GW - 40

Annual Report

2013

Western Refining

WNR LISTED NYSE

March 13, 2014

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

OIL CONS. DIV DIST. 3
MAR 20 2014

FedEx Tracking #: 7982 1281 7152

RE: 2013 Annual Report – former Giant Bloomfield Refinery
OCD Discharge Permit GW-040

Dear Mr. Von Gonten;

Please find enclosed the 2013 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 Randy Schmaltz at 505-632-4171 or at Randy.Schmaltz@wnr.com.

Sincerely,

Kelly Robinson
Environmental Supervisor
Western Refining

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

2013 ANNUAL REPORT

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

MARCH 2014

WESTERN REFINING SOUTHWEST, INC.
Bloomfield, New Mexico

2013 ANNUAL REPORT

FORMER GIANT BLOOMFIELD REFINERY
BLOOMFIELD, NEW MEXICO

DISCHARGE PERMIT GW-040

MARCH 2014

Prepared for:

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

Prepared by:

LT ENVIRONMENTAL, INC.
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Durango, Colorado 81301
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EXECUTIVE SUMMARY

LT Environmental, Inc. (LTE) on behalf of Western Refining Southwest, Inc. (Western) has prepared this report detailing work completed from January 2013 through December 2013 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 2013. The total volume of groundwater recovered and treated decreased from the volume observed in 2012 by 538,714 gallons to a total of 1,180,284 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 14.99 gallons of PSH were recovered from the Site in 2013; a decrease from the 17.32 gallons recovered in 2012. The decreased volume of PSH recovered in 2013 can be attributed to a reduction in accumulation of PSH at the recovery well locations. Western increased the frequency of PSH recovery activities from quarterly to weekly beginning in August 2011. After two years of aggressive recovery, PSH accumulation in monitoring wells has decreased. However, PSH was detected in monitoring well SHS-9 for the first time since 1997 following a large precipitation event.

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 2013 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 five 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 thirteen 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 one upgradient monitoring well and one on-site monitoring well. The influent, effluent, and ten of the thirteen monitoring and recovery wells contained manganese in excess of NMWQCC standards. Iron concentrations exceeded the NMWQCC standard in all thirteen monitoring and recovery wells. Chromium and selenium 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 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 2013 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. In 2013 the system consisted 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 2013.

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. Groundwater is collected in Tank 102 then pumped through two active carbon filters positioned in series where the groundwater is treated by carbon absorption. 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. No groundwater leaks were noted during inspections conducted in 2013.

Maintenance included repair and replacement of well pumps, pump controllers, and flow meters, and replacement of the carbon filtration tanks. 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, SHS-2, SHS-9, and GBR 25 when present with disposable bailers.

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 second carbon filter. 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 8270C and five 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:

- On January 10, 2013, piping to the infiltration gallery froze preventing flow to the carbon absorption tanks. The plumbing and electrical equipment were performed and the system was brought back online within two weeks;
- An electrician began updating the electrical system in February 2013. The controllers and electrical boxes were replaced and heat lamps were installed in GRW-3, GRW-6, GRW-5, GRW-4, GRW-2;
- Western replaced the carbon absorption tanks at the end of February 2013. At this time Tank 102 was drained and bypassed until the installation was complete; the recovery wells pumped straight to the carbon absorption tanks;
- Tank 102 was put back into use in March 2013;
- In September 2013, a lighting strike damaged the motor for the pump at Tank 102. The motor was replaced with a higher powered motor. The new motor moved water through Tank 102 at a higher rate and pressure;
- The new motor on the pump at Tank 102 created a water imbalance in Tank 102, draining water too fast and triggering low level alarms that shut the pump down. At the end of 2013 Western bypassed Tank 102 and recovery wells pump directly to the carbon absorption tanks;

- No surface indications of underground leaks were observed in 2013.

Except for GRW-4 and GRW-13, the recovery wells pumped smaller volumes of groundwater in 2013 as compared to 2012. In total, the system pumped 538,714 fewer gallons in 2013 compared to 2012. Mechanical problems with pumps; frozen piping in the infiltration gallery; replacement of the carbon absorption tanks; and water level balance issues in Tank 102 required more down time in 2013 than in 2012. Additionally, GRW-10, which is the highest producing recovery well, recovered less water in 2013. Table 2 presents the total volume of groundwater pumped from each recovery well during 2012 and 2013. A total of 1,180,284 gallons of groundwater were recovered and treated by carbon filtration in 2013.

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 2013 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, SHS-2, SHS9, and product recovery well GBR-34A during 2013 (Figure 11). Annual volumes of PSH recovered from 2009 through 2013 are presented in Table 4. Less PSH was recovered in 2013 as compared to 2012.

In the Northern Area, LTE did not detect measurable PSH in GBR-23, GBR-25 and GBR-26 in 2013, but approximately 1.78 gallons of PSH were recovered with oil absorbent socks during the year.

In the Central Area, early in the year LTE regularly detected and recovered PSH in GBR-34. The thickness of PSH in GBR-34 was as high as 0.40 feet in January 2013. No PSH has been measured in GBR-34 since April of 2013. A total of 5.3 gallons of PSH were 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 1.24 gallons of PSH from GBR-22 during 2013 using oil-absorbent socks.

In the Southern Area, no PSH was detected in GBR-7, GBR-8, GBR-11, or GBR-20 during 2013. LTE continued to recover small volumes of PSH in oil absorbent socks throughout the year. A total amount of 2.02 gallons of PSH were recovered from the Southern Area.

In 2012 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. In

January 2013, PSH was discovered in SHS-9 for the first time since 2005. SHS-9 contained 0.01 feet of PSH in January 2013. No PSH was measured in SHS-8 in 2013 and no PSH was measured in SHS-2 or SHS-9 after May 2013.

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 2013 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 GBR-24D;
- Concentrations of PAHs were not detected above the respective laboratory limits in samples collected from the system effluent. Samples collected from GRW-3 and GBR-31 contained minor concentrations of PAHs;
- 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 well GBR-32, 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 samples from all groundwater recovery and monitoring wells, but did not exceed the standard in the influent and effluent samples;
- 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, GBR-51, SHS-8, as well as from the influent and effluent samples;

- The lead concentration exceeded the NMWQCC standard in groundwater sampled from SHS-9;
- The concentration of selenium exceeded the NMWQCC standard in groundwater from upgradient monitoring well 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 decreased due to downtime associated with ongoing maintenance and upgrading of the remediation system, as well as decreased production in GRW-10.

Measurable PSH near the previously identified sources at the Site decreased in 2013 compared to 2012. 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 the result of a significant rain event that increased groundwater elevations rapidly combined with an overall groundwater elevation decrease resulting from ongoing drought conditions. After several months of PSH recovery using a combination of absorbent socks and manual recovery no PSH was detected south of Highway 64 after May 2013.

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 2013, 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, lead, manganese, nickel, and selenium were detected in offsite monitoring wells during the annual sampling in January 2013. Additionally, iron and manganese concentrations exceeded NMWQCC standards in on-site wells. Previous studies conducted for the Lee Acres Landfill identified chromium, iron, lead, manganese, nickel, and selenium in groundwater sampled upgradient of the Site. *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;
- Monitor presence of PSH regularly, using oil absorbent socks as needed to recovery PSH;
- Monitor groundwater flow behavior quarterly by measuring depth to groundwater;
- Sample the system influent and effluent quarterly; andSample 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

