID	**lcs-1787**	SampType:	**LCS4**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**BatchQC**	Batch ID:	**1787**	RunNo:	**2671**
Prep Date:	**5/3/2012**	Analysis Date:	**5/9/2012**	SeqNo:	**74258** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Nitroaniline	81	20	100.0	0	81.1	43.1	122			
Nitrobenzene	88	5.0	100.0	0	88.0	30.9	125			
2-Nitrophenol	86	10	100.0	0	86.4	40	112			
4-Nitrophenol	63	10	100.0	0	63.3	11.6	73.1			
Pentachlorophenol	80	5.0	100.0	0	80.0	20.2	93			
Phenanthrene	85	10	100.0	0	84.6	31.5	133			
Phenol	74	10	100.0	0	73.9	23	66.1			S
Pyrene	80	10	100.0	0	79.6	40.1	101			
Pyridine	50	5.0	100.0	0	49.9	5.14	87.1			
1,2,4-Trichlorobenzene	85	10	100.0	0	85.4	37.7	99.1			
2,4,5-Trichlorophenol	83	10	100.0	0	83.1	37.3	118			
2,4,6-Trichlorophenol	77	10	100.0	0	77.1	37.7	115			
Surr: 2,4,6-Tribromophenol	100		100.0		103	44.2	126			
Surr: 2-Fluorobiphenyl	86		100.0		85.7	37	114			
Surr: 2-Fluorophenol	80		100.0		79.9	23.4	98			
Surr: 4-Terphenyl-d14	93		100.0		93.5	41.3	116			
Surr: Nitrobenzene-d5	79		100.0		79.1	39.5	118			
Surr: Phenol-d5	67		100.0		66.6	20.9	95.9			

Sample ID	**lcsd-1787**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**1787**	RunNo:	**2671**
Prep Date:	**5/3/2012**	Analysis Date:	**5/9/2012**	SeqNo:	**74259** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	74	10	100.0	0	74.0	38.2	99.4	12.6	20	
4-Chloro-3-methylphenol	73	10	100.0	0	73.4	35.5	108	18.2	20	
2-Chlorophenol	84	10	100.0	0	83.6	29.8	106	3.04	20	
1,4-Dichlorobenzene	72	5.0	100.0	0	71.9	32.6	91.5	15.5	20	
2,4-Dinitrotoluene	75	5.0	100.0	0	74.6	44.7	112	8.76	20	
N-Nitrosodi-n-propylamine	92	10	100.0	0	91.8	38.5	105	5.32	20	
4-Nitrophenol	56	10	100.0	0	55.6	11.6	73.1	13.1	20	
Pentachlorophenol	81	5.0	100.0	0	81.0	20.2	93	1.32	20	
Phenol	67	10	100.0	0	67.1	23	66.1	9.73	20	S
Pyrene	82	10	100.0	0	82.4	40.1	101	3.56	20	
1,2,4-Trichlorobenzene	85	10	100.0	0	85.2	37.7	99.1	0.188	20	
Surr: 2,4,6-Tribromophenol	110		100.0		105	44.2	126	0	0	
Surr: 2-Fluorobiphenyl	81		100.0		81.4	37	114	0	0	
Surr: 2-Fluorophenol	77		100.0		77.1	23.4	98	0	0	
Surr: 4-Terphenyl-d14	95		100.0		95.2	41.3	116	0	0	
Surr: Nitrobenzene-d5	82		100.0		81.8	39.5	118	0	0	
Surr: Phenol-d5	64		100.0		64.2	20.9	95.9	0	0	

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **lcsd-1787**	SampType: **LCSD4**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **BatchQC**	Batch ID: **1787**	RunNo: **2671**			
Prep Date: **5/3/2012**	Analysis Date: **5/9/2012**	SeqNo: **74260**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	74	10	100.0	0	74.0	38.2	99.4	12.6	20	
Acenaphthylene	78	10	100.0	0	78.0	37.5	123	5.22	20	
Aniline	71	10	100.0	0	70.5	16.9	115	9.64	20	
Anthracene	92	10	100.0	0	92.4	31.4	133	0.905	20	
Azobenzene	99	10	100.0	0	98.8	31	127	4.34	20	
Benz(a)anthracene	83	10	100.0	0	83.0	43.4	117	0.847	20	
Benzo(a)pyrene	80	10	100.0	0	79.7	44.1	118	3.97	20	
Benzo(b)fluoranthene	79	10	100.0	0	79.0	43.3	122	2.03	20	
Benzo(g,h,i)perylene	82	10	100.0	0	81.6	37.7	116	1.95	20	
Benzo(k)fluoranthene	80	10	100.0	0	80.3	47	117	1.13	20	
Benzoic acid	61	20	100.0	0	60.5	6.52	105	2.29	20	
Benzyl alcohol	82	10	100.0	0	81.9	29.2	120	9.51	20	
Bis(2-chloroethoxy)methane	80	10	100.0	0	80.3	42.2	116	1.88	20	
Bis(2-chloroethyl)ether	84	10	100.0	0	84.3	33.7	114	9.06	20	
Bis(2-chloroisopropyl)ether	94	10	100.0	0	94.1	28.2	121	6.83	20	
Bis(2-ethylhexyl)phthalate	98	10	100.0	0	98.4	30.9	130	5.47	20	B
4-Bromophenyl phenyl ether	86	10	100.0	0	86.3	18.1	148	4.18	20	
Butyl benzyl phthalate	82	10	100.0	0	81.9	39.1	125	3.97	20	
Carbazole	85	10	100.0	0	85.0	35.9	129	4.21	20	
4-Chloro-3-methylphenol	73	10	100.0	0	73.4	35.5	108	18.2	20	
4-Chloroaniline	78	10	100.0	0	77.5	38.3	115	2.55	20	
2-Chloronaphthalene	86	10	100.0	0	85.6	38.8	113	4.63	20	
2-Chlorophenol	84	10	100.0	0	83.6	29.8	106	3.04	20	
4-Chlorophenyl phenyl ether	72	10	100.0	0	72.4	43.3	118	13.2	20	
Chrysene	81	10	100.0	0	81.1	42.8	119	4.18	20	
Di-n-butyl phthalate	94	10	100.0	0	93.5	23.3	142	2.47	20	
Di-n-octyl phthalate	87	10	100.0	0	86.7	31	132	2.31	20	
Dibenz(a,h)anthracene	79	10	100.0	0	79.3	45.4	113	2.76	20	
Dibenzofuran	77	10	100.0	0	77.3	40.1	123	1.64	20	
1,2-Dichlorobenzene	77	5.0	100.0	0	76.8	27.4	101	9.76	20	
1,3-Dichlorobenzene	76	10	100.0	0	75.8	24.3	96.8	7.35	20	
1,4-Dichlorobenzene	72	5.0	100.0	0	71.9	32.6	91.5	15.5	20	
3,3´-Dichlorobenzidine	79	10	100.0	0	78.6	32.1	131	2.64	20	
Diethyl phthalate	76	10	100.0	0	76.4	44.9	117	13.8	20	
Dimethyl phthalate	76	10	100.0	0	76.2	43.2	126	11.8	20	
2,4-Dichlorophenol	76	20	100.0	0	75.9	43.5	111	4.31	20	
2,4-Dimethylphenol	83	10	100.0	0	83.2	38.4	115	2.94	20	
4,6-Dinitro-2-methylphenol	74	20	100.0	0	73.5	27.9	133	2.65	20	
2,4-Dinitrophenol	57	5.0	100.0	0	57.1	23.1	118	1.63	20	
2,4-Dinitrotoluene	75	5.0	100.0	0	74.6	44.7	112	8.76	20	
2,6-Dinitrotoluene	74	10	100.0	0	74.2	46.9	121	5.25	20	

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1204A78**

10-May-12

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **lcsd-1787**	SampType: **LCSD4**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **BatchQC**	Batch ID: **1787**	RunNo: **2671**
Prep Date: **5/3/2012**	Analysis Date: **5/9/2012**	SeqNo: **74260** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoranthene	83	10	100.0	0	83.3	34.2	133	1.28	20	
Fluorene	74	10	100.0	0	74.0	45.5	112	5.70	20	
Hexachlorobenzene	89	5.0	100.0	0	89.4	30	130	2.63	20	
Hexachlorobutadiene	82	10	100.0	0	81.5	22.7	116	1.46	20	
Hexachlorocyclopentadiene	78	10	100.0	0	77.9	21.8	106	4.60	20	
Hexachloroethane	74	5.0	100.0	0	74.1	23.2	97.8	1.39	20	
Indeno(1,2,3-cd)pyrene	82	10	100.0	0	82.0	37.9	117	4.59	20	
Isophorone	81	10	100.0	0	80.8	42.5	122	7.02	20	
1-Methylnaphthalene	82	10	100.0	0	82.1	35	110	11.2	20	
2-Methylnaphthalene	79	10	100.0	0	78.7	37.6	119	13.3	20	
2-Methylphenol	79	5.0	100.0	0	78.7	36.1	105	9.26	20	
3+4-Methylphenol	73	5.0	100.0	0	73.0	35.7	92.5	13.4	20	
N-Nitrosodi-n-propylamine	92	10	100.0	0	91.8	38.5	105	5.32	20	
N-Nitrosodimethylamine	80	10	100.0	0	80.1	26.9	96	13.4	20	
N-Nitrosodiphenylamine	86	10	100.0	0	86.1	30	167	5.45	20	
Naphthalene	84	10	100.0	0	83.6	31.6	117	1.24	20	
2-Nitroaniline	75	10	100.0	0	74.5	41.5	120	1.41	20	
3-Nitroaniline	71	10	100.0	0	71.2	48.4	107	8.37	20	
4-Nitroaniline	74	20	100.0	0	73.5	43.1	122	9.83	20	
Nitrobenzene	88	5.0	100.0	0	87.6	30.9	125	0.547	20	
2-Nitrophenol	84	10	100.0	0	83.9	40	112	2.89	20	
4-Nitrophenol	56	10	100.0	0	55.6	11.6	73.1	13.1	20	
Pentachlorophenol	81	5.0	100.0	0	81.0	20.2	93	1.32	20	
Phenanthrene	88	10	100.0	0	88.4	31.5	133	4.44	20	
Phenol	67	10	100.0	0	67.1	23	66.1	9.73	20	S
Pyrene	82	10	100.0	0	82.4	40.1	101	3.56	20	
Pyridine	48	5.0	100.0	0	47.7	5.14	87.1	4.47	20	
1,2,4-Trichlorobenzene	85	10	100.0	0	85.2	37.7	99.1	0.188	20	
2,4,5-Trichlorophenol	79	10	100.0	0	79.4	37.3	118	4.63	20	
2,4,6-Trichlorophenol	77	10	100.0	0	77.1	37.7	115	0	20	
Surr: 2,4,6-Tribromophenol	110		100.0		105	44.2	126	0		
Surr: 2-Fluorobiphenyl	81		100.0		81.4	37	114	0		
Surr: 2-Fluorophenol	77		100.0		77.1	23.4	98	0		
Surr: 4-Terphenyl-d14	95		100.0		95.2	41.3	116	0		
Surr: Nitrobenzene-d5	82		100.0		81.8	39.5	118	0		
Surr: Phenol-d5	64		100.0		64.2	20.9	95.9	0		

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **1205094-001Cms** SampType: **MS4** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **BatchQC** Batch ID: **1787** RunNo: **2671**