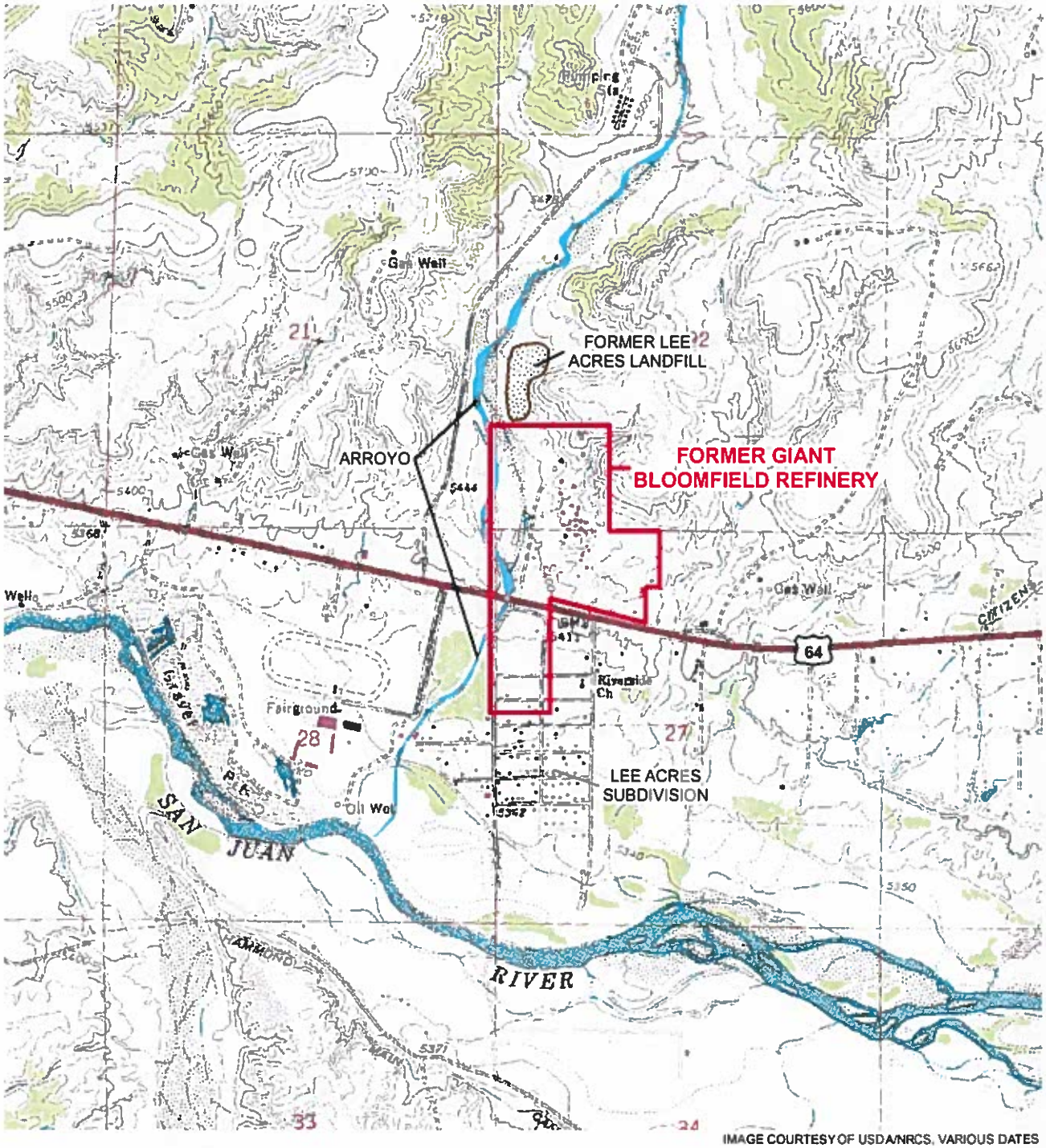

IMAGE COURTESY OF USDA/NRCS, VARIOUS DATES

0 2,000 4,000
Feet

N

LEGEND

- SITE LOCATION
- ARROYO
- FORMER LEE ACRES LANDFILL

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

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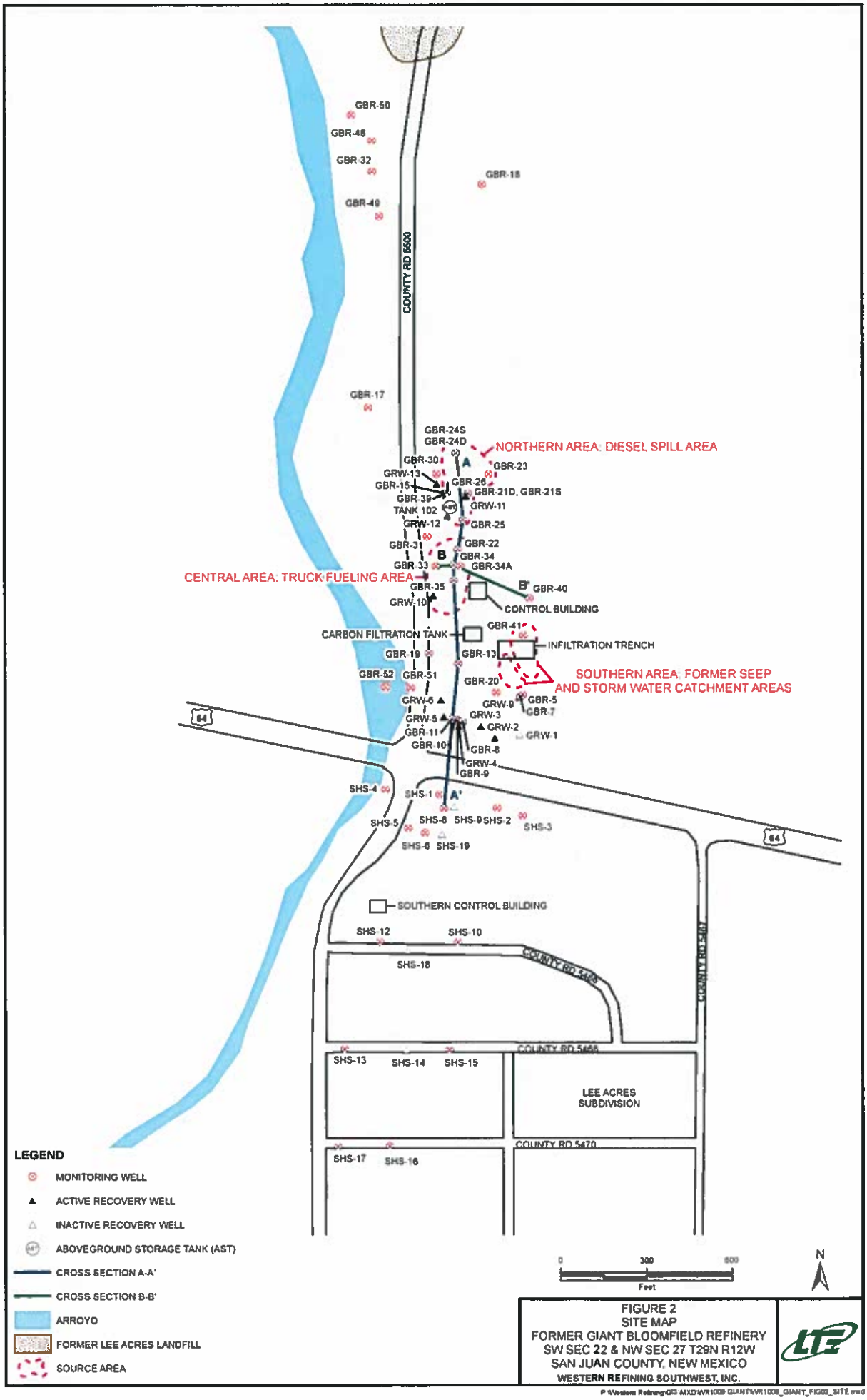
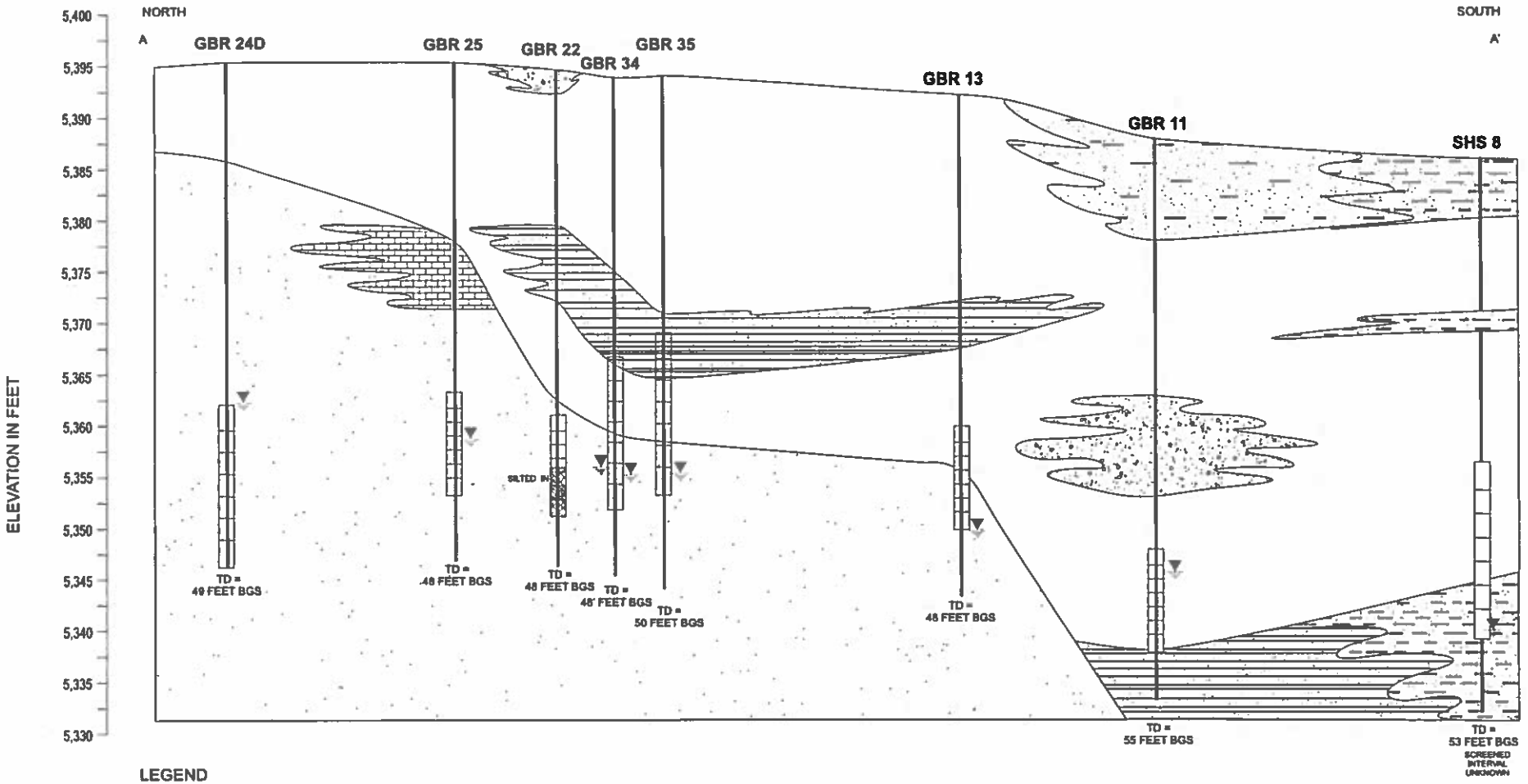


FIGURE 2
SITE MAP
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.

P:\Western Refining\GIS MXD\WR1009 GIANT\WR1009_GIANT_FIG02_SITE.mxd



LEGEND

- SANDY SILT
- CLAYEY SAND
- SILTY SAND
- SAND
- PEBBLES/GRAVEL
- NACIMIENTO SHALE
- NACIMIENTO SANDSTONE

- BOREHOLE
- SCREENED INTERVAL
- BGS BELOW GROUND SURFACE
- TD TOTAL DEPTH IN FEET
- ELEVATION OF PHASE SEPARATED HYDROCARBON (PSH) FROM JANUARY 2013
- GROUNDWATER ELEVATION FROM JANUARY 2013

HORIZONTAL SCALE
1" = 10 FEET

VERTICAL SCALE
1" = 90 FEET

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

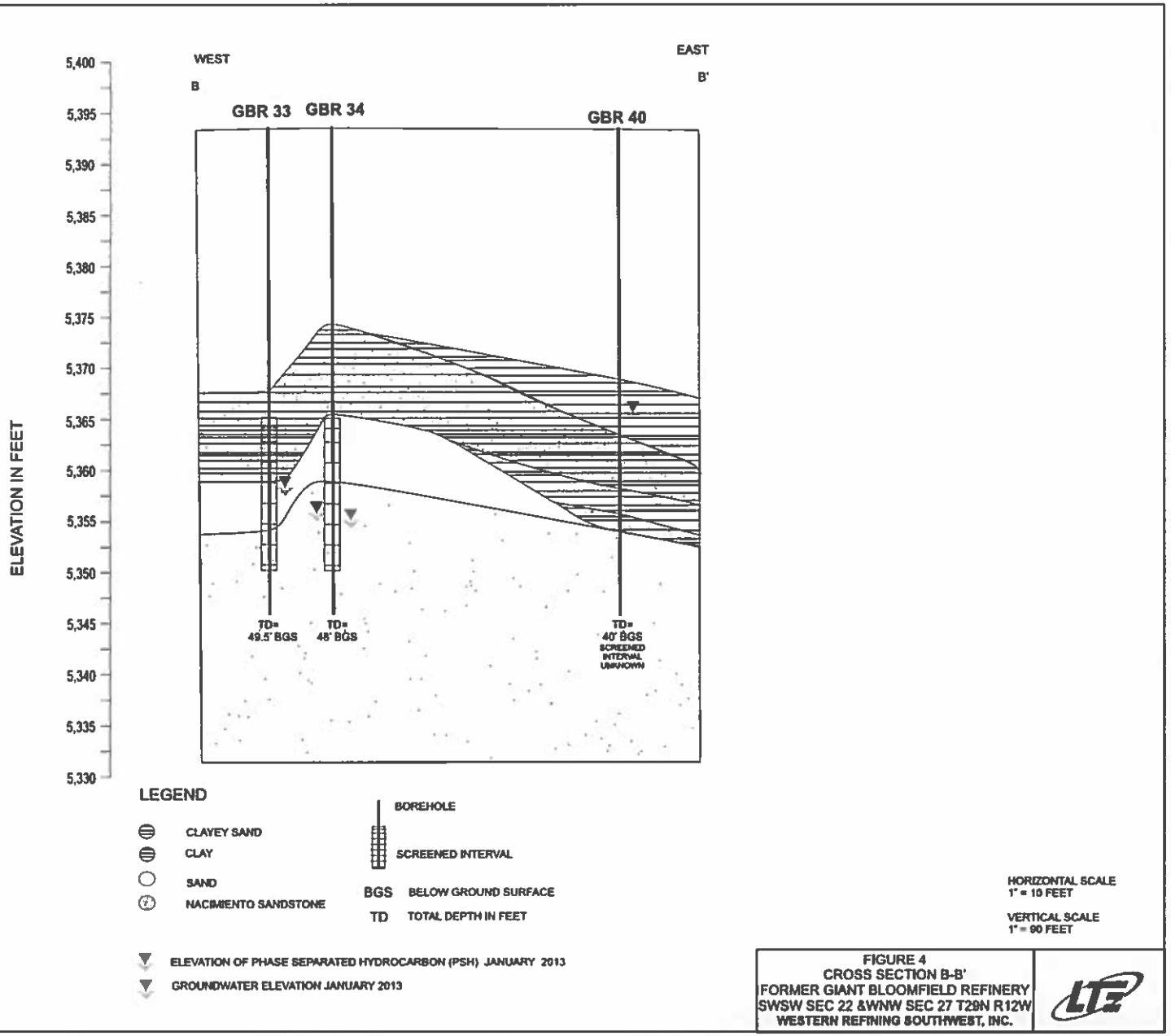


FIGURE 4
CROSS SECTION B-B'
FORMER GIANT BLOOMFIELD REFINERY
SWSW SEC 22 &WNW SEC 27 T29N R12W
WESTERN REFINING SOUTHWEST, INC.

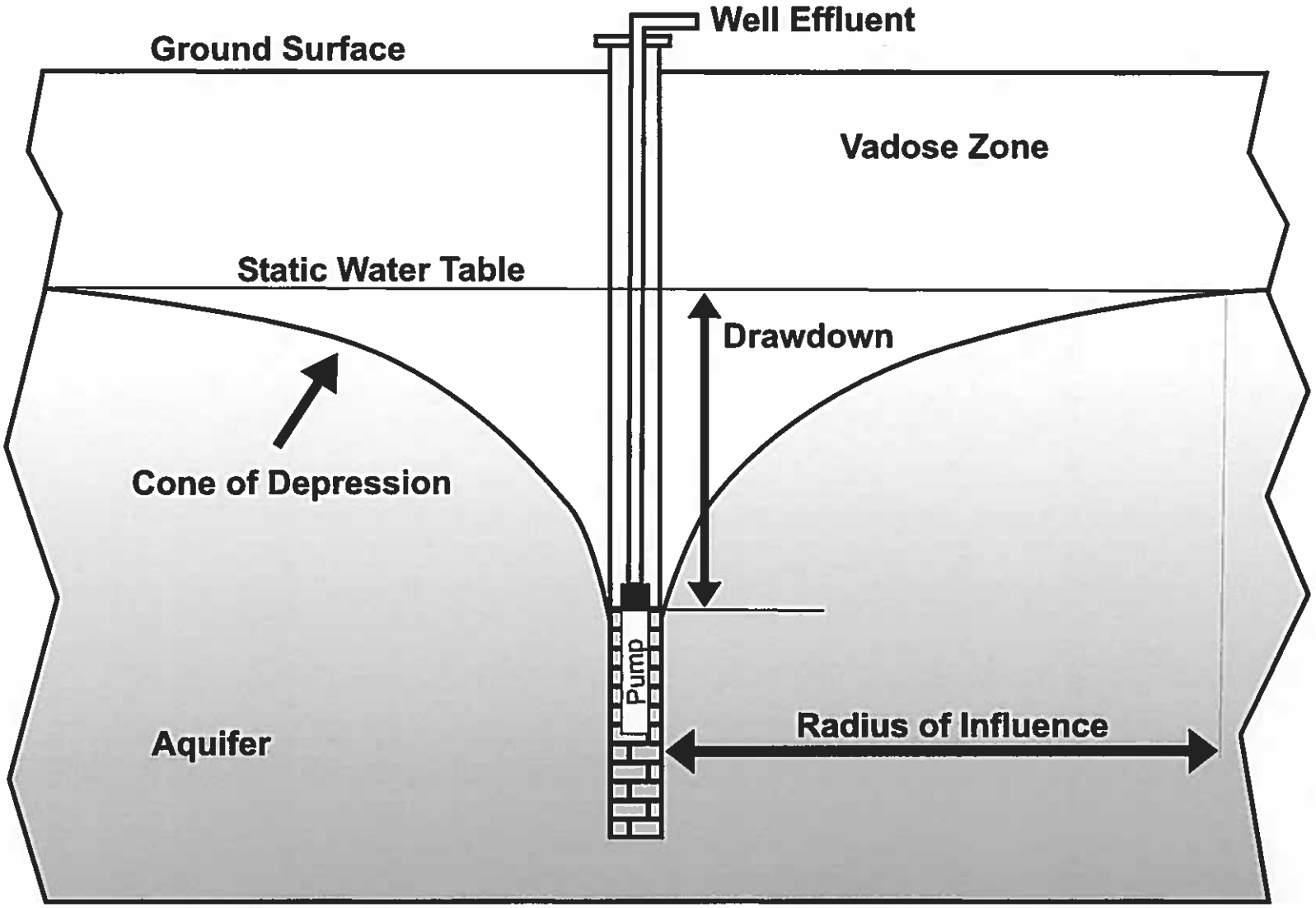


FIGURE 5
HYDRAULIC BARRIER
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
WESTERN REFINING SOUTHWEST, INC.