Prep Date: **5/3/2012** Analysis Date: **5/9/2012** SeqNo: **74264** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	75	10	100.0	0	75.2	38.2	99.4			
Acenaphthylene	71	10	100.0	0	71.0	37.5	116			
Aniline	67	10	100.0	0	66.7	23.6	105			
Anthracene	81	10	100.0	0	81.2	36.3	125			
Azobenzene	82	10	100.0	0	82.2	31.1	120			
Benz(a)anthracene	76	10	100.0	0	75.9	39.1	117			
Benzo(a)pyrene	75	10	100.0	0	75.3	40.9	117			
Benzo(b)fluoranthene	75	10	100.0	0	75.3	35.3	126			
Benzo(g,h,i)perylene	73	10	100.0	0	73.3	40	110			
Benzo(k)fluoranthene	75	10	100.0	0	74.6	40.1	119			
Benzoic acid	26	20	100.0	0	25.8	3.46	49			
Benzyl alcohol	71	10	100.0	0	70.6	32.4	109			
Bis(2-chloroethoxy)methane	72	10	100.0	0	72.2	36.4	114			
Bis(2-chloroethyl)ether	72	10	100.0	0	71.7	26.3	111			
Bis(2-chloroisopropyl)ether	87	10	100.0	0	87.5	24.2	117			
Bis(2-ethylhexyl)phthalate	92	10	100.0	13.88	77.9	41.8	108			B
4-Bromophenyl phenyl ether	82	10	100.0	0	81.9	29.6	127			
Butyl benzyl phthalate	81	10	100.0	0	80.5	28.9	130			
Carbazole	81	10	100.0	0	81.4	32	131			
4-Chloro-3-methylphenol	72	10	100.0	0	71.8	35.5	108			
4-Chloroaniline	69	10	100.0	0	68.7	39.1	105			
2-Chloronaphthalene	76	10	100.0	0	76.5	33.6	114			
2-Chlorophenol	67	10	100.0	0	67.4	29.8	106			
4-Chlorophenyl phenyl ether	72	10	100.0	0	72.1	42.9	115			
Chrysene	76	10	100.0	0	76.4	38.5	120			
Di-n-butyl phthalate	85	10	100.0	0	84.6	21.3	137			
Di-n-octyl phthalate	81	10	100.0	0	81.4	28.7	127			
Dibenz(a,h)anthracene	71	10	100.0	0	70.9	42.4	112			
Dibenzofuran	72	10	100.0	0	72.2	38.9	120			
1,2-Dichlorobenzene	67	5.0	100.0	0	67.4	20.9	103			
1,3-Dichlorobenzene	65	10	100.0	0	64.7	19.2	97.9			
1,4-Dichlorobenzene	66	5.0	100.0	0	66.2	32.6	91.5			
3,3´-Dichlorobenzidine	78	10	100.0	0	77.9	20.5	130			
Diethyl phthalate	82	10	100.0	0	82.2	45.8	116			
Dimethyl phthalate	76	10	100.0	0	76.1	44.4	122			
2,4-Dichlorophenol	68	20	100.0	0	68.1	25.6	120			
2,4-Dimethylphenol	78	10	100.0	0	78.4	35.5	114			
4,6-Dinitro-2-methylphenol	26	20	100.0	0	26.3	23.5	132			
2,4-Dinitrophenol	18	5.0	100.0	0	18.0	11	112			
2,4-Dinitrotoluene	79	5.0	100.0	0	79.2	44.7	112			
2,6-Dinitrotoluene	74	10	100.0	0	74.3	42.2	123			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

WO#: 1204A78

Hall Environmental Analysis Laboratory, Inc.

10-May-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **1205094-001Cms** SampType: **MS4** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **BatchQC** Batch ID: **1787** RunNo: **2671**

Prep Date: **5/3/2012** Analysis Date: **5/9/2012** SeqNo: **74264** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoranthene	75	10	100.0	0	75.3	37.5	126			
Fluorene	70	10	100.0	0	69.5	45.3	110			
Hexachlorobenzene	78	5.0	100.0	0	78.0	30.3	126			
Hexachlorobutadiene	71	10	100.0	0	71.5	26.3	107			
Hexachlorocyclopentadiene	64	10	100.0	0	63.9	12.5	111			
Hexachloroethane	62	5.0	100.0	0	62.3	19.5	96.4			
Indeno(1,2,3-cd)pyrene	72	10	100.0	0	72.3	41.8	109			
Isophorone	72	10	100.0	0	71.6	36.9	119			
1-Methylnaphthalene	73	10	100.0	0	73.0	35	110			
2-Methylnaphthalene	70	10	100.0	0	69.9	37.8	109			
2-Methylphenol	70	5.0	100.0	0	69.7	28.7	108			
3+4-Methylphenol	73	5.0	100.0	0	72.6	24.2	136			
N-Nitrosodi-n-propylamine	71	10	100.0	0	70.8	38.5	105			
N-Nitrosodimethylamine	70	10	100.0	0	70.5	24.6	93.4			
N-Nitrosodiphenylamine	77	10	100.0	0	76.7	21.2	140			
Naphthalene	75	10	100.0	0	75.0	29.4	109			
2-Nitroaniline	72	10	100.0	0	71.5	35.5	121			
3-Nitroaniline	73	10	100.0	0	72.8	45.8	112			
4-Nitroaniline	77	20	100.0	0	77.1	36.6	143			
Nitrobenzene	81	5.0	100.0	0	81.1	28.8	119			
2-Nitrophenol	72	10	100.0	0	72.3	18.3	125			
4-Nitrophenol	27	10	100.0	3.560	23.6	11.6	73.1			
Pentachlorophenol	26	5.0	100.0	0	26.3	20.2	93			
Phenanthrene	79	10	100.0	3.360	75.7	36.2	124			
Phenol	54	10	100.0	0	53.5	23	66.1			
Pyrene	75	10	100.0	0	75.0	40.1	101			
Pyridine	54	5.0	100.0	0	53.5	19.3	82.8			
1,2,4-Trichlorobenzene	74	10	100.0	0	73.8	37.7	99.1			
2,4,5-Trichlorophenol	67	10	100.0	0	66.9	13.1	127			
2,4,6-Trichlorophenol	55	10	100.0	0	55.1	11.3	124			
Surr: 2,4,6-Tribromophenol	69		100.0		68.6	44.2	126			
Surr: 2-Fluorobiphenyl	74		100.0		73.6	37	114			
Surr: 2-Fluorophenol	56		100.0		55.8	23.4	98			
Surr: 4-Terphenyl-d14	92		100.0		92.5	41.3	116			
Surr: Nitrobenzene-d5	75		100.0		74.8	39.5	118			
Surr: Phenol-d5	54		100.0		53.7	20.9	95.9			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1204A78**

10-May-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID 1205094-001Cmsd SampType: **MSD4** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **BatchQC** Batch ID: **1787** RunNo: **2671**

Prep Date: **5/3/2012** Analysis Date: **5/9/2012** SeqNo: **74265** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	72	10	100.0	0	72.2	38.2	99.4	3.99	20	
Acenaphthylene	72	10	100.0	0	72.1	37.5	116	1.45	20	
Aniline	64	10	100.0	0	64.1	23.6	105	3.94	20	
Anthracene	87	10	100.0	0	87.3	36.3	125	7.21	20	
Azobenzene	85	10	100.0	0	84.7	31.1	120	3.00	20	
Benz(a)anthracene	81	10	100.0	0	81.2	39.1	117	6.85	20	
Benzo(a)pyrene	75	10	100.0	0	74.5	40.9	117	0.988	20	
Benzo(b)fluoranthene	74	10	100.0	0	73.6	35.3	126	2.23	20	
Benzo(g,h,i)perylene	74	10	100.0	0	74.3	40	110	1.27	20	
Benzo(k)fluoranthene	76	10	100.0	0	75.9	40.1	119	1.73	20	
Benzoic acid	25	20	100.0	0	24.8	3.46	49	3.96	20	
Benzyl alcohol	67	10	100.0	0	67.2	32.4	109	5.02	20	
Bis(2-chloroethoxy)methane	71	10	100.0	0	70.8	36.4	114	2.01	20	
Bis(2-chloroethyl)ether	65	10	100.0	0	65.0	26.3	111	9.83	20	
Bis(2-chloroisopropyl)ether	79	10	100.0	0	78.5	24.2	117	10.7	20	
Bis(2-ethylhexyl)phthalate	96	10	100.0	13.88	82.2	41.8	108	4.54	20	B
4-Bromophenyl phenyl ether	85	10	100.0	0	84.7	29.6	127	3.31	20	
Butyl benzyl phthalate	86	10	100.0	0	85.7	28.9	130	6.23	20	
Carbazole	86	10	100.0	0	85.9	32	131	5.38	20	
4-Chloro-3-methylphenol	69	10	100.0	0	69.1	35.5	108	3.89	20	
4-Chloroaniline	69	10	100.0	0	69.3	39.1	105	0.841	20	
2-Chloronaphthalene	75	10	100.0	0	75.2	33.6	114	1.69	20	
2-Chlorophenol	60	10	100.0	0	60.4	29.8	106	11.0	20	
4-Chlorophenyl phenyl ether	74	10	100.0	0	73.7	42.9	115	2.20	20	
Chrysene	78	10	100.0	0	78.2	38.5	120	2.33	20	
Di-n-butyl phthalate	88	10	100.0	0	88.2	21.3	137	4.14	20	
Di-n-octyl phthalate	86	10	100.0	0	85.7	28.7	127	5.17	20	
Dibenz(a,h)anthracene	73	10	100.0	0	72.9	42.4	112	2.75	20	
Dibenzofuran	74	10	100.0	0	74.1	38.9	120	2.57	20	
1,2-Dichlorobenzene	63	5.0	100.0	0	62.7	20.9	103	7.32	20	
1,3-Dichlorobenzene	62	10	100.0	0	61.9	19.2	97.9	4.36	20	
1,4-Dichlorobenzene	60	5.0	100.0	0	60.4	32.6	91.5	9.23	20	
3,3´-Dichlorobenzidine	81	10	100.0	0	80.9	20.5	130	3.83	20	
Diethyl phthalate	82	10	100.0	0	81.6	45.8	116	0.732	20	
Dimethyl phthalate	84	10	100.0	0	83.5	44.4	122	9.27	20	
2,4-Dichlorophenol	69	20	100.0	0	68.8	25.6	120	0.994	20	
2,4-Dimethylphenol	76	10	100.0	0	75.8	35.5	114	3.35	20	
4,6-Dinitro-2-methylphenol	27	20	100.0	0	26.5	23.5	132	0.908	20	
2,4-Dinitrophenol	18	5.0	100.0	0	17.7	11	112	1.57	20	
2,4-Dinitrotoluene	80	5.0	100.0	0	79.5	44.7	112	0.328	20	
2,6-Dinitrotoluene	75	10	100.0	0	74.8	42.2	123	0.670	20	

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1204A78**

10-May-12

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **1205094-001Cmsd** SampType: **MSD4** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **BatchQC** Batch ID: **1787** RunNo: **2671**
Prep Date: **5/3/2012** Analysis Date: **5/9/2012** SeqNo: **74265** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoranthene	81	10	100.0	0	80.8	37.5	126	6.94	20	
Fluorene	76	10	100.0	0	76.2	45.3	110	9.19	20	
Hexachlorobenzene	80	5.0	100.0	0	79.6	30.3	126	1.93	20	
Hexachlorobutadiene	67	10	100.0	0	67.3	26.3	107	6.05	20	
Hexachlorocyclopentadiene	62	10	100.0	0	61.6	12.5	111	3.57	20	
Hexachloroethane	57	5.0	100.0	0	57.3	19.5	96.4	8.39	20	
Indeno(1,2,3-cd)pyrene	72	10	100.0	0	72.1	41.8	109	0.194	20	
Isophorone	72	10	100.0	0	72.0	36.9	119	0.473	20	
1-Methylnaphthalene	70	10	100.0	0	70.3	35	110	3.77	20	
2-Methylnaphthalene	68	10	100.0	0	68.4	37.8	109	2.26	20	
2-Methylphenol	65	5.0	100.0	0	65.1	28.7	108	6.86	20	
3+4-Methylphenol	63	5.0	100.0	0	62.7	24.2	136	14.7	20	
N-Nitrosodi-n-propylamine	64	10	100.0	0	63.9	38.5	105	10.2	20	
N-Nitrosodimethylamine	63	10	100.0	0	62.9	24.6	93.4	11.3	20	
N-Nitrosodiphenylamine	82	10	100.0	0	82.5	21.2	140	7.31	20	
Naphthalene	72	10	100.0	0	72.3	29.4	109	3.72	20	
2-Nitroaniline	75	10	100.0	0	74.8	35.5	121	4.46	20	
3-Nitroaniline	77	10	100.0	0	77.1	45.8	112	5.63	20	
4-Nitroaniline	78	20	100.0	0	78.5	36.6	143	1.70	20	
Nitrobenzene	71	5.0	100.0	0	70.8	28.8	119	13.6	20	
2-Nitrophenol	70	10	100.0	0	69.5	18.3	125	3.95	20	
4-Nitrophenol	27	10	100.0	3.560	23.7	11.6	73.1	0.515	20	
Pentachlorophenol	28	5.0	100.0	0	28.1	20.2	93	6.54	20	
Phenanthrene	84	10	100.0	3.360	81.1	36.2	124	6.53	20	
Phenol	50	10	100.0	0	50.2	23	66.1	6.44	20	
Pyrene	79	10	100.0	0	79.0	40.1	101	5.25	20	
Pyridine	50	5.0	100.0	0	50.3	19.3	82.8	6.28	20	
1,2,4-Trichlorobenzene	75	10	100.0	0	75.1	37.7	99.1	1.77	20	
2,4,5-Trichlorophenol	68	10	100.0	0	67.8	13.1	127	1.28	20	
2,4,6-Trichlorophenol	55	10	100.0	0	55.1	11.3	124	0	20	
Surr: 2,4,6-Tribromophenol	68		100.0		68.3	44.2	126	0		
Surr: 2-Fluorobiphenyl	73		100.0		73.4	37	114	0		
Surr: 2-Fluorophenol	53		100.0		52.8	23.4	98	0		
Surr: 4-Terphenyl-d14	97		100.0		97.0	41.3	116	0		
Surr: Nitrobenzene-d5	67		100.0		67.3	39.5	118	0		
Surr: Phenol-d5	50		100.0		50.4	20.9	95.9	0		