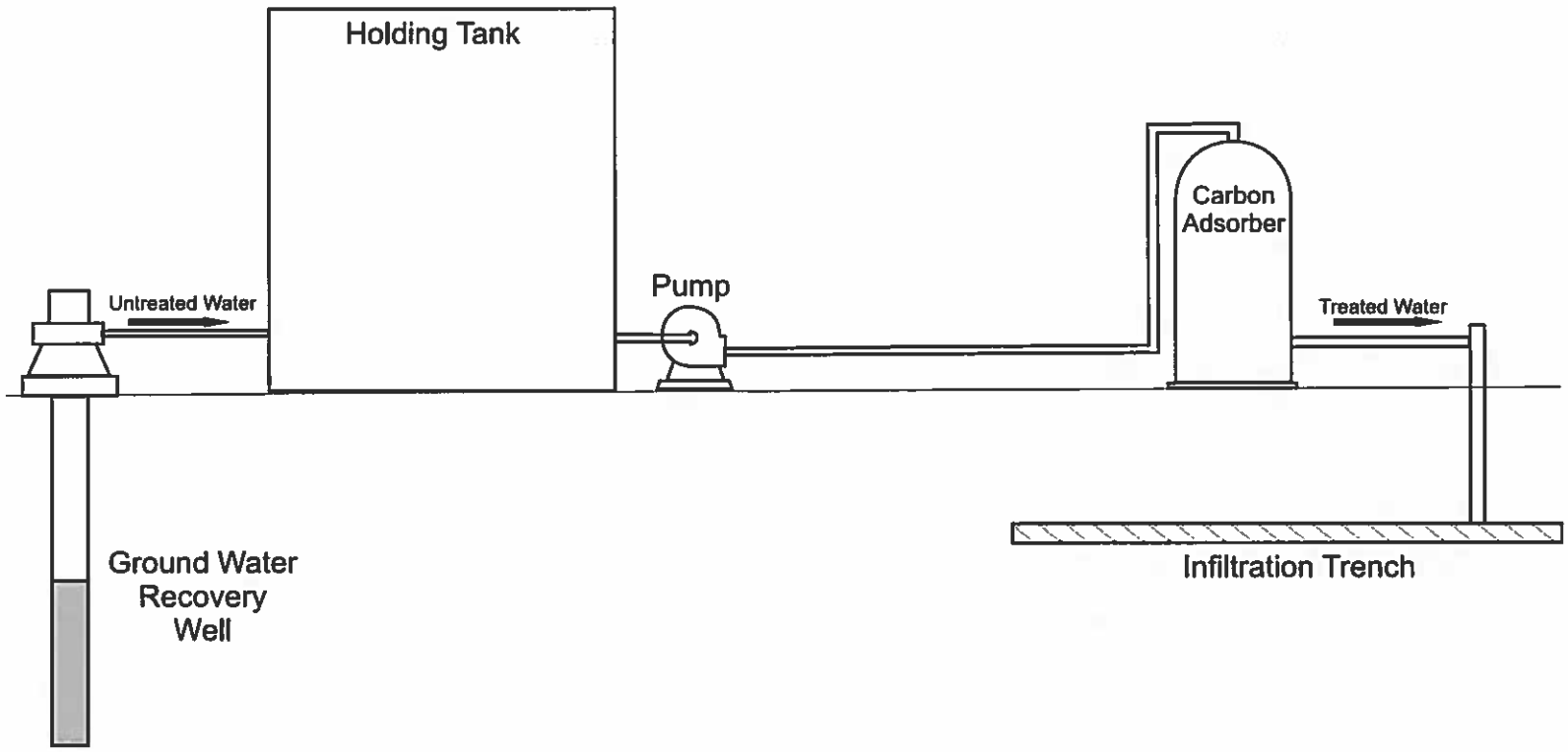


FIGURE6
SIMPLIFIED REPRESENTATION OF THE GROUNDWATER RECOVERY, TREATMENT AND DISPOSAL SYSTEM
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
WESTERN REFINING SOUTHWEST, INC.

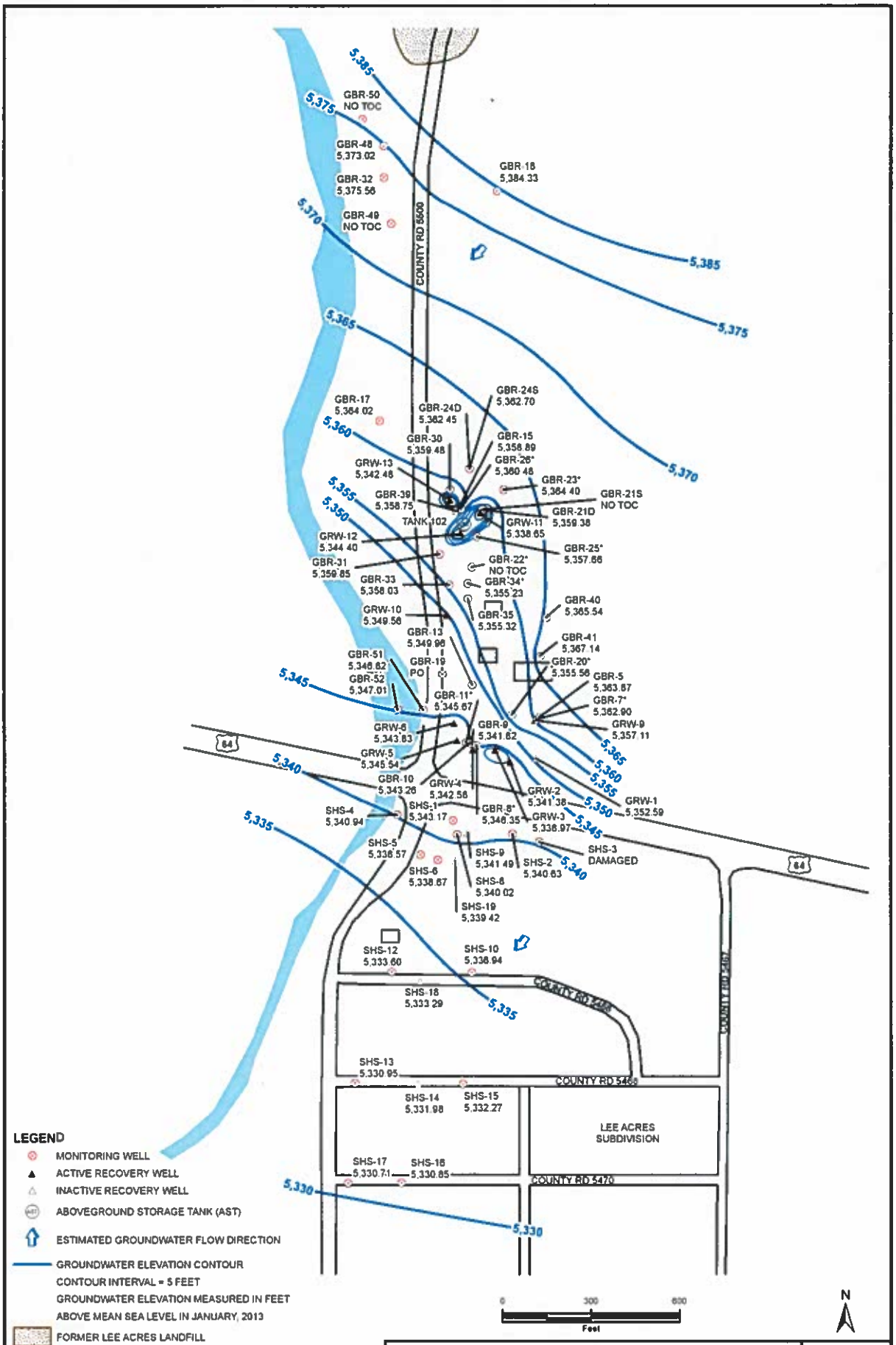


FIGURE 7
GROUNDWATER POTENTIOMETRIC SURFACE MAP (JANUARY 2013)
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.

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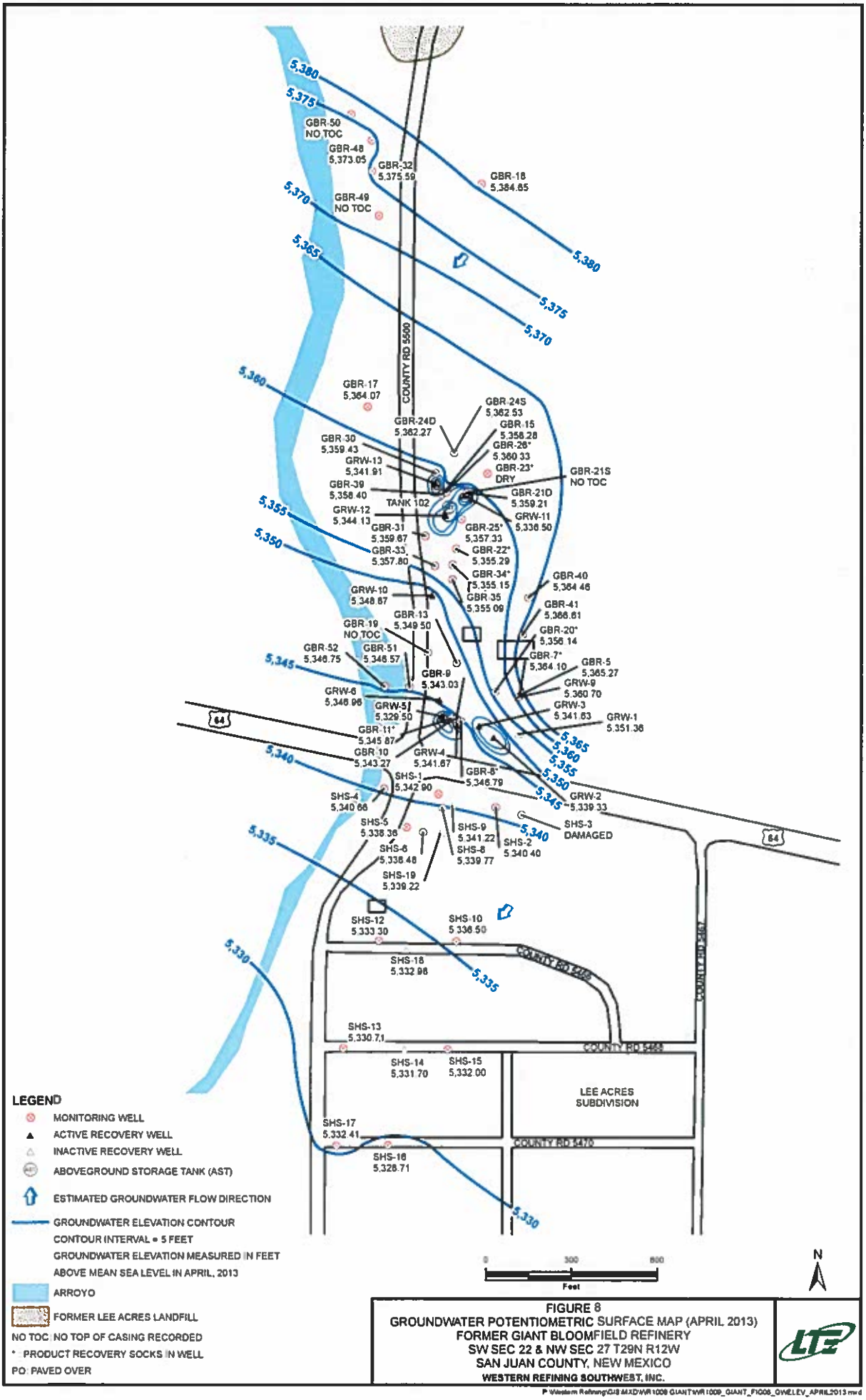

FIGURE 8
GROUNDWATER POTENTIOMETRIC SURFACE MAP (APRIL 2013)
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.

P:\Western Refining\GIS MXD\WR1008 GIANT\WR1008_GIANT_FIG08_GWELEV_APRIL2013.mxd

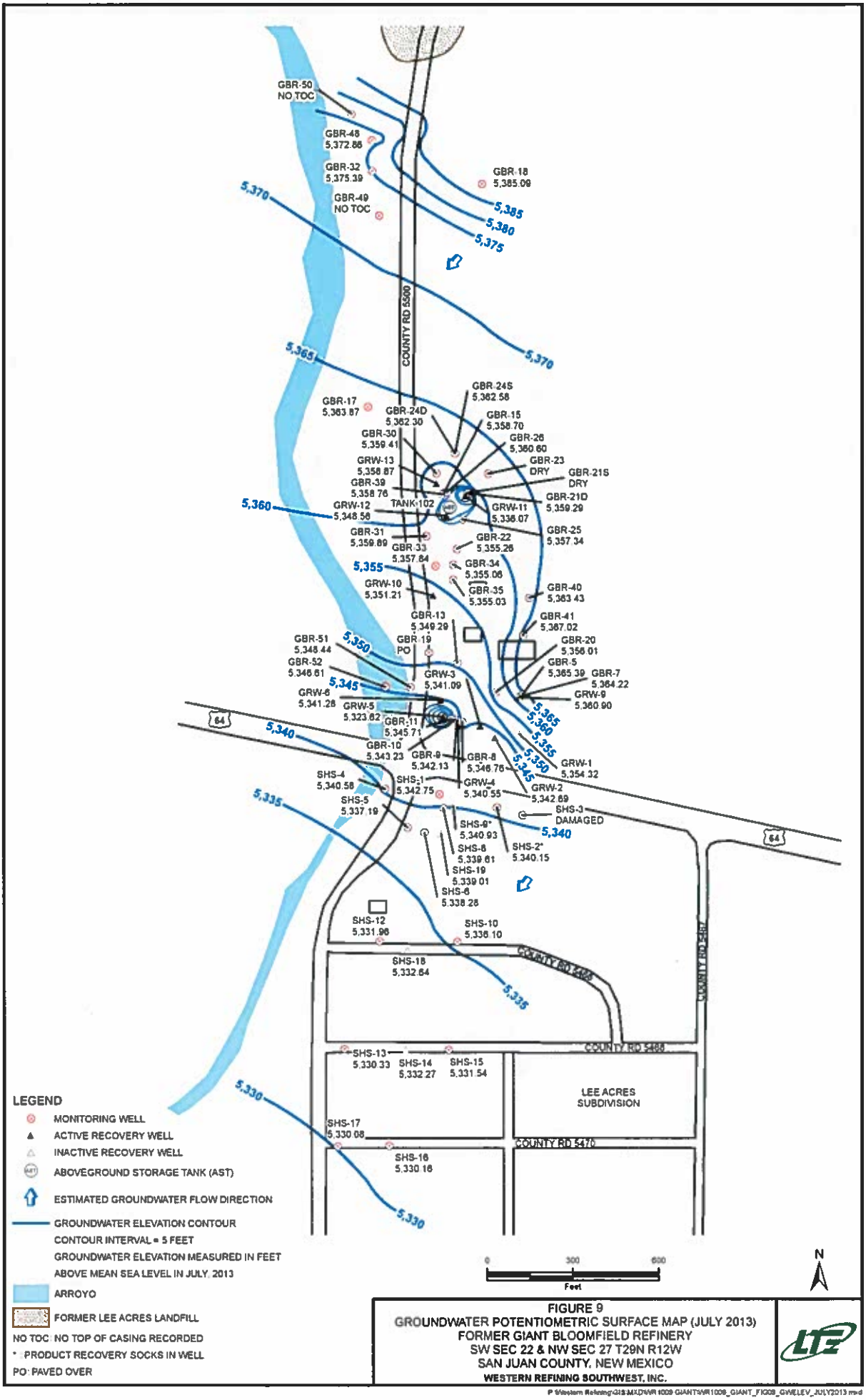

FIGURE 9
GROUNDWATER POTENTIOMETRIC SURFACE MAP (JULY 2013)
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.