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1204A78**

10-May-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **mb-1** SampType: **MBLK** TestCode: **SM2320B: Alkalinity**

Client ID: **PBW** Batch ID: **R2482** RunNo: **2482**

Prep Date: Analysis Date: **4/30/2012** SeqNo: **68896** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20								

Sample ID **lcs-1** SampType: **LCS** TestCode: **SM2320B: Alkalinity**

Client ID: **LCSW** Batch ID: **R2482** RunNo: **2482**

Prep Date: Analysis Date: **4/30/2012** SeqNo: **68897** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	80	20	80.00	0	99.9	88.1	104			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Sample ID **MB-1780** SampType: **MBLK** TestCode: **SM2540C MOD: Total Dissolved Solids**

Client ID: **PBW** Batch ID: **1780** RunNo: **2554**

Prep Date: **5/2/2012** Analysis Date: **5/3/2012** SeqNo: **71078** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID **LCS-1780** SampType: **LCS** TestCode: **SM2540C MOD: Total Dissolved Solids**

Client ID: **LCSW** Batch ID: **1780** RunNo: **2554**

Prep Date: **5/2/2012** Analysis Date: **5/3/2012** SeqNo: **71079** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1,010	20.0	1,000	0	101	80	120			

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laborator
4901 Hawkins NE
Albuquerque, NM 8710
TEL: 505-345-3975 FAX: 505-345-410
Website: www.hallenvironmental.co

Sample Log-In Check List

Client Name: Western Refining Southwest, Inc Bloomfield   Work Order Number: 1204A78

Received by/date: AT 04/28/12

Logged By: Michelle Garcia 4/28/2012 Michelle Garcia

Completed By: Michelle Garcia 4/28/2012 11:02:28 AM Michelle Garcia

Reviewed By: AT 04/30/12

Chain of Custody

1. Were seals intact? Yes ☐ No ☐ Not Present ☑
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☑ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? Yes ☑ No ☐
(Note discrepancies on chain of custody)
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? Yes ☑ No ☐
(If no, notify customer for authorization.)

\# of preserved bottles checked for pH: 3
([✓ <2] or >12 unless noted)
Adjusted?
Checked by:

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:
Date:
By Whom:
Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

19. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining
kelly Robinson
Mailing Address: 111 CR 4990
Bloomfield, NM 87413
Phone #: 505-632-4166
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: GBR
Project #:
Project Manager: Ashley Ager
Sampler: Sam LaRue
On Ice: [illegible] ☐ No
Sample Temperature: [illegible]

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 120[illegible]	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	See Attached List				Air Bubbles (Y or N)
4/27/12	12:29	WT	GRW-6	8 various	various	-001												X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
4/27/12	13:30		Christine Wallace	4/27/12	13:30
4/27/12	1540	Christine Wallace		04/27/12	1030

Remarks: Please forward results to aager@wnr.com

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.

List of Analyses:

PAH

Method 8270

VOC

Method 8260

General Groundwater Chemistry

- pH
- EC
- TDS
- Alkalinity
- Hardness
- Anions
  - Bromide
  - Chloride
  - Sulfate
  - Fluoride
  - Nitrate/nitrite
  - phosphorus
- Cations
  - Calcium
  - Iron
  - Magnesium
  - Manganese
  - Potassium
  - sodium

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 24, 2012

Ashley Ager
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413
TEL: (970) 946-1093
FAX (505) 632-3911

RE: GBR OrderNo.: 1204286

Dear Ashley Ager:

Hall Environmental Analysis Laboratory received 3 sample(s) on 4/6/2012 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1204286**
Date Reported: **4/24/2012**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1204286-001
Matrix: AQUEOUS

Client Sample ID: Effluent
Collection Date: 4/5/2012 1:27:00 PM
Received Date: 4/6/2012 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Fluoride	0.56	0.10		mg/L	1	4/6/2012 9:49:59 PM
Chloride	76	10		mg/L	20	4/6/2012 10:27:14 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	4/6/2012 9:49:59 PM
Bromide	0.27	0.10		mg/L	1	4/6/2012 9:49:59 PM
Nitrogen, Nitrate (As N)	1.4	0.10		mg/L	1	4/6/2012 9:49:59 PM
Phosphorus, Orthophosphate (As P	ND	10		mg/L	20	4/6/2012 10:27:14 PM
Sulfate	1,600	25		mg/L	50	4/9/2012 9:07:42 PM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Calcium	370	10		mg/L	10	4/23/2012 12:35:46 PM
Iron	ND	0.020		mg/L	1	4/22/2012 1:18:03 PM
Magnesium	29	1.0		mg/L	1	4/23/2012 12:32:33 PM
Manganese	0.0044	0.0020		mg/L	1	4/22/2012 1:18:03 PM
Potassium	2.8	1.0		mg/L	1	4/23/2012 12:32:33 PM
Sodium	470	10		mg/L	10	4/23/2012 12:35:46 PM
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Benzene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
Toluene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
Ethylbenzene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
Naphthalene	ND	2.0		µg/L	1	4/7/2012 3:04:29 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	4/7/2012 3:04:29 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	4/7/2012 3:04:29 AM
Acetone	ND	10		µg/L	1	4/7/2012 3:04:29 AM
Bromobenzene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
Bromodichloromethane	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
Bromoform	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
Bromomethane	ND	3.0		µg/L	1	4/7/2012 3:04:29 AM
2-Butanone	ND	10		µg/L	1	4/7/2012 3:04:29 AM
Carbon disulfide	ND	10		µg/L	1	4/7/2012 3:04:29 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
Chlorobenzene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
Chloroethane	ND	2.0		µg/L	1	4/7/2012 3:04:29 AM
Chloroform	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
Chloromethane	ND	3.0		µg/L	1	4/7/2012 3:04:29 AM
2-Chlorotoluene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
4-Chlorotoluene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
cis-1,2-DCE	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: Effluent
Project: GBR
Collection Date: 4/5/2012 1:27:00 PM
Lab ID: 1204286-001
Matrix: AQUEOUS
Received Date: 4/6/2012 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/7/2012 3:04:29 AM
Dibromochloromethane	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
Dibromomethane	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	4/7/2012 3:04:29 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
2-Hexanone	ND	10		µg/L	1	4/7/2012 3:04:29 AM
Isopropylbenzene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	4/7/2012 3:04:29 AM
Methylene Chloride	ND	3.0		µg/L	1	4/7/2012 3:04:29 AM
n-Butylbenzene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
n-Propylbenzene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
sec-Butylbenzene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
Styrene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
tert-Butylbenzene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/7/2012 3:04:29 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
trans-1,2-DCE	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/7/2012 3:04:29 AM
Vinyl chloride	ND	1.0		µg/L	1	4/7/2012 3:04:29 AM
Xylenes, Total	ND	1.5		µg/L	1	4/7/2012 3:04:29 AM
Surr: 1,2-Dichloroethane-d4	97.7	70-130		%REC	1	4/7/2012 3:04:29 AM
Surr: 4-Bromofluorobenzene	120	70-130		%REC	1	4/7/2012 3:04:29 AM
Surr: Dibromofluoromethane	116	69.8-130		%REC	1	4/7/2012 3:04:29 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Analytical Report
Lab Order **1204286**
Date Reported: **4/24/2012**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1204286-001
Matrix: AQUEOUS
Client Sample ID: Effluent
Collection Date: 4/5/2012 1:27:00 PM
Received Date: 4/6/2012 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Surr: Toluene-d8	88.6	70-130		%REC	1	4/7/2012 3:04:29 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JLF**
Conductivity	3,100	0.010		µmhos/cm	1	4/18/2012 9:25:20 AM
SM4500-H+B: PH						Analyst: **JLF**
pH	7.65	1.68	H	pH units	1	4/11/2012 3:16:10 PM
SM2320B: ALKALINITY						Analyst: **JLF**
Bicarbonate (As CaCO3)	330	20		mg/L CaCO3	1	4/11/2012 3:16:10 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	4/11/2012 3:16:10 PM
Total Alkalinity (as CaCO3)	330	20		mg/L CaCO3	1	4/11/2012 3:16:10 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2,780	20.0		mg/L	1	4/12/2012 5:59:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Influent
Project: GBR **Collection Date:** 4/5/2012 1:37:00 PM
Lab ID: 1204286-002 **Matrix:** AQUEOUS **Received Date:** 4/6/2012 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Fluoride	0.59	0.10		mg/L	1	4/6/2012 10:39:39 PM
Chloride	77	10		mg/L	20	4/6/2012 10:52:03 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	4/6/2012 10:39:39 PM
Bromide	0.25	0.10		mg/L	1	4/6/2012 10:39:39 PM
Nitrogen, Nitrate (As N)	1.5	0.10		mg/L	1	4/6/2012 10:39:39 PM
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	4/6/2012 10:52:03 PM
Sulfate	1,500	25		mg/L	50	4/9/2012 9:18:56 PM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Calcium	380	10		mg/L	10	4/23/2012 12:42:10 PM
Iron	0.023	0.020		mg/L	1	4/22/2012 1:21:17 PM
Magnesium	29	1.0		mg/L	1	4/23/2012 12:38:57 PM
Manganese	0.0081	0.0020		mg/L	1	4/22/2012 1:21:17 PM
Potassium	2.6	1.0		mg/L	1	4/23/2012 12:38:57 PM
Sodium	480	10		mg/L	10	4/23/2012 12:42:10 PM
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Benzene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
Toluene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
Ethylbenzene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
Naphthalene	ND	2.0		µg/L	1	4/7/2012 3:32:45 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	4/7/2012 3:32:45 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	4/7/2012 3:32:45 AM
Acetone	ND	10		µg/L	1	4/7/2012 3:32:45 AM
Bromobenzene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
Bromodichloromethane	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
Bromoform	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
Bromomethane	ND	3.0		µg/L	1	4/7/2012 3:32:45 AM
2-Butanone	ND	10		µg/L	1	4/7/2012 3:32:45 AM
Carbon disulfide	ND	10		µg/L	1	4/7/2012 3:32:45 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
Chlorobenzene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
Chloroethane	ND	2.0		µg/L	1	4/7/2012 3:32:45 AM
Chloroform	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
Chloromethane	ND	3.0		µg/L	1	4/7/2012 3:32:45 AM
2-Chlorotoluene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
4-Chlorotoluene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
cis-1,2-DCE	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1204286-002
Matrix: AQUEOUS

Client Sample ID: Influent
Collection Date: 4/5/2012 1:37:00 PM
Received Date: 4/6/2012 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/7/2012 3:32:45 AM
Dibromochloromethane	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
Dibromomethane	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	4/7/2012 3:32:45 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
2-Hexanone	ND	10		µg/L	1	4/7/2012 3:32:45 AM
Isopropylbenzene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	4/7/2012 3:32:45 AM
Methylene Chloride	ND	3.0		µg/L	1	4/7/2012 3:32:45 AM
n-Butylbenzene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
n-Propylbenzene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
sec-Butylbenzene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
Styrene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
tert-Butylbenzene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/7/2012 3:32:45 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
trans-1,2-DCE	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/7/2012 3:32:45 AM
Vinyl chloride	ND	1.0		µg/L	1	4/7/2012 3:32:45 AM
Xylenes, Total	ND	1.5		µg/L	1	4/7/2012 3:32:45 AM
Surr: 1,2-Dichloroethane-d4	110	70-130		%REC	1	4/7/2012 3:32:45 AM
Surr: 4-Bromofluorobenzene	107	70-130		%REC	1	4/7/2012 3:32:45 AM
Surr: Dibromofluoromethane	118	69.8-130		%REC	1	4/7/2012 3:32:45 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Analytical Report
Lab Order **1204286**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: **4/24/2012**

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1204286-002
Matrix: AQUEOUS

Client Sample ID: Influent
Collection Date: 4/5/2012 1:37:00 PM
Received Date: 4/6/2012 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Surr: Toluene-d8	101	70-130		%REC	1	4/7/2012 3:32:45 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JLF**
Conductivity	3,100	0.010		µmhos/cm	1	4/18/2012 9:29:37 AM
SM4500-H+B: PH						Analyst: **JLF**
pH	7.60	1.68	H	pH units	1	4/11/2012 3:30:28 PM
SM2320B: ALKALINITY						Analyst: **JLF**
Bicarbonate (As CaCO3)	330	20		mg/L CaCO3	1	4/11/2012 3:30:28 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	4/11/2012 3:30:28 PM
Total Alkalinity (as CaCO3)	330	20		mg/L CaCO3	1	4/11/2012 3:30:28 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2,770	20.0		mg/L	1	4/12/2012 5:59:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Trip Blank
Project: GBR **Collection Date:**
Lab ID: 1204286-003 **Matrix:** TRIP BLANK **Received Date:** 4/6/2012 9:30:00 AM