P:\Western Refining\218 MIDWR 1009 GIANT\WR1009_GIANT_FIG09_GWELEV_JULY2013.mxd

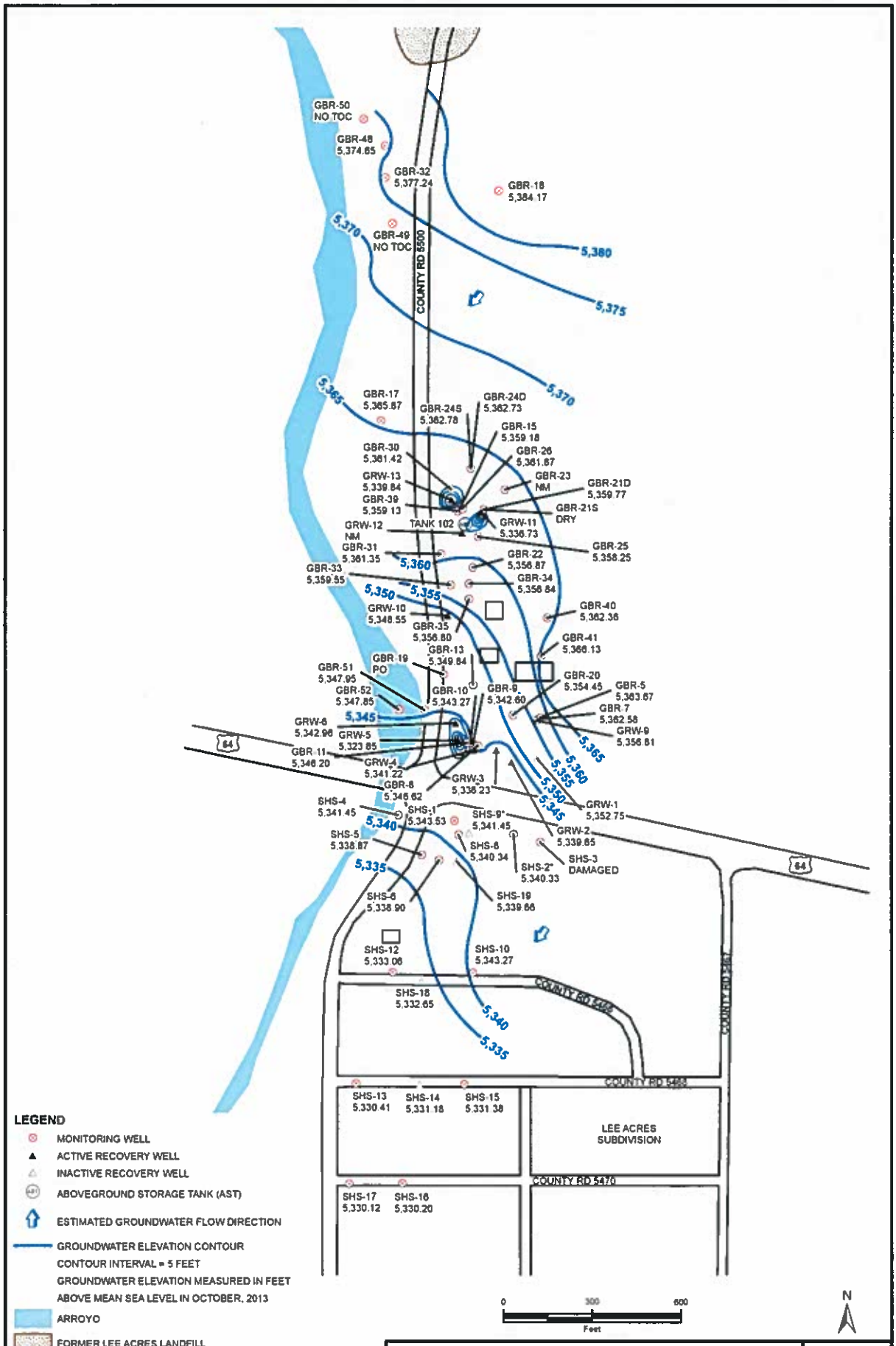

FIGURE 10
GROUNDWATER POTENTIOMETRIC SURFACE MAP (OCTOBER 2013)
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.

P:\Western Refining\GIS\MXD\WR1009 GIANT\WR1009_GIANT_FIG09_GWELEV_OCT_2013.mxd

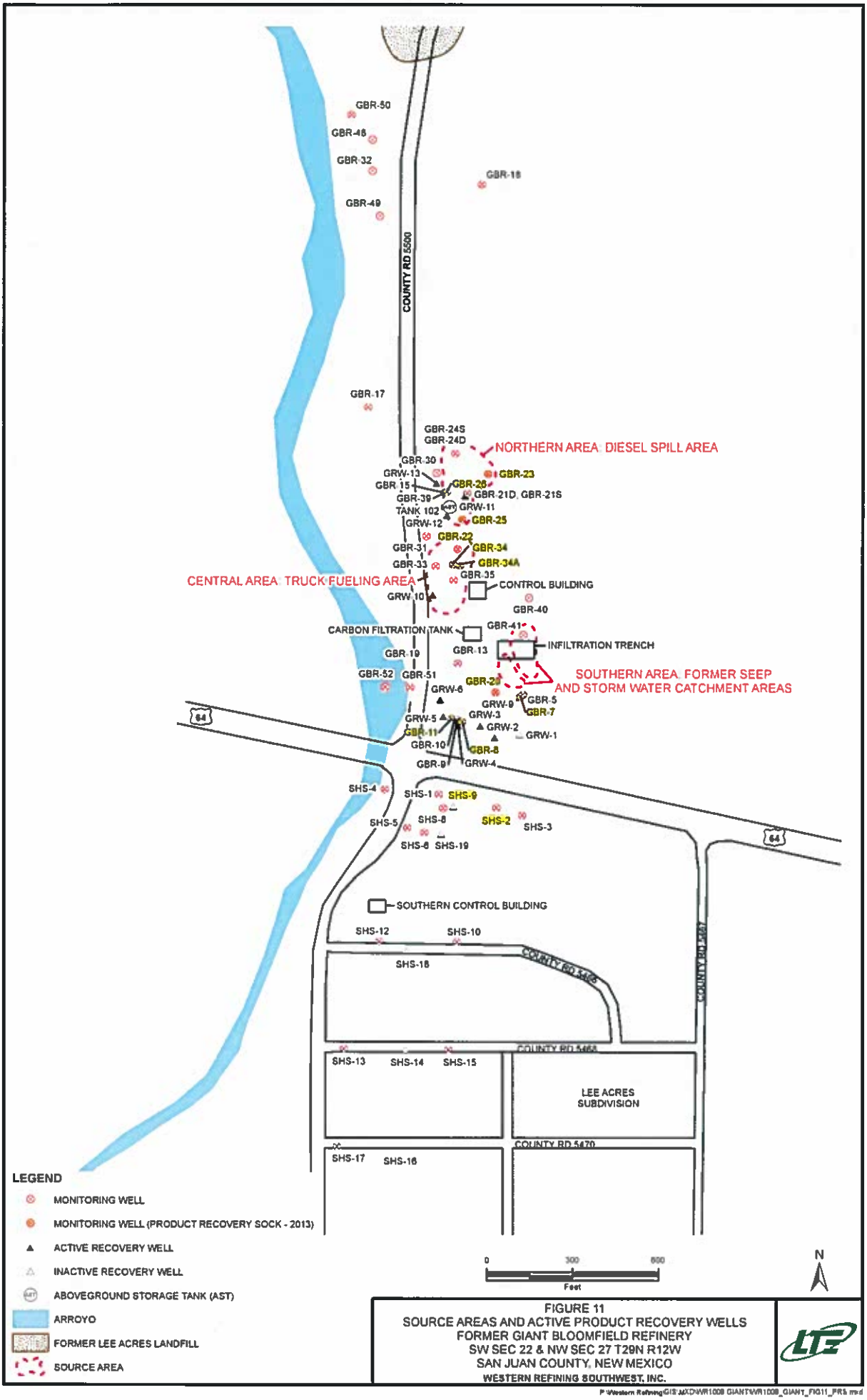

FIGURE 11
SOURCE AREAS AND ACTIVE PRODUCT RECOVERY WELLS
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.

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TABLES

TABLE 1

2013 SAMPLING SCHEDULE
FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.

	Jan-13	Apr-13	Jul-13	Oct-13
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:

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 2012 (Gallons)	Total Volume Pumped in 2013 (Gallons)	Difference (Gallons)
GRW-1	0	2,347	
GRW-2	86,086	70,737	-15,349
GRW-3	82,446	60,128	-22,318
GRW-4	65,700	72,219	6,519
GRW-5	78,919	59,977	-18,942
GRW-6	102,215	88,068	-14,147
GRW-10	1,038,356	647,197	-391,159
GRW-11	143,855	73,251	-70,604
GRW-12	95,413	80,623	-14,790
GRW-13	26,008	28,084	2,076
Total Volume Pumped (Gallons)	**1,718,998**	**1,180,284**	**-538,714**

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 2013				April 2013				July 2013				October 2013			
			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	41.71	-	-	5,352.59	42.94	-	-	5,351.36	39.98	-	-	5,354.32	41.55	-	-	5,352.75
GRW-2	5,391.28	68.00	49.90	-	-	5,341.38	51.95	-	-	5,339.33	48.59	-	-	5,342.69	51.63	-	-	5,339.65
GRW-3	5,388.77	58.30	49.80	-	-	5,338.97	47.14	-	-	5,341.63	47.68	-	-	5,341.09	52.54	-	-	5,336.23
GRW-4	5,390.02	60.00	47.48	-	-	5,342.58	48.35	-	-	5,341.67	49.47	-	-	5,340.55	48.80	-	-	5,341.22
GRW-5	5,390.56	68.30	45.02	-	-	5,345.54	61.06	-	-	5,329.50	66.94	-	-	5,323.62	66.71	-	-	5,323.85
GRW-6	5,390.81	53.80	46.98	-	-	5,343.83	43.85	-	-	5,346.96	49.53	-	-	5,341.28	47.85	-	-	5,342.96
GRW-9	5,395.70	54.40	38.59	-	-	5,357.11	35.00	-	-	5,360.70	34.80	-	-	5,360.90	38.89	-	-	5,356.81
GRW-10	5,395.02	66.02	45.46	-	-	5,349.56	46.15	-	-	5,348.87	43.81	-	-	5,351.21	46.47	-	-	5,348.55
GRW-11	5,397.85	64.00	59.20	-	-	5,338.65	61.75	-	-	5,336.50	68.78	-	-	5,336.07	61.82	-	-	5,336.73
GRW-12	5,397.24	48.00	52.84	-	-	5,344.40	53.11	-	-	5,344.13	48.68	-	-	5,348.56	-	-	-	-
GRW-13	5,396.90	61.30	54.42	-	-	5,342.48	54.99	-	-	5,341.91	38.03	-	-	5,358.87	57.06	-	-	5,339.84
GBR-5	5,395.07	47.08	31.20	-	-	5,363.87	29.80	-	-	5,365.27	29.68	-	-	5,365.39	31.40	-	-	5,363.67
GBR-7	5,395.85	51.65	32.95	-	-	5,362.90 †	31.75	-	-	5,364.10 †	31.63	-	-	5,364.22 †	33.27	-	-	5,362.58 †
GBR-8	5,390.50	50.90	44.15	-	-	5,346.35 †	43.71	-	-	5,346.79 †	43.74	-	-	5,346.76 †	43.88	-	-	5,346.62 †
GBR-9	5,389.92	67.22	48.1	-	-	5,341.82	46.89	-	-	5,343.03	47.79	-	-	5,342.13	47.32	-	-	5,342.60
GBR-10	5,390.57	47.56	47.31	-	-	5,343.26	47.30	-	-	5,343.27	47.34	-	-	5,343.23	47.30	-	-	5,343.27
GBR-11	5,389.43	51.87	43.76	-	-	5,345.67 †	43.56	-	-	5,345.87 †	43.72	-	-	5,345.71 †	43.23	-	-	5,346.20 †
GBR-13	5,393.04	45.47	43.08	-	-	5,349.96	43.54	-	-	5,349.50	43.75	-	-	5,349.29	43.20	-	-	5,349.84
GBR-15	5,397.99	58.42	39.00	-	-	5,358.89	39.71	-	-	5,358.28	39.29	-	-	5,358.70	38.81	-	-	5,359.18
GBR-17	5,402.69	43.20	38.67	-	-	5,364.02	38.62	-	-	5,364.07	38.82	-	-	5,363.87	36.82	-	-	5,365.87
GBR-18	5,421.68	47.85	37.15	-	-	5,384.53	37.03	-	-	5,384.65	36.59	-	-	5,385.09	37.51	-	-	5,384.17
GBR-19***	5,393.83	46.23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GBR-20	5,393.47	54.57	37.91	-	-	5,355.56 †	37.73	-	-	5,356.14 †	37.46	-	-	5,356.01 †	39.02	-	-	5,354.45 †
GBR-21D	5,400.19	49.77	40.81	-	-	5,359.38	40.98	-	-	5,359.21	40.90	-	-	5,359.29	40.42	-	-	5,359.77
GBR-21S	5,400.65	49.77	dry	-	-	-	dry	-	-	-	dry	-	-	-	dry	-	-	-
GBR-22	5,395.91	38.73	dry	-	-	- †	40.62	-	-	5,355.29 †	40.65	-	-	5,355.26 †	39.04	-	-	5,356.87 †
GBR-23	5,403.72	39.45	39.32	-	-	5,364.40 †	dry	-	-	- †	dry	-	-	- †	dry	-	-	- †
GBR-24D	5,396.77	51.40	34.32	-	-	5,362.45	34.50	-	-	5,362.27	34.47	-	-	5,362.30	34.04	-	-	5,362.73
GBR-24S	5,396.08	37.05	33.38	-	-	5,362.70	33.55	-	-	5,362.53	33.50	-	-	5,362.58	33.30	-	-	5,362.78
GBR-25	5,397.03	57.12	39.37	-	-	5,357.66 †	39.70	-	-	5,357.33 †	39.69	-	-	5,357.34 †	38.78	-	-	5,358.25 †
GBR-26	5,396.72	41.29	36.24	-	-	5,360.48 †	36.39	-	-	5,360.33 †	36.12	-	-	5,360.60 †	34.85	-	-	5,361.87 †
GBR-30	5,395.59	41.66	36.11	-	-	5,359.48	36.16	-	-	5,359.43	36.18	-	-	5,359.41	34.17	-	-	5,361.42
GBR-31	5,396.58	43.50	36.73	-	-	5,359.85	36.91	-	-	5,359.67	36.69	-	-	5,359.89	35.23	-	-	5,361.35
GBR-32	5,414.86	47.83	39.30	-	-	5,375.56	39.27	-	-	5,375.59	39.47	-	-	5,375.39	37.62	-	-	5,377.24
GBR-33	5,396.28	45.72	38.25	-	-	5,358.03	38.48	-	-	5,357.80	38.44	-	-	5,357.84	36.73	-	-	5,359.55
GBR-34	5,394.00	42.20	39.12	38.72	0.40	5,355.20 †	38.85	-	-	5,355.15 †	38.94	-	-	5,355.06 †	37.16	-	-	5,356.84 †
GBR-35	5,393.66	42.35	38.34	-	-	5,355.32	38.57	-	-	5,355.09	38.61	-	-	5,355.05	36.86	-	-	5,356.80
GBR-39	5,397.55	41.42	38.80	-	-	5,358.75	39.15	-	-	5,358.40	38.79	-	-	5,358.76	38.42	-	-	5,359.13
GBR-40	5,400.76	39.38	35.22	-	-	5,365.54	36.10	-	-	5,364.66	37.33	-	-	5,363.43	38.40	-	-	5,362.36
GBR-41	5,396.35	34.28	29.21	-	-	5,367.14	29.74	-	-	5,366.61	29.33	-	-	5,367.02	30.22	-	-	5,366.13
GBR-48	5,413.90	43.54	40.88	-	-	5,373.02	40.85	-	-	5,373.05	41.04	-	-	5,372.86	39.25	-	-	5,374.65
GBR-49	*	40.30	37.17	-	-	-	37.17	-	-	-	37.37	-	-	-	35.51	-	-	-
GBR-50	*	44.37	36.52	-	-	-	36.46	-	-	-	36.66	-	-	-	35.00	-	-	-
GBR-51	5,389.68	57.07	42.86	-	-	5,346.82	43.18	-	-	5,346.50	41.24	-	-	5,348.44	41.73	-	-	5,347.95
GBR-52	5,387.74	52.73	40.73	-	-	5,347.01	40.99	-	-	5,346.75	41.13	-	-	5,346.61	39.89	-	-	5,347.85

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 2013				April 2013				July 2013				October 2013			
			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	40.64	-	-	5,342.90	40.79	-	-	5,342.75	40.01	-	-	5,343.53
SHS-2	5,381.66	48.56	41.03	-	-	5,340.63	41.27	41.26	0.01	5,340.39	41.51	-	-	5,340.15	† 41.33	-	-	5,340.33 †
SHS-3**	5,383.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SHS-4	5,383.62	52.86	42.68	-	-	5,340.94	42.96	-	-	5,340.66	43.04	-	-	5,340.58	42.17	-	-	5,341.45
SHS-5	5,378.36	47.85	39.79	-	-	5,338.57	40.00	-	-	5,338.36	41.17	-	-	5,337.19	39.49	-	-	5,338.87
SHS-6	5,378.17	52.78	39.50	-	-	5,338.67	39.69	-	-	5,338.48	39.89	-	-	5,338.28	39.27	-	-	5,338.90
SHS-8	5,380.25	50.92	40.23	-	-	5,340.02	40.48	-	-	5,339.77	40.64	-	-	5,339.61	39.91	-	-	5,340.34
SHS-9	5,380.79	46.25	39.30	-	-	5,341.49	39.73	39.55	0.18	5,341.06	39.86	-	-	5,340.93	† 39.34	-	-	5,341.45 †
SHS-10	5,373.80	45.80	36.86	-	-	5,336.94	37.30	-	-	5,336.50	37.70	-	-	5,336.10	30.53	-	-	5,343.27
SHS-12	5,373.94	52.41	40.34	-	-	5,333.60	40.64	-	-	5,333.30	41.98	-	-	5,331.96	40.88	-	-	5,333.06
SHS-13	5,367.81	47.51	36.86	-	-	5,330.95	37.10	-	-	5,330.71	37.48	-	-	5,330.33	37.40	-	-	5,330.41
SHS-14	5,367.07	52.71	35.09	-	-	5,331.98	35.37	-	-	5,331.70	34.80	-	-	5,332.27	35.89	-	-	5,331.18
SHS-15	5,366.21	47.78	33.94	-	-	5,332.27	34.21	-	-	5,332.00	34.67	-	-	5,331.54	34.83	-	-	5,331.38
SHS-16	5,362.58	42.20	31.73	-	-	5,330.85	33.87	-	-	5,328.71	32.42	-	-	5,330.16	32.18	-	-	5,330.20
SHS-17	5,364.35	46.21	33.64	-	-	5,330.71	31.94	-	-	5,332.41	34.27	-	-	5,330.08	34.23	-	-	5,330.12
SHS-18	5,373.64	47.36	40.35	-	-	5,333.29	40.66	-	-	5,332.98	41.00	-	-	5,332.64	40.99	-	-	5,332.65
SHS-19	5,378.89	52.40	39.47	-	-	5,339.42	39.67	-	-	5,339.22	39.88	-	-	5,339.01	39.23	-	-	5,339.66