Analyses	**Result**	**RL**	**Qual**	**Units**	**DF**	**Date Analyzed**
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Benzene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
Toluene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
Ethylbenzene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
Naphthalene	ND	2.0		µg/L	1	4/7/2012 4:00:57 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	4/7/2012 4:00:57 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	4/7/2012 4:00:57 AM
Acetone	ND	10		µg/L	1	4/7/2012 4:00:57 AM
Bromobenzene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
Bromodichloromethane	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
Bromoform	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
Bromomethane	ND	3.0		µg/L	1	4/7/2012 4:00:57 AM
2-Butanone	ND	10		µg/L	1	4/7/2012 4:00:57 AM
Carbon disulfide	ND	10		µg/L	1	4/7/2012 4:00:57 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
Chlorobenzene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
Chloroethane	ND	2.0		µg/L	1	4/7/2012 4:00:57 AM
Chloroform	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
Chloromethane	ND	3.0		µg/L	1	4/7/2012 4:00:57 AM
2-Chlorotoluene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
4-Chlorotoluene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
cis-1,2-DCE	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/7/2012 4:00:57 AM
Dibromochloromethane	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
Dibromomethane	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	4/7/2012 4:00:57 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
2-Hexanone	ND	10		µg/L	1	4/7/2012 4:00:57 AM

Qualifiers:	*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Trip Blank
Project: GBR **Collection Date:**
Lab ID: 1204286-003 **Matrix:** TRIP BLANK **Received Date:** 4/6/2012 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JDJ**
Isopropylbenzene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	4/7/2012 4:00:57 AM
Methylene Chloride	ND	3.0		µg/L	1	4/7/2012 4:00:57 AM
n-Butylbenzene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
n-Propylbenzene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
sec-Butylbenzene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
Styrene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
tert-Butylbenzene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/7/2012 4:00:57 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
trans-1,2-DCE	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/7/2012 4:00:57 AM
Vinyl chloride	ND	1.0		µg/L	1	4/7/2012 4:00:57 AM
Xylenes, Total	ND	1.5		µg/L	1	4/7/2012 4:00:57 AM
Surr: 1,2-Dichloroethane-d4	89.4	70-130		%REC	1	4/7/2012 4:00:57 AM
Surr: 4-Bromofluorobenzene	102	70-130		%REC	1	4/7/2012 4:00:57 AM
Surr: Dibromofluoromethane	98.1	69.8-130		%REC	1	4/7/2012 4:00:57 AM
Surr: Toluene-d8	101	70-130		%REC	1	4/7/2012 4:00:57 AM

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1204286**

24-Apr-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **ICV CAT** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**

Client ID: **PBW** Batch ID: **R2304** RunNo: **2304**

Prep Date: Analysis Date: **4/23/2012** SeqNo: **64021** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0								
Magnesium	50	1.0								
Potassium	49	1.0								
Sodium	49	1.0								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**

Client ID: **PBW** Batch ID: **R2304** RunNo: **2304**

Prep Date: Analysis Date: **4/23/2012** SeqNo: **64026** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **R2304** RunNo: **2304**

Prep Date: Analysis Date: **4/23/2012** SeqNo: **64027** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	54	1.0	50.00	0	107	85	115			
Magnesium	56	1.0	50.00	0	111	85	115			
Potassium	54	1.0	50.00	0	109	85	115			
Sodium	55	1.0	50.00	0	111	85	115			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1204286**

24-Apr-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBW** Batch ID: **R1985** RunNo: **1985**

Prep Date: Analysis Date: **4/6/2012** SeqNo: **55349** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSW** Batch ID: **R1985** RunNo: **1985**

Prep Date: Analysis Date: **4/6/2012** SeqNo: **55350** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	101	90	110			
Chloride	4.8	0.50	5.000	0	96.7	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	97.3	90	110			
Bromide	2.4	0.10	2.500	0	97.8	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.5	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.3	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBW** Batch ID: **R1985** RunNo: **1985**

Prep Date: Analysis Date: **4/6/2012** SeqNo: **55468** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSW** Batch ID: **R1985** RunNo: **1985**

Prep Date: Analysis Date: **4/6/2012** SeqNo: **55479** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Chloride	4.6	0.50	5.000	0	92.9	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.5	90	110			
Bromide	2.4	0.10	2.500	0	94.4	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	95.6	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.8	90	110			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1204286**

24-Apr-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBW** Batch ID: **R2017** RunNo: **2017**

Prep Date: Analysis Date: **4/9/2012** SeqNo: **56199** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSW** Batch ID: **R2017** RunNo: **2017**

Prep Date: Analysis Date: **4/9/2012** SeqNo: **56200** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.3	0.50	10.00	0	93.3	90	110			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1204286**

24-Apr-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID	**5ml rb**	SampType:	**MBLK**	TestCode:	**EPA Method 8260B: VOLATILES**
Client ID:	**PBW**	Batch ID:	**R1980**	RunNo:	**1980**
Prep Date:		Analysis Date:	**4/6/2012**	SeqNo:	**55138** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1204286**

24-Apr-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **5ml rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R1980**	RunNo: **1980**	
Prep Date:	Analysis Date: **4/6/2012**	SeqNo: **55138**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		115	70	130			
Surr: Dibromofluoromethane	11		10.00		107	69.8	130			
Surr: Toluene-d8	8.7		10.00		87.1	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **LCSW**	Batch ID: **R1980**	RunNo: **1980**	
Prep Date:	Analysis Date: **4/6/2012**	SeqNo: **55139**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	97.3	84.1	126			
Toluene	19	1.0	20.00	0	97.2	80	120			
Chlorobenzene	21	1.0	20.00	0	104	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	97.9	83	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.2	76.2	119			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		92.6	70	130			
Surr: 4-Bromofluorobenzene	13		10.00		127	70	130			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **LCSW** Batch ID: **R1980** RunNo: **1980**

Prep Date: Analysis Date: **4/6/2012** SeqNo: **55139** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	10		10.00		103	69.8	130			
Surr: Toluene-d8	9.4		10.00		93.5	70	130			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1204286**

24-Apr-12

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **mb-1**		SampType: **MBLK**		TestCode: **SM2320B: Alkalinity**						
Client ID: **PBW**		Batch ID: **R2080**		RunNo: **2080**						
Prep Date:		Analysis Date: **4/11/2012**		SeqNo: **57736**		Units: **mg/L CaCO3**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20								

Sample ID **lcs-1**		SampType: **LCS**		TestCode: **SM2320B: Alkalinity**						
Client ID: **LCSW**		Batch ID: **R2080**		RunNo: **2080**						
Prep Date:		Analysis Date: **4/11/2012**		SeqNo: **57737**		Units: **mg/L CaCO3**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79	20	80.00	0	98.8	88.1	104			

Sample ID **lcsd-1**		SampType: **LCSD**		TestCode: **SM2320B: Alkalinity**						
Client ID: **LCSS02**		Batch ID: **R2080**		RunNo: **2080**						
Prep Date:		Analysis Date: **4/11/2012**		SeqNo: **57738**		Units: **mg/L CaCO3**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	80	20	80.00	0	99.8	88.1	104	1.11	20	

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1204286**

24-Apr-12

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **MB-1474** SampType: **MBLK** TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW** Batch ID: **1474** RunNo: **2100**
Prep Date: **4/11/2012** Analysis Date: **4/12/2012** SeqNo: **58150** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID **LCS-1474** SampType: **LCS** TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW** Batch ID: **1474** RunNo: **2100**
Prep Date: **4/11/2012** Analysis Date: **4/12/2012** SeqNo: **58151** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1,020	20.0	1,000	0	102	80	120			

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laborator
4901 Hawkins NE
Albuquerque, NM 8710
TEL: 505-345-3975 FAX: 505-345-410
Website: www.hallenvironmental.con

Sample Log-In Check List

Client Name: Western Refining Southwest, Inc Bloomfield **Work Order Number:** 1204286

Received by/date: 04/06/12

Logged By: Lindsay Mangin 4/6/2012 9:30:00 AM

Completed By: Lindsay Mangin 4/6/2012 1:07:42 PM

Reviewed By: Mg 04/06/12

Chain of Custody

1. Were seals intact? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? FedEx

Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☑ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? Yes ☑ No ☐
   (Note discrepancies on chain of custody)
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? Yes ☑ No ☐
   (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 2
([✓ <2] or >12 unless noted)
Adjusted? —
Checked by:

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:
Date:
By Whom:
Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

19. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining

Mailing Address: 111 CR 4990
Bloomfield NM 87413

Phone #:

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: GBR

Project #:

Project Manager: Ashley Ager

Sampler: Devin Henemann

On Ice: ☒ Yes

Sample Temperature: 5.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1204[illegible]
/5/12	1327	AQ	Effluent	6 total	Various	-001
/5/12	1337	AQ	Influent	6 total	Various	-002
/5/12		AQ	trip Blank		HCL	-003

Analysis Request

Sample Request ID	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	8260 (VOC)	anions, Cations, Fe, Mn	TDS, Alk, EC, pH		Air Bubbles (Y or N)
Effluent												X	X	X		
Influent												X	X	X		
trip Blank												X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
/5/12	1411		Christie Wheeler	4/5/12	1411
4/5/12	1537	Christie Wheeler		04/06/12	0930

Remarks: Please forward Results to aager@ltenv.com

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 27, 2012

Ashley Ager
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413
TEL: (970) 946-1093
FAX (505) 632-3911

RE: GBR OrderNo.: 1207B48

Dear Ashley Ager:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/26/2012 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Effluent
Project: GBR **Collection Date:** 7/25/2012 12:30:00 PM
Lab ID: 1207B48-001 **Matrix:** AQUEOUS **Received Date:** 7/26/2012 9:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **SRM**
Fluoride	0.61	0.10		mg/L	1	7/28/2012 1:14:38 AM
Chloride	81	10		mg/L	20	7/26/2012 6:09:24 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	7/26/2012 5:56:59 PM
Bromide	0.31	0.10		mg/L	1	7/26/2012 5:56:59 PM
Nitrogen, Nitrate (As N)	1.6	0.10		mg/L	1	7/26/2012 5:56:59 PM
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	7/26/2012 6:09:24 PM
Sulfate	1600	50		mg/L	100	7/28/2012 1:27:02 AM
EPA METHOD 200.7: METALS						Analyst: **JLF**
Calcium	370	5.0		mg/L	5	8/17/2012 10:50:54 AM
Iron	ND	0.020		mg/L	1	8/17/2012 10:47:05 AM
Magnesium	33	1.0		mg/L	1	8/17/2012 10:47:05 AM
Manganese	0.0035	0.0020		mg/L	1	8/17/2012 10:47:05 AM
Potassium	3.6	1.0		mg/L	1	8/17/2012 10:47:05 AM
Sodium	470	5.0		mg/L	5	8/17/2012 10:50:54 AM
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
Toluene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
Ethylbenzene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
Naphthalene	ND	2.0		µg/L	1	7/31/2012 2:36:45 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	7/31/2012 2:36:45 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	7/31/2012 2:36:45 AM
Acetone	ND	10		µg/L	1	7/31/2012 2:36:45 AM
Bromobenzene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
Bromodichloromethane	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
Bromoform	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
Bromomethane	ND	3.0		µg/L	1	7/31/2012 2:36:45 AM
2-Butanone	ND	10		µg/L	1	7/31/2012 2:36:45 AM
Carbon disulfide	ND	10		µg/L	1	7/31/2012 2:36:45 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
Chlorobenzene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
Chloroethane	ND	2.0		µg/L	1	7/31/2012 2:36:45 AM
Chloroform	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
Chloromethane	ND	3.0		µg/L	1	7/31/2012 2:36:45 AM
2-Chlorotoluene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
4-Chlorotoluene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
cis-1,2-DCE	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits
	X	Value exceeds Maximum Contaminant Level.		

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1207B48-001
Matrix: AQUEOUS
Client Sample ID: Effluent
Collection Date: 7/25/2012 12:30:00 PM
Received Date: 7/26/2012 9:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/31/2012 2:36:45 AM
Dibromochloromethane	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
Dibromomethane	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	7/31/2012 2:36:45 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
2-Hexanone	ND	10		µg/L	1	7/31/2012 2:36:45 AM
Isopropylbenzene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	7/31/2012 2:36:45 AM
Methylene Chloride	ND	3.0		µg/L	1	7/31/2012 2:36:45 AM
n-Butylbenzene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
n-Propylbenzene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
sec-Butylbenzene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
Styrene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
tert-Butylbenzene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/31/2012 2:36:45 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
trans-1,2-DCE	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/31/2012 2:36:45 AM
Vinyl chloride	ND	1.0		µg/L	1	7/31/2012 2:36:45 AM
Xylenes, Total	ND	1.5		µg/L	1	7/31/2012 2:36:45 AM
Surr: 1,2-Dichloroethane-d4	78.7	70-130		%REC	1	7/31/2012 2:36:45 AM
Surr: 4-Bromofluorobenzene	78.8	70-130		%REC	1	7/31/2012 2:36:45 AM
Surr: Dibromofluoromethane	79.3	70-130		%REC	1	7/31/2012 2:36:45 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits
X	Value exceeds Maximum Contaminant Level.		

Hall Environmental Analysis Laboratory, Inc.

Date Reported: **8/27/2012**

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	Effluent
Project:	GBR	**Collection Date:**	7/25/2012 12:30:00 PM
Lab ID:	1207B48-001 **Matrix:** AQUEOUS	**Received Date:**	7/26/2012 9:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Surr: Toluene-d8	82.8	70-130		%REC	1	7/31/2012 2:36:45 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **DBD**
Conductivity	3200	0.010		µmhos/cm	1	7/30/2012 12:29:01 PM
SM4500-H+B: PH						Analyst: **DBD**
pH	7.52	1.68	H	pH units	1	7/30/2012 12:29:01 PM
SM2320B: ALKALINITY						Analyst: **DBD**
Bicarbonate (As CaCO3)	330	20		mg/L CaCO3	1	7/30/2012 12:29:01 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	7/30/2012 12:29:01 PM
Total Alkalinity (as CaCO3)	330	20		mg/L CaCO3	1	7/30/2012 12:29:01 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2770	20.0		mg/L	1	7/29/2012 1:56:00 PM

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: Influent
Project: GBR
Collection Date: 7/25/2012 12:30:00 PM
Lab ID: 1207B48-002
Matrix: AQUEOUS
Received Date: 7/26/2012 9:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **SRM**
Fluoride	0.59	0.10		mg/L	1	7/28/2012 1:39:27 AM
Chloride	81	10		mg/L	20	7/26/2012 6:34:13 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	7/26/2012 6:21:48 PM
Bromide	0.31	0.10		mg/L	1	7/26/2012 6:21:48 PM
Nitrogen, Nitrate (As N)	1.7	0.10		mg/L	1	7/26/2012 6:21:48 PM
Phosphorus, Orthophosphate (As P	ND	10		mg/L	20	7/26/2012 6:34:13 PM
Sulfate	1500	50		mg/L	100	7/28/2012 1:51:51 AM
EPA METHOD 200.7: METALS						Analyst: **JLF**
Calcium	380	5.0		mg/L	5	8/17/2012 10:58:17 AM
Iron	0.067	0.020		mg/L	1	8/17/2012 10:54:27 AM
Magnesium	32	1.0		mg/L	1	8/17/2012 10:54:27 AM
Manganese	0.052	0.0020	X	mg/L	1	8/17/2012 10:54:27 AM
Potassium	3.3	1.0		mg/L	1	8/17/2012 10:54:27 AM
Sodium	460	5.0		mg/L	5	8/17/2012 10:58:17 AM
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
Toluene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
Ethylbenzene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
Naphthalene	ND	2.0		µg/L	1	7/31/2012 3:04:29 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	7/31/2012 3:04:29 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	7/31/2012 3:04:29 AM
Acetone	ND	10		µg/L	1	7/31/2012 3:04:29 AM
Bromobenzene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
Bromodichloromethane	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
Bromoform	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
Bromomethane	ND	3.0		µg/L	1	7/31/2012 3:04:29 AM
2-Butanone	ND	10		µg/L	1	7/31/2012 3:04:29 AM
Carbon disulfide	ND	10		µg/L	1	7/31/2012 3:04:29 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
Chlorobenzene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
Chloroethane	ND	2.0		µg/L	1	7/31/2012 3:04:29 AM
Chloroform	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
Chloromethane	ND	3.0		µg/L	1	7/31/2012 3:04:29 AM
2-Chlorotoluene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
4-Chlorotoluene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
cis-1,2-DCE	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits
X	Value exceeds Maximum Contaminant Level.		

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Influent
Project: GBR **Collection Date:** 7/25/2012 12:30:00 PM
Lab ID: 1207B48-002 **Matrix:** AQUEOUS **Received Date:** 7/26/2012 9:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/31/2012 3:04:29 AM
Dibromochloromethane	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
Dibromomethane	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	7/31/2012 3:04:29 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
2-Hexanone	ND	10		µg/L	1	7/31/2012 3:04:29 AM
Isopropylbenzene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	7/31/2012 3:04:29 AM
Methylene Chloride	ND	3.0		µg/L	1	7/31/2012 3:04:29 AM
n-Butylbenzene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
n-Propylbenzene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
sec-Butylbenzene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
Styrene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
tert-Butylbenzene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/31/2012 3:04:29 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
trans-1,2-DCE	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/31/2012 3:04:29 AM
Vinyl chloride	ND	1.0		µg/L	1	7/31/2012 3:04:29 AM
Xylenes, Total	ND	1.5		µg/L	1	7/31/2012 3:04:29 AM
Surr: 1,2-Dichloroethane-d4	80.2	70-130		%REC	1	7/31/2012 3:04:29 AM
Surr: 4-Bromofluorobenzene	79.6	70-130		%REC	1	7/31/2012 3:04:29 AM
Surr: Dibromofluoromethane	72.2	70-130		%REC	1	7/31/2012 3:04:29 AM

Analytical Report
Lab Order **1207B48**
Date Reported: **8/27/2012**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1207B48-002
Matrix: AQUEOUS

Client Sample ID: Influent
Collection Date: 7/25/2012 12:30:00 PM
Received Date: 7/26/2012 9:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Surr: Toluene-d8	82.7	70-130		%REC	1	7/31/2012 3:04:29 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **DBD**
Conductivity	3200	0.010		µmhos/cm	1	7/30/2012 12:43:34 PM
SM4500-H+B: PH						Analyst: **DBD**
pH	7.60	1.68	H	pH units	1	7/30/2012 12:43:34 PM
SM2320B: ALKALINITY						Analyst: **DBD**
Bicarbonate (As CaCO3)	330	20		mg/L CaCO3	1	7/30/2012 12:43:34 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	7/30/2012 12:43:34 PM
Total Alkalinity (as CaCO3)	330	20		mg/L CaCO3	1	7/30/2012 12:43:34 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2780	20.0		mg/L	1	7/29/2012 1:56:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits
X	Value exceeds Maximum Contaminant Level.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207B48**

27-Aug-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**

Client ID: **PBW** Batch ID: **R4938** RunNo: **4938**

Prep Date: Analysis Date: **8/17/2012** SeqNo: **139688** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **R4938** RunNo: **4938**

Prep Date: Analysis Date: **8/17/2012** SeqNo: **139689** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	99.1	85	115			
Iron	0.48	0.020	0.5000	0	96.8	85	115			
Magnesium	50	1.0	50.00	0	99.9	85	115			
Manganese	0.48	0.0020	0.5000	0	95.4	85	115			
Potassium	49	1.0	50.00	0	97.5	85	115			
Sodium	49	1.0	50.00	0	98.4	85	115			

Sample ID **1207807-002BMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **R4938** RunNo: **4938**

Prep Date: Analysis Date: **8/17/2012** SeqNo: **139715** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	300	5.0	250.0	60.01	97.5	70	130			

Sample ID **1207807-002BMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **R4938** RunNo: **4938**

Prep Date: Analysis Date: **8/17/2012** SeqNo: **139716** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	320	5.0	250.0	60.01	103	70	130	4.43	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207B48**

27-Aug-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R4938**	RunNo: **4938**
Prep Date:	Analysis Date: **8/17/2012**	SeqNo: **139690** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R4938**	RunNo: **4938**
Prep Date:	Analysis Date: **8/17/2012**	SeqNo: **139691** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	100	85	115			
Iron	0.49	0.020	0.5000	0	98.6	85	115			
Magnesium	50	1.0	50.00	0	101	85	115			
Manganese	0.49	0.0020	0.5000	0	97.2	85	115			
Potassium	49	1.0	50.00	0	98.8	85	115			
Sodium	50	1.0	50.00	0	99.5	85	115			

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207B48**

27-Aug-12

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R4455** RunNo: **4455**
Prep Date: Analysis Date: **7/26/2012** SeqNo: **124363** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R4455** RunNo: **4455**
Prep Date: Analysis Date: **7/26/2012** SeqNo: **124364** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	97.9	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.0	90	110			
Bromide	2.5	0.10	2.500	0	100	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	104	90	110			
Phosphorus, Orthophosphate (As P	5.1	0.50	5.000	0	102	90	110			

Sample ID **1207B25-002AMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R4455** RunNo: **4455**
Prep Date: Analysis Date: **7/26/2012** SeqNo: **124366** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.8	0.10	2.500	0.2037	105	83.3	107			

Sample ID **1207B25-002AMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R4455** RunNo: **4455**
Prep Date: Analysis Date: **7/26/2012** SeqNo: **124367** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.9	0.10	2.500	0.2037	107	83.3	107	1.50	20	

Sample ID **1207B24-002AMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R4455** RunNo: **4455**
Prep Date: Analysis Date: **7/26/2012** SeqNo: **124369** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.6	0.10	2.500	0.1728	95.3	83.3	107			

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207B48**

27-Aug-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **1207B24-002AMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R4455** RunNo: **4455**
Prep Date: Analysis Date: **7/26/2012** SeqNo: **124370** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.6	0.10	2.500	0.1728	97.6	83.3	107	2.26	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R4455** RunNo: **4455**
Prep Date: Analysis Date: **7/27/2012** SeqNo: **124430** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R4455** RunNo: **4455**
Prep Date: Analysis Date: **7/27/2012** SeqNo: **124431** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	97.7	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.3	90	110			
Bromide	2.5	0.10	2.500	0	100	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	103	90	110			
Phosphorus, Orthophosphate (As P	5.2	0.50	5.000	0	103	90	110			

Sample ID **1207B80-007AMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R4455** RunNo: **4455**
Prep Date: Analysis Date: **7/27/2012** SeqNo: **124441** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	0.87	0.10	1.000	0	86.7	72.5	111			
Bromide	2.9	0.10	2.500	0.4442	96.4	83.3	107			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	91.9	74.5	115			

Sample ID **1207B80-007AMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R4455** RunNo: **4455**
Prep Date: Analysis Date: **7/27/2012** SeqNo: **124442** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	0.88	0.10	1.000	0	88.4	72.5	111	1.89	20	
Bromide	2.8	0.10	2.500	0.4442	95.5	83.3	107	0.724	20	
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.3	74.5	115	2.55	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**
Client ID:	**PBW**	Batch ID:	**R4501**	RunNo:	**4501**
Prep Date:		Analysis Date:	**7/27/2012**	SeqNo:	**126140** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Sulfate	ND	0.50								

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**
Client ID:	**LCSW**	Batch ID:	**R4501**	RunNo:	**4501**
Prep Date:		Analysis Date:	**7/27/2012**	SeqNo:	**126141** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Sulfate	10	0.50	10.00	0	99.8	90	110			

Sample ID	**1207B94-001AMS**	SampType:	**MS**	TestCode:	**EPA Method 300.0: Anions**
Client ID:	**BatchQC**	Batch ID:	**R4501**	RunNo:	**4501**
Prep Date:		Analysis Date:	**7/27/2012**	SeqNo:	**126143** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.58	0.10	0.5000	0	115	76.6	110			S
Sulfate	37	0.50	10.00	26.28	111	84.6	122			

Sample ID	**1207B94-001AMSD**	SampType:	**MSD**	TestCode:	**EPA Method 300.0: Anions**
Client ID:	**BatchQC**	Batch ID:	**R4501**	RunNo:	**4501**
Prep Date:		Analysis Date:	**7/27/2012**	SeqNo:	**126144** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.59	0.10	0.5000	0	118	76.6	110	2.09	20	S
Sulfate	38	0.50	10.00	26.28	113	84.6	122	0.506	20	

Sample ID	**1207C08-001BMS**	SampType:	**MS**	TestCode:	**EPA Method 300.0: Anions**
Client ID:	**BatchQC**	Batch ID:	**R4501**	RunNo:	**4501**
Prep Date:		Analysis Date:	**7/27/2012**	SeqNo:	**126147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.61	0.10	0.5000	0.1539	91.0	76.6	110			

Sample ID	**1207C08-001BMSD**	SampType:	**MSD**	TestCode:	**EPA Method 300.0: Anions**
Client ID:	**BatchQC**	Batch ID:	**R4501**	RunNo:	**4501**
Prep Date:		Analysis Date:	**7/27/2012**	SeqNo:	**126148** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.62	0.10	0.5000	0.1539	92.8	76.6	110	1.43	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207B48**