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
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
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	2013 Total	Cumulative Total
	(ounces)	(ounces)	(ounces)	(ounces)	(ounces)	(ounces)
GBR-7	0.1	0.0	24.7	42.5	34	101.2
GBR-8	no sock	no sock	23.8	51.85	41.65	117.3
GBR-11	no sock	no sock	15.8	34	70.55	120.4
GBR-20	no sock	17.0	25.2	164.9	113.05	320.1
GBR-22	0.2	0.0	18.7	280.95	158.95	458.8
GBR-23	38.4	48.2	8.5	38.2	17	150.3
GBR-25	9.0	45.6	59.5	117.3	170.5	401.9
GBR-26	17.9	0.0	10.2	60.35	40.8	129.3
GBR-34	12.8	63.2	713.8	1,297.40	679.60	2,766.8
GBR-34A	no sock	no sock	no sock	125.5	330.56	456.1
SHS-2	no sock	no sock	no sock	4.0	113.9	117.9
SHS -9	no sock	no sock	no sock	no sock	149.10	149.1
Annual Total (Ounces)	78.3	174.0	900.13	2,216.95	1,919.66	5,289.1
Annual Total (Gallons)	0.61	1.36	7.03	17.32	15.00	41.3

TABLE 5

2013 GROUNDWATER LABORATORY ANALYTICAL RESULTS
FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.

Analyte	NMWQCC Standard	Unit	INFLUENT Jan 2013	INFLUENT April 2013	INFLUENT July 2013	INFLUENT Oct 2013	EFFLUENT Jan 2013	EFFLUENT April 2013	EFFLUENT July 2013	EFFLUENT Oct 2013	GRW-3 Jan 2013	GRW-6 Jan 2013	GBR-17 Jan 2013	GBR-24D Jan 2013	GBR-30 Jan 2013	GBR-31 Jan 2013	GBR-32 Jan 2013	GBR-46 Jan 2013	GBR-49 Jan 2013	GBR-50 Jan 2013	GBR-51 Jan 2013	GBR-52 Jan 2013	SHS-8 Jan 2013
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	1.4	<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	42	<10	<10	<10	<10	<10	<10	<10	<10	<100
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	<100
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	<100
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	<100
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	<100
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	<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-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	1.2	1.0	1.4	<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

2013 GROUNDWATER LABORATORY ANALYTICAL RESULTS
FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.

Analyte	NMWQCC Standard	Unit	INFLUENT Jan 2013	INFLUENT April 2013	INFLUENT July 2013	INFLUENT Oct 2013	EFFLUENT Jan 2013	EFFLUENT April 2013	EFFLUENT July 2013	EFFLUENT Oct 2013	GRW-3 Jan 2013	GRW-6 Jan 2013	GBR-17 Jan 2013	GBR-24D Jan 2013	GBR-30 Jan 2013	GBR-31 Jan 2013	GBR-32 Jan 2013	GBR-48 Jan 2013	GBR-49 Jan 2013	GBR-50 Jan 2013	GBR-51 Jan 2013	GBR-52 Jan 2013	SHS-8 Jan 2013
USEPA Method 8270C: Polycyclic 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	0.98	<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	<0.75	NT	NT	NT	<0.75	<0.75	<0.75	<0.75	<0.75	<0.50	NT	NT	NT	NT	NT	NT	NT
fluoranthene	NE	µg/L	NT	NT	NT	NT	<0.75	NT	NT	NT	<0.75	<0.75	<0.75	<0.75	<0.75	0.92	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	0.92	NT	NT	NT	NT	NT	NT	NT
benzo(a)anthracene	NE	µg/L	NT	NT	NT	NT	<0.50	NT	NT	NT	<0.50	<0.50	<0.50	<0.50	<0.50	0.53	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	0.56	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	0.54	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	<0.75	NT	NT	NT	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	NT	NT	NT	NT	NT	NT	NT
benzo(g,h,i)perylene	NE	µg/L	NT	NT	NT	NT	<0.75	NT	NT	NT	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	NT	NT	NT	NT	NT	NT	NT
indeno(1,2,3-cd)pyrene	NE	µg/L	NT	NT	NT	NT	<1.0	NT	NT	NT	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NT	NT	NT	NT	NT	NT	NT
USEPA Method 300.0: Anions																							
bromide	NE	mg/L	0.49	0.33	0.35	0.36	0.33	0.32	0.33	0.40	<0.50	<0.50	0.22	0.96	1.0	<0.50	1.5	0.81	0.76	0.26	0.30	0.38	<0.50
chloride	250	mg/L	85	76	78	82	83	76	78	85	59	100	47	200	**310**	79	**400**	230	240	49	56	63	120
sulfate	600	mg/L	**1,400**	**1,600**	**1,400**	**1,500**	**1,400**	**1,600**	**1,400**	**1,400**	**1,300**	**1,500**	**1,300**	**1,700**	**1,500**	**1,600**	**2,200**	**2,200**	**1,600**	**1,600**	**1,500**	**1,700**	**770**
fluoride	1.6	mg/L	0.65	0.67	0.54	0.70	0.63	0.66	0.56	0.68	1.0	0.66	0.71	1.1	0.67	0.63	0.56	0.61	0.54	0.61	0.74	0.80	1.3
nitrate + nitrite as N	NE	mg/L	<0.10	1.7	<0.10	<1.0	<0.10	1.7	0.13	<1.0	<1.0	<1.0	5.3	<1.0	2.3	2.3	5.9	6.9	<1.0	3.4	5.6	5.3	<0.50
phosphorus, orthophosphate (As P)	NE	mg/L	<10	<10	<0.10	<10	<10	<10	<0.50	<10	<0.10	<0.10	<0.10	<0.10	0.65	<0.10	0.18	0.43	<0.10	<0.10	0.13	<0.10	<2.5
USEPA Method 200.7: Total Metals																							
barium	NE	mg/L	NT	NT	NT	NT	0.019	NT	NT	NT	NT	NT	NT	NT	NT	NT	0.020	0.072	0.019	0.016	NT	NT	2.2
beryllium	NE	mg/L	NT	NT	NT	NT	<0.010	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.0020	<0.0020	<0.0020	<0.0020	NT	NT	0.0067
cadmium	0.01	mg/L	NT	NT	NT	NT	<0.010	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.0020	<0.0020	<0.0020	<0.0020	NT	NT	<0.0020
calcium	NE	mg/L	280	390	330	310	300	390	360	300	190	370	190	440	470	410	610	480	540	440	420	470	190
chromium	0.05	mg/L	NT	NT	NT	NT	<0.030	NT	NT	NT	NT	NT	NT	NT	NT	NT	0.098	**0.52**	0.041	<0.0060	NT	NT	0.099
iron	1.0	mg/L	0.14	0.068	0.13	0.14	0.021	<0.020	<0.020	<0.020	**2.8**	**2.4**	**1.2**	**3.6**	**130**	**15**	**1.2**	**17**	**4.6**	**1.3**	**9.7**	**2.3**	**100**
magnesium	NE	mg/L	33	31	31	30	32	30	31	31	26	37	31	38	49	36	60	48	47	33	35	36	36
manganese	0.2	mg/L	**0.98**	**0.43**	**0.38**	**0.59**	**0.78**	**0.43**	**0.45**	**0.70**	**0.54**	**1.2**	0.045	**1.8**	**6.1**	**0.77**	**0.40**	**0.94**	**1.3**	0.12	**0.88**	0.036	**4.7**
nickel	0.2	mg/L	NT	NT	NT	NT	<0.050	NT	NT	NT	NT	NT	NT	NT	NT	NT	0.084	0.041	0.11	<0.010	NT	NT	0.13
potassium	NE	mg/L	3.4	2.5	3.9	4.0	3.4	2.5	3.3	4.1	2.5	2.5	<5.0	7.6	11	5.1	5.1	7.0	4.4	3.0	3.2	2.2	12
silver	0.05	mg/L	NT	NT	NT	NT	<0.025	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.0050	<0.0050	<0.0050	NT	NT	<0.0050
sodium	NE	mg/L	560	410	440	490	560	420	440	510	540	540	290	610	500	430	760	730	530	410	330	350	470
zinc	10	mg/L	NT	NT	NT	NT	0.030	NT	NT	NT	NT	NT	NT	NT	NT	NT	0.021	0.034	0.020	0.015	NT	NT	0.36
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	<0.0025
arsenic	0.1	mg/L	NT	NT	NT	NT	<0.0010	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.0025	0.0032	<0.0025	<0.0025	NT	NT	0.025
copper	1.0	mg/L	NT	NT	NT	NT	0.0036	NT	NT	NT	NT	NT	NT	NT