27-Aug-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **b2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**			
Client ID: **PBS**	Batch ID: **R4514**	RunNo: **4514**			
Prep Date:	Analysis Date: **7/30/2012**	SeqNo: **127896**	Units: **mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.050								
Benzene	ND	0.050								
1,2-Dichloroethane (EDC)	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
1,2-Dibromoethane (EDB)	ND	0.050								
1,2,4-Trimethylbenzene	ND	0.050								
1,3,5-Trimethylbenzene	ND	0.050								
Naphthalene	ND	0.10								
2-Methylnaphthalene	ND	0.20								
1-Methylnaphthalene	ND	0.20								
Surr: 1,2-Dichloroethane-d4	0.41		0.5000		82.8	70	130			
Surr: 4-Bromofluorobenzene	0.40		0.5000		80.5	70	130			
Surr: Dibromofluoromethane	0.39		0.5000		78.8	70	130			
Surr: Toluene-d8	0.41		0.5000		81.2	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: Volatiles Short List**			
Client ID: **LCSS**	Batch ID: **R4514**	RunNo: **4514**			
Prep Date:	Analysis Date: **7/30/2012**	SeqNo: **127897**	Units: **mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.050	1.000	0	97.0	70.7	123			
Toluene	1.0	0.050	1.000	0	102	80	120			
Surr: 1,2-Dichloroethane-d4	0.42		0.5000		83.1	70	130			
Surr: 4-Bromofluorobenzene	0.41		0.5000		81.7	70	130			
Surr: Dibromofluoromethane	0.38		0.5000		76.8	70	130			
Surr: Toluene-d8	0.41		0.5000		82.4	70	130			

Sample ID **1207c51-001ams**	SampType: **MS**	TestCode: **EPA Method 8260B: Volatiles Short List**			
Client ID: **BatchQC**	Batch ID: **R4514**	RunNo: **4514**			
Prep Date:	Analysis Date: **7/30/2012**	SeqNo: **127898**	Units: **mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	6.7	0.50	7.145	0	93.1	81.3	119			
Toluene	7.1	0.50	7.145	0	98.8	75	121			
Surr: 1,2-Dichloroethane-d4	3.1		3.573		87.5	70	130			
Surr: 4-Bromofluorobenzene	5.1		3.573		143	70	130			S
Surr: Dibromofluoromethane	2.9		3.573		81.4	70	130			
Surr: Toluene-d8	2.9		3.573		80.7	70	130			

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **1207c51-001amsd** SampType: **MSD** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC** Batch ID: **R4514** RunNo: **4514**
Prep Date: Analysis Date: **7/30/2012** SeqNo: **127899** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	6.5	0.50	7.145	0	91.5	81.3	119	1.68	15.7	
Toluene	7.5	0.50	7.145	0	105	75	121	6.31	16.2	
Surr: 1,2-Dichloroethane-d4	2.8		3.573		79.7	70	130	0	0	
Surr: 4-Bromofluorobenzene	4.9		3.573		137	70	130	0	0	S
Surr: Dibromofluoromethane	2.8		3.573		77.9	70	130	0	0	
Surr: Toluene-d8	2.9		3.573		82.3	70	130	0	0	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207B48**

27-Aug-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID	**b2**	SampType:	**MBLK**	TestCode:	**EPA Method 8260B: VOLATILES**
Client ID:	**PBW**	Batch ID:	**R4514**	RunNo:	**4514**
Prep Date:		Analysis Date:	**7/30/2012**	SeqNo:	**128008** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207B48**

27-Aug-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **b2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R4514**	RunNo: **4514**
Prep Date:	Analysis Date: **7/30/2012**	SeqNo: **128008** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.3		10.00		82.8	70	130			
Surr: 4-Bromofluorobenzene	8.0		10.00		80.5	70	130			
Surr: Dibromofluoromethane	7.9		10.00		78.8	70	130			
Surr: Toluene-d8	8.1		10.00		81.2	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R4514**	RunNo: **4514**
Prep Date:	Analysis Date: **7/30/2012**	SeqNo: **128011** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	97.0	84.1	126			
Toluene	20	1.0	20.00	0	102	80	120			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.6	83	130			
Trichloroethene (TCE)	17	1.0	20.00	0	85.0	76.2	119			
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.1	70	130			
Surr: 4-Bromofluorobenzene	8.2		10.00		81.7	70	130			

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207B48**

27-Aug-12

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R4514** RunNo: **4514**
Prep Date: Analysis Date: **7/30/2012** SeqNo: **128011** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	7.7		10.00		76.8	70	130			
Surr: Toluene-d8	8.2		10.00		82.4	70	130			

Sample ID **1207c85-001ams** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **BatchQC** Batch ID: **R4514** RunNo: **4514**
Prep Date: Analysis Date: **7/30/2012** SeqNo: **128012** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlorobenzene	210	10	200.0	0	103	70	130			
1,1-Dichloroethene	160	10	200.0	0	81.6	70	130			
Trichloroethene (TCE)	170	10	200.0	0	84.9	70	130			
Surr: 1,2-Dichloroethane-d4	80		100.0		80.0	70	130			
Surr: 4-Bromofluorobenzene	80		100.0		80.1	70	130			
Surr: Dibromofluoromethane	75		100.0		75.1	70	130			
Surr: Toluene-d8	82		100.0		81.6	70	130			

Sample ID **1207c85-001amsd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **BatchQC** Batch ID: **R4514** RunNo: **4514**
Prep Date: Analysis Date: **7/30/2012** SeqNo: **128013** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlorobenzene	180	10	200.0	0	90.9	70	130	12.5	19.5	
1,1-Dichloroethene	160	10	200.0	0	78.3	70	130	4.05	16.7	
Trichloroethene (TCE)	160	10	200.0	0	79.9	70	130	6.05	17.5	
Surr: 1,2-Dichloroethane-d4	80		100.0		80.0	70	130	0	0	
Surr: 4-Bromofluorobenzene	74		100.0		74.2	70	130	0	0	
Surr: Dibromofluoromethane	60		100.0		59.8	70	130	0	0	S
Surr: Toluene-d8	81		100.0		80.7	70	130	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **1207B39-001C dup**		SampType: **DUP**			TestCode: **EPA 120.1: Specific Conductance**					
Client ID: **BatchQC**		Batch ID: **R4521**			RunNo: **4521**					
Prep Date:		Analysis Date: **7/30/2012**			SeqNo: **126649**		Units: **µmhos/cm**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	3800	0.010						0.674	20	

Sample ID **1207B93-001A dup**		SampType: **DUP**			TestCode: **EPA 120.1: Specific Conductance**					
Client ID: **BatchQC**		Batch ID: **R4521**			RunNo: **4521**					
Prep Date:		Analysis Date: **7/30/2012**			SeqNo: **126661**		Units: **µmhos/cm**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	3700	0.010						5.09	20	

Sample ID **1207B93-017A dup**		SampType: **DUP**			TestCode: **EPA 120.1: Specific Conductance**					
Client ID: **BatchQC**		Batch ID: **R4521**			RunNo: **4521**					
Prep Date:		Analysis Date: **7/31/2012**			SeqNo: **126678**		Units: **µmhos/cm**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	2300	0.010						3.74	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207B48**

27-Aug-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **b2** SampType: **MBLK** TestCode: **EPA Method 8015B Mod: Gasoline Range**
Client ID: **PBS** Batch ID: **R4514** RunNo: **4514**
Prep Date: Analysis Date: **7/30/2012** SeqNo: **127882** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	400		500.0		80.5	70	130			

Sample ID **2.5ug lcs** SampType: **LCS** TestCode: **EPA Method 8015B Mod: Gasoline Range**
Client ID: **LCSS** Batch ID: **R4514** RunNo: **4514**
Prep Date: Analysis Date: **7/30/2012** SeqNo: **127884** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	400		500.0		79.9	70	130			

Sample ID **1207c51-001amsg** SampType: **MS** TestCode: **EPA Method 8015B Mod: Gasoline Range**
Client ID: **BatchQC** Batch ID: **R4514** RunNo: **4514**
Prep Date: Analysis Date: **7/30/2012** SeqNo: **127885** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	5800		3572		161	70	130			S

Sample ID **1207c51-001amsdg** SampType: **MSD** TestCode: **EPA Method 8015B Mod: Gasoline Range**
Client ID: **BatchQC** Batch ID: **R4514** RunNo: **4514**
Prep Date: Analysis Date: **7/30/2012** SeqNo: **127886** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	5000		3572		140	70	130	0	0	S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207B48**

27-Aug-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **1207B39-001C dup**		SampType: **DUP**		TestCode: **SM4500-H+B: pH**						
Client ID: **BatchQC**		Batch ID: **R4521**		RunNo: **4521**						
Prep Date:		Analysis Date: **7/30/2012**		SeqNo: **126609**		Units: **pH units**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	8.53	1.68								XH

Sample ID **1207B93-017A dup**		SampType: **DUP**		TestCode: **SM4500-H+B: pH**						
Client ID: **BatchQC**		Batch ID: **R4521**		RunNo: **4521**						
Prep Date:		Analysis Date: **7/31/2012**		SeqNo: **126622**		Units: **pH units**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	9.11	1.68								XH

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207B48**

27-Aug-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **mb-1**	SampType: **MBLK**	TestCode: **SM2320B: Alkalinity**
Client ID: **PBW**	Batch ID: **R4521**	RunNo: **4521**
Prep Date:	Analysis Date: **7/30/2012**	SeqNo: **126575** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20								

Sample ID **lcs-1**	SampType: **LCS**	TestCode: **SM2320B: Alkalinity**
Client ID: **LCSW**	Batch ID: **R4521**	RunNo: **4521**
Prep Date:	Analysis Date: **7/30/2012**	SeqNo: **126576** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	81	20	80.00	0	102	88.1	104			

Sample ID **1207B96-005A ms**	SampType: **MS**	TestCode: **SM2320B: Alkalinity**
Client ID: **BatchQC**	Batch ID: **R4521**	RunNo: **4521**
Prep Date:	Analysis Date: **7/30/2012**	SeqNo: **126580** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	130	20	80.00	53.36	96.8	62.6	110			

Sample ID **1207B96-005A msd**	SampType: **MSD**	TestCode: **SM2320B: Alkalinity**
Client ID: **BatchQC**	Batch ID: **R4521**	RunNo: **4521**
Prep Date:	Analysis Date: **7/30/2012**	SeqNo: **126581** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	130	20	80.00	53.36	96.7	59.9	111	0.0612	10	

Sample ID **mb-2**	SampType: **MBLK**	TestCode: **SM2320B: Alkalinity**
Client ID: **PBW**	Batch ID: **R4521**	RunNo: **4521**
Prep Date:	Analysis Date: **7/30/2012**	SeqNo: **126593** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20								

Sample ID **lcs-2**	SampType: **LCS**	TestCode: **SM2320B: Alkalinity**
Client ID: **LCSW**	Batch ID: **R4521**	RunNo: **4521**
Prep Date:	Analysis Date: **7/30/2012**	SeqNo: **126594** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	81	20	80.00	0	101	88.1	104			

Sample ID **mb-3**	SampType: **MBLK**	TestCode: **SM2320B: Alkalinity**
Client ID: **PBW**	Batch ID: **R4521**	RunNo: **4521**
Prep Date:	Analysis Date: **7/31/2012**	SeqNo: **126605** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20								

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207B48**

27-Aug-12

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID	**lcs-3**	SampType:	**LCS**	TestCode:	**SM2320B: Alkalinity**
Client ID:	**LCSW**	Batch ID:	**R4521**	RunNo:	**4521**
Prep Date:		Analysis Date:	**7/31/2012**	SeqNo:	**126606** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	81	20	80.00	0	102	88.1	104			

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207B48**

27-Aug-12

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **MB-3066** SampType: **MBLK** TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW** Batch ID: **3066** RunNo: **4482**
Prep Date: **7/27/2012** Analysis Date: **7/29/2012** SeqNo: **125518** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID **LCS-3066** SampType: **LCS** TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW** Batch ID: **3066** RunNo: **4482**
Prep Date: **7/27/2012** Analysis Date: **7/29/2012** SeqNo: **125519** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	7.000	100	80	120			

Sample ID **1207A56-001BMS** SampType: **MS** TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **BatchQC** Batch ID: **3066** RunNo: **4482**
Prep Date: **7/27/2012** Analysis Date: **7/29/2012** SeqNo: **125531** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1530	20.0	1000	525.0	100	80	120			

Sample ID **1207A56-001BMSD** SampType: **MSD** TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **BatchQC** Batch ID: **3066** RunNo: **4482**
Prep Date: **7/27/2012** Analysis Date: **7/29/2012** SeqNo: **125532** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1520	20.0	1000	525.0	99.4	80	120	0.394	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laborator
4901 Hawkins N
Albuquerque, NM 8710
TEL: 505-345-3975 FAX: 505-345-410
Website: www.hallenvironmental.co

Sample Log-In Check List

Client Name: Western Refining Southwest, Inc Bloomfield   Work Order Number: 1207B48

Received by/date: 07/26/12

Logged By: Ashley Gallegos   7/26/2012 9:59:00 AM

Completed By: Ashley Gallegos   7/26/2012 11:12:51 AM

Reviewed By: 07/26/12

Chain of Custody

1.	Were seals intact?	Yes ☐	No ☐	Not Present ☑
2.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3.	How was the sample delivered?	Courier		

Log In

4.	Coolers are present? (see 19. for cooler specific information)	Yes ☑	No ☐	NA ☐
5.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
6.	Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9.	Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
12.	Were any sample containers received broken?	Yes ☐	No ☑	
13.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 4
([✓ <2] or >12 unless noted)
Adjusted?
Checked by:

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

19. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining

Mailing Address: 111 CR 4990
Bloomfield NM 87413

Phone #:

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other ______

☐ EDD (Type) ______

Turn-Around Time:
☒ Standard ☐ Rush ______

Project Name: GBR

Project #:

Project Manager: Ashley Ager

Sampler: Sam LaRue

On Ice: ☒ Yes ☐ No

Sample Temperature: [illegible]

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. [illegible]	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	8260 (VOC)	anions, cations, Fe, Mn	TDS, Alk, EC, pH		Air Bubbles (Y or N)
/25/12	12:30	Aq	Effluent	6 various	Various	-001												X	X	X		
/25/12	12:30	Aq	Influent	6 various	Various	-002												X	X	X		
		Aq																				

Date:	Time:	Relinquished by:	Received by:	Date	Time
7/25/12	14:10		Christine Walters	7/25/12	1410
7/25/12	1714	Christine Walters		07/26/12	0959

Remarks: Please forward results to aager@ltenv.co

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

**HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY**

*Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com*

October 24, 2012

Ashley Ager
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413
TEL: (970) 946-1093
FAX (505) 632-3911

RE: GBR

OrderNo.: 1210345

Dear Ashley Ager:

Hall Environmental Analysis Laboratory received 3 sample(s) on 10/5/2012 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued October 17, 2012.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1210345**
Date Reported: **10/24/2012**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: Influent
Project: GBR
Collection Date: 10/4/2012 1:44:00 PM
Lab ID: 1210345-001
Matrix: AQUEOUS
Received Date: 10/5/2012 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JRR**
Fluoride	0.65	0.10		mg/L	1	10/5/2012 6:43:17 PM
Chloride	81	10		mg/L	20	10/5/2012 6:55:42 PM
Bromide	0.32	0.10		mg/L	1	10/5/2012 6:43:17 PM
Phosphorus, Orthophosphate (As P	ND	10		mg/L	20	10/5/2012 6:55:42 PM
Sulfate	1600	25		mg/L	50	10/11/2012 2:10:17 AM
Nitrate+Nitrite as N	1.7	1.0		mg/L	5	10/11/2012 4:39:12 AM
EPA METHOD 200.7: METALS						Analyst: **JLF**
Calcium	360	5.0		mg/L	5	10/10/2012 8:22:00 PM
Iron	0.025	0.020		mg/L	1	10/10/2012 8:18:07 PM
Magnesium	33	1.0		mg/L	1	10/10/2012 8:18:07 PM
Manganese	0.044	0.0020		mg/L	1	10/10/2012 8:18:07 PM
Potassium	2.7	1.0		mg/L	1	10/10/2012 8:18:07 PM
Sodium	470	5.0		mg/L	5	10/10/2012 8:22:00 PM
SM2340B: HARDNESS						Analyst: **JLF**
Hardness (As CaCO3)	1000	6.6		mg/L	1	10/10/2012 3:23:00 PM
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
Toluene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
Ethylbenzene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
Naphthalene	ND	2.0		µg/L	1	10/5/2012 8:56:59 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	10/5/2012 8:56:59 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	10/5/2012 8:56:59 PM
Acetone	ND	10		µg/L	1	10/5/2012 8:56:59 PM
Bromobenzene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
Bromodichloromethane	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
Bromoform	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
Bromomethane	ND	3.0		µg/L	1	10/5/2012 8:56:59 PM
2-Butanone	ND	10		µg/L	1	10/5/2012 8:56:59 PM
Carbon disulfide	ND	10		µg/L	1	10/5/2012 8:56:59 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
Chlorobenzene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
Chloroethane	ND	2.0		µg/L	1	10/5/2012 8:56:59 PM
Chloroform	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
Chloromethane	ND	3.0		µg/L	1	10/5/2012 8:56:59 PM
2-Chlorotoluene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM

Qualifiers:				
	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	P	Sample pH greater than 2	R	RPD outside accepted recovery limits
	RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Influent
Project: GBR **Collection Date:** 10/4/2012 1:44:00 PM
Lab ID: 1210345-001 **Matrix:** AQUEOUS **Received Date:** 10/5/2012 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
4-Chlorotoluene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
cis-1,2-DCE	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/5/2012 8:56:59 PM
Dibromochloromethane	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
Dibromomethane	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	10/5/2012 8:56:59 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
2-Hexanone	ND	10		µg/L	1	10/5/2012 8:56:59 PM
Isopropylbenzene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	10/5/2012 8:56:59 PM
Methylene Chloride	ND	3.0		µg/L	1	10/5/2012 8:56:59 PM
n-Butylbenzene	ND	3.0		µg/L	1	10/5/2012 8:56:59 PM
n-Propylbenzene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
sec-Butylbenzene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
Styrene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
tert-Butylbenzene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/5/2012 8:56:59 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
trans-1,2-DCE	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/5/2012 8:56:59 PM
Vinyl chloride	ND	1.0		µg/L	1	10/5/2012 8:56:59 PM
Xylenes, Total	ND	1.5		µg/L	1	10/5/2012 8:56:59 PM
Surr: 1,2-Dichloroethane-d4	85.7	70-130		%REC	1	10/5/2012 8:56:59 PM

Analytical Report
Lab Order **1210345**
Date Reported: **10/24/2012**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1210345-001
Matrix: AQUEOUS
Client Sample ID: Influent
Collection Date: 10/4/2012 1:44:00 PM
Received Date: 10/5/2012 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Surr: 4-Bromofluorobenzene	80.4	70-130		%REC	1	10/5/2012 8:56:59 PM
Surr: Dibromofluoromethane	102	70-130		%REC	1	10/5/2012 8:56:59 PM
Surr: Toluene-d8	78.6	70-130		%REC	1	10/5/2012 8:56:59 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JML**
Conductivity	3300	0.010		µmhos/cm	1	10/5/2012 5:04:26 PM
SM4500-H+B: PH						Analyst: **JML**
pH	7.50	1.68	H	pH units	1	10/5/2012 5:04:26 PM
SM2320B: ALKALINITY						Analyst: **JML**
Bicarbonate (As CaCO3)	320	20		mg/L CaCO3	1	10/5/2012 5:04:26 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	10/5/2012 5:04:26 PM
Total Alkalinity (as CaCO3)	320	20		mg/L CaCO3	1	10/5/2012 5:04:26 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2750	20.0		mg/L	1	10/11/2012 9:46:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1210345-002 **Matrix:** AQUEOUS

Client Sample ID: Effluent
Collection Date: 10/4/2012 1:50:00 PM
Received Date: 10/5/2012 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JRR**
Fluoride	0.63	0.10		mg/L	1	10/5/2012 5:51:03 PM
Chloride	82	10		mg/L	20	10/5/2012 6:03:28 PM
Bromide	0.33	0.10		mg/L	1	10/5/2012 5:51:03 PM
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	10/5/2012 6:03:28 PM
Sulfate	1600	25		mg/L	50	10/11/2012 2:22:41 AM
Nitrate+Nitrite as N	1.6	1.0		mg/L	5	10/11/2012 4:51:36 AM
EPA METHOD 200.7: METALS						Analyst: **JLF**
Calcium	370	5.0		mg/L	5	10/10/2012 8:44:24 PM
Iron	ND	0.020		mg/L	1	10/10/2012 8:40:33 PM
Magnesium	33	1.0		mg/L	1	10/10/2012 8:40:33 PM
Manganese	0.0082	0.0020		mg/L	1	10/10/2012 8:40:33 PM
Potassium	2.8	1.0		mg/L	1	10/10/2012 8:40:33 PM
Sodium	470	5.0		mg/L	5	10/10/2012 8:44:24 PM
SM2340B: HARDNESS						Analyst: **JLF**
Hardness (As CaCO3)	1100	6.6		mg/L	1	10/10/2012 3:23:00 PM
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
Toluene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
Ethylbenzene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
Naphthalene	ND	2.0		µg/L	1	10/5/2012 9:24:44 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	10/5/2012 9:24:44 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	10/5/2012 9:24:44 PM
Acetone	ND	10		µg/L	1	10/5/2012 9:24:44 PM
Bromobenzene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
Bromodichloromethane	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
Bromoform	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
Bromomethane	ND	3.0		µg/L	1	10/5/2012 9:24:44 PM
2-Butanone	ND	10		µg/L	1	10/5/2012 9:24:44 PM
Carbon disulfide	ND	10		µg/L	1	10/5/2012 9:24:44 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
Chlorobenzene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
Chloroethane	ND	2.0		µg/L	1	10/5/2012 9:24:44 PM
Chloroform	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
Chloromethane	ND	3.0		µg/L	1	10/5/2012 9:24:44 PM
2-Chlorotoluene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1210345-002 **Matrix:** AQUEOUS
Client Sample ID: Effluent
Collection Date: 10/4/2012 1:50:00 PM
Received Date: 10/5/2012 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
4-Chlorotoluene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
cis-1,2-DCE	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/5/2012 9:24:44 PM
Dibromochloromethane	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
Dibromomethane	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	10/5/2012 9:24:44 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
2-Hexanone	ND	10		µg/L	1	10/5/2012 9:24:44 PM
Isopropylbenzene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	10/5/2012 9:24:44 PM
Methylene Chloride	ND	3.0		µg/L	1	10/5/2012 9:24:44 PM
n-Butylbenzene	ND	3.0		µg/L	1	10/5/2012 9:24:44 PM
n-Propylbenzene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
sec-Butylbenzene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
Styrene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
tert-Butylbenzene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/5/2012 9:24:44 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
trans-1,2-DCE	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/5/2012 9:24:44 PM
Vinyl chloride	ND	1.0		µg/L	1	10/5/2012 9:24:44 PM
Xylenes, Total	ND	1.5		µg/L	1	10/5/2012 9:24:44 PM
Surr: 1,2-Dichloroethane-d4	82.5	70-130		%REC	1	10/5/2012 9:24:44 PM

Qualifiers:				
	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	P	Sample pH greater than 2	R	RPD outside accepted recovery limits
	RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	Effluent
Project:	GBR	**Collection Date:**	10/4/2012 1:50:00 PM
Lab ID:	1210345-002 **Matrix:** AQUEOUS	**Received Date:**	10/5/2012 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Surr: 4-Bromofluorobenzene	81.5	70-130		%REC	1	10/5/2012 9:24:44 PM
Surr: Dibromofluoromethane	97.5	70-130		%REC	1	10/5/2012 9:24:44 PM
Surr: Toluene-d8	81.8	70-130		%REC	1	10/5/2012 9:24:44 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JML**
Conductivity	3300	0.010		µmhos/cm	1	10/5/2012 5:19:18 PM
SM4500-H+B: PH						Analyst: **JML**
pH	7.49	1.68	H	pH units	1	10/5/2012 5:19:18 PM
SM2320B: ALKALINITY						Analyst: **JML**
Bicarbonate (As CaCO3)	320	20		mg/L CaCO3	1	10/5/2012 5:19:18 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	10/5/2012 5:19:18 PM
Total Alkalinity (as CaCO3)	320	20		mg/L CaCO3	1	10/5/2012 5:19:18 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2780	20.0		mg/L	1	10/11/2012 9:46:00 AM

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Trip Blank
Project: GBR **Collection Date:**
Lab ID: 1210345-003 **Matrix:** TRIP BLANK **Received Date:** 10/5/2012 10:10:00 AM

Analyses	**Result**	**RL**	**Qual**	**Units**	**DF**	**Date Analyzed**
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
Toluene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
Ethylbenzene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
Naphthalene	ND	2.0		µg/L	1	10/5/2012 9:52:17 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	10/5/2012 9:52:17 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	10/5/2012 9:52:17 PM
Acetone	ND	10		µg/L	1	10/5/2012 9:52:17 PM
Bromobenzene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
Bromodichloromethane	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
Bromoform	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
Bromomethane	ND	3.0		µg/L	1	10/5/2012 9:52:17 PM
2-Butanone	ND	10		µg/L	1	10/5/2012 9:52:17 PM
Carbon disulfide	ND	10		µg/L	1	10/5/2012 9:52:17 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
Chlorobenzene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
Chloroethane	ND	2.0		µg/L	1	10/5/2012 9:52:17 PM
Chloroform	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
Chloromethane	ND	3.0		µg/L	1	10/5/2012 9:52:17 PM
2-Chlorotoluene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
4-Chlorotoluene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
cis-1,2-DCE	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/5/2012 9:52:17 PM
Dibromochloromethane	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
Dibromomethane	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	10/5/2012 9:52:17 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
2-Hexanone	ND	10		µg/L	1	10/5/2012 9:52:17 PM

Qualifiers:				
	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	P	Sample pH greater than 2	R	RPD outside accepted recovery limits
	RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: Trip Blank
Project: GBR
Collection Date:
Lab ID: 1210345-003
Matrix: TRIP BLANK
Received Date: 10/5/2012 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Isopropylbenzene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	10/5/2012 9:52:17 PM
Methylene Chloride	ND	3.0		µg/L	1	10/5/2012 9:52:17 PM
n-Butylbenzene	ND	3.0		µg/L	1	10/5/2012 9:52:17 PM
n-Propylbenzene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
sec-Butylbenzene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
Styrene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
tert-Butylbenzene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/5/2012 9:52:17 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
trans-1,2-DCE	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/5/2012 9:52:17 PM
Vinyl chloride	ND	1.0		µg/L	1	10/5/2012 9:52:17 PM
Xylenes, Total	ND	1.5		µg/L	1	10/5/2012 9:52:17 PM
Surr: 1,2-Dichloroethane-d4	83.9	70-130		%REC	1	10/5/2012 9:52:17 PM
Surr: 4-Bromofluorobenzene	79.6	70-130		%REC	1	10/5/2012 9:52:17 PM
Surr: Dibromofluoromethane	99.9	70-130		%REC	1	10/5/2012 9:52:17 PM
Surr: Toluene-d8	78.0	70-130		%REC	1	10/5/2012 9:52:17 PM

Qualifiers:				
	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	P	Sample pH greater than 2	R	RPD outside accepted recovery limits
	RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **R6141** RunNo: **6141**
Prep Date: Analysis Date: **10/10/2012** SeqNo: **176939** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **R6141** RunNo: **6141**
Prep Date: Analysis Date: **10/10/2012** SeqNo: **176940** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	99.8	85	115			
Iron	0.49	0.020	0.5000	0	98.1	85	115			
Magnesium	50	1.0	50.00	0	99.9	85	115			
Manganese	0.49	0.0020	0.5000	0	97.7	85	115			
Potassium	48	1.0	50.00	0	96.8	85	115			
Sodium	49	1.0	50.00	0	98.7	85	115			

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R6030** RunNo: **6030**
Prep Date: Analysis Date: **10/5/2012** SeqNo: **173760** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R6030** RunNo: **6030**
Prep Date: Analysis Date: **10/5/2012** SeqNo: **173761** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.47	0.10	0.5000	0	94.4	90	110			
Chloride	4.9	0.50	5.000	0	97.7	90	110			
Bromide	2.5	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P	5.1	0.50	5.000	0	103	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R6149** RunNo: **6149**
Prep Date: Analysis Date: **10/10/2012** SeqNo: **177130** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R6149** RunNo: **6149**
Prep Date: Analysis Date: **10/10/2012** SeqNo: **177131** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.8	0.50	10.00	0	97.9	90	110			
Nitrate+Nitrite as N	3.6	0.20	3.500	0	102	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2	R	RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1210345

24-Oct-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **5ml-rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **PBW** Batch ID: **R6048** RunNo: **6048**

Prep Date: Analysis Date: **10/5/2012** SeqNo: **174216** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2	R	RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1210345**

24-Oct-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **5ml-rb**		SampType: **MBLK**			TestCode: **EPA Method 8260B: VOLATILES**					
Client ID: **PBW**		Batch ID: **R6048**			RunNo: **6048**					
Prep Date:		Analysis Date: **10/5/2012**			SeqNo: **174216**		Units: **µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.7		10.00		87.4	70	130			
Surr: 4-Bromofluorobenzene	8.1		10.00		80.6	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	7.9		10.00		79.4	70	130			

Sample ID **100ng lcs**		SampType: **LCS**			TestCode: **EPA Method 8260B: VOLATILES**					
Client ID: **LCSW**		Batch ID: **R6048**			RunNo: **6048**					
Prep Date:		Analysis Date: **10/5/2012**			SeqNo: **174218**		Units: **µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.4	70	130			
Toluene	18	1.0	20.00	0	90.7	80	120			
Chlorobenzene	17	1.0	20.00	0	85.9	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	97.8	73.7	122			
Trichloroethene (TCE)	17	1.0	20.00	0	84.3	70	130			
Surr: 1,2-Dichloroethane-d4	8.3		10.00		82.6	70	130			
Surr: 4-Bromofluorobenzene	7.8		10.00		78.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2	R	RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1210345**

24-Oct-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R6048**	RunNo: **6048**
Prep Date:	Analysis Date: **10/5/2012**	SeqNo: **174218** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	9.9		10.00		99.0	70	130			
Surr: Toluene-d8	7.8		10.00		78.4	70	130			

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R6048**	RunNo: **6048**
Prep Date:	Analysis Date: **10/5/2012**	SeqNo: **174241** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2	R	RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1210345**

24-Oct-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R6048**	RunNo: **6048**
Prep Date:	Analysis Date: **10/5/2012**	SeqNo: **174241** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.2		10.00		82.4	70	130			
Surr: 4-Bromofluorobenzene	8.3		10.00		82.8	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.0	70	130			
Surr: Toluene-d8	8.1		10.00		81.1	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2	R	RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1210345**

24-Oct-12

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID	**100ng lcs2**	SampType:	**LCS**	TestCode:	**EPA Method 8260B: VOLATILES**
Client ID:	**LCSW**	Batch ID:	**R6048**	RunNo:	**6048**
Prep Date:		Analysis Date:	**10/5/2012**	SeqNo:	**174243** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	19	1.0	20.00	0	93.1	80	120			
Chlorobenzene	17	1.0	20.00	0	87.4	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	104	73.7	122			
Trichloroethene (TCE)	17	1.0	20.00	0	84.8	70	130			
Surr: 1,2-Dichloroethane-d4	8.5		10.00		84.6	70	130			
Surr: 4-Bromofluorobenzene	8.3		10.00		83.3	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	7.9		10.00		78.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2	R	RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1210345

24-Oct-12

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID	**1210345-002b dup**	SampType:	**dup**	TestCode:	**EPA 120.1: Specific Conductance**
Client ID:	**Effluent**	Batch ID:	**R6035**	RunNo:	**6035**
Prep Date:		Analysis Date:	**10/5/2012**	SeqNo:	**173973** Units: **µmhos/cm**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	3300	0.010						0.0898	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2	R	RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1210345**

24-Oct-12

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **mb-1** SampType: **mblk** TestCode: **SM2320B: Alkalinity**
Client ID: **PBW** Batch ID: **R6035** RunNo: **6035**
Prep Date: Analysis Date: **10/5/2012** SeqNo: **173929** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20								

Sample ID **lcs-1** SampType: **lcs** TestCode: **SM2320B: Alkalinity**
Client ID: **LCSW** Batch ID: **R6035** RunNo: **6035**
Prep Date: Analysis Date: **10/5/2012** SeqNo: **173930** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79	20	80.00	0	99.4	88.1	104			

Sample ID **mb-2** SampType: **mblk** TestCode: **SM2320B: Alkalinity**
Client ID: **PBW** Batch ID: **R6035** RunNo: **6035**
Prep Date: Analysis Date: **10/5/2012** SeqNo: **173953** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20								

Sample ID **lcs-2** SampType: **lcs** TestCode: **SM2320B: Alkalinity**
Client ID: **LCSW** Batch ID: **R6035** RunNo: **6035**
Prep Date: Analysis Date: **10/5/2012** SeqNo: **173954** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	82	20	80.00	0	102	88.1	104			

Sample ID **1210345-002b ms** SampType: **ms** TestCode: **SM2320B: Alkalinity**
Client ID: **Effluent** Batch ID: **R6035** RunNo: **6035**
Prep Date: Analysis Date: **10/5/2012** SeqNo: **173957** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	390	20	80.00	318.3	84.6	62.6	110			

Sample ID **1210345-002b msd** SampType: **msd** TestCode: **SM2320B: Alkalinity**
Client ID: **Effluent** Batch ID: **R6035** RunNo: **6035**
Prep Date: Analysis Date: **10/5/2012** SeqNo: **173958** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	390	20	80.00	318.3	85.7	59.9	111	0.217	10	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2	R	RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1210345**

24-Oct-12

Client: Western Refining Southwest, Inc.
Project: GBR

Sample ID **MB-4215**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**		
Client ID: **PBW**	Batch ID: **4215**	RunNo: **6151**		
Prep Date: **10/9/2012**	Analysis Date: **10/11/2012**	SeqNo: **177213**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID **LCS-4215**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**		
Client ID: **LCSW**	Batch ID: **4215**	RunNo: **6151**		
Prep Date: **10/9/2012**	Analysis Date: **10/11/2012**	SeqNo: **177214**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	80	120			

Sample ID **1210345-001BMS**	SampType: **MS**	TestCode: **SM2540C MOD: Total Dissolved Solids**		
Client ID: **Influent**	Batch ID: **4215**	RunNo: **6151**		
Prep Date: **10/9/2012**	Analysis Date: **10/11/2012**	SeqNo: **177216**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	3790	20.0	1000	2752	104	80	120			

Sample ID **1210345-001BMSD**	SampType: **MSD**	TestCode: **SM2540C MOD: Total Dissolved Solids**		
Client ID: **Influent**	Batch ID: **4215**	RunNo: **6151**		
Prep Date: **10/9/2012**	Analysis Date: **10/11/2012**	SeqNo: **177217**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	3780	20.0	1000	2752	102	80	120	0.344	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2	R	RPD outside accepted recovery limits

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laborator
4901 Hawkins NE
Albuquerque, NM 8710
TEL: 505-345-3975 FAX: 505-345-410
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Southwest, Inc Bloomfield   Work Order Number: 1210345
Received by/date: LM   10/05/12
Logged By: **Michelle Garcia**   10/5/2012 10:10:00 AM   Michelle Garcia
Completed By: **Michelle Garcia**   10/5/2012 11:00:37 AM   Michelle Garcia
Reviewed By: MG   10/05/12

Chain of Custody

1. Were seals intact?   Yes ☐ No ☐ Not Present ☑
2. Is Chain of Custody complete?   Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered?   Courier

Log In

4. Coolers are present? (see 19. for cooler specific information)   Yes ☑ No ☐ NA ☐
5. Was an attempt made to cool the samples?   Yes ☑ No ☐ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C   Yes ☑ No ☐ NA ☐
7. Sample(s) in proper container(s)?   Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)?   Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved?   ~~Yes ☑~~ No ☑
10. Was preservative added to bottles?   Yes ☑ ~~No ☑~~   NA ☐

001C, 002C - ADDED 1mL HNO_3 FOR ACCEPTABLE pH - 10/05/12

11. VOA vials have zero headspace?   Yes ☑ No ☐ No VOA Vials ☐
12. Were any sample containers received broken?   Yes ☐ No ☑
13. Does paperwork match bottle labels?   Yes ☑ No ☐
(Note discrepancies on chain of custody)
14. Are matrices correctly identified on Chain of Custody?   Yes ☑ No ☐
15. Is it clear what analyses were requested?   Yes ☑ No ☐
16. Were all holding times able to be met?   Yes ☑ No ☐
(If no, notify customer for authorization.)

# of preserved bottles checked for pH: 4
([✓ <2] or >12 unless noted)
Adjusted? Y
Checked by:

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order?   Yes ☐ No ☐ NA ☑

Person Notified:
Date:
By Whom:
Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

19. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

Chain-of-Custody Record

Client: Western Refining

Mailing Address: 111 CR 4990
Bloomfield NM 87413

Phone #:

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: GBR

Project #:

Project Manager: Ashley Ager

Sampler: Devin Henemann

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.2

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1210045	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	8260 (VOC)	anions, cations, Fe, Mn	TDS, Alk, EC, pH		Air Bubbles (Y or N)
10/4/12	1344	Aq	Influent	6 various	Various	-001												X	X	X		
10/4/12	1350	Aq	Effluent	6 various	Various	-002												X	X	X		
10/4/12	0800	Aq	Trip Blank			-003												X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
0/4/12	1437		Christine Waalen	10/4/12	1437
10/4/12	1708	Christine Waalen		10/05/12	1010

Remarks: Please forward results to aager@Henv.com

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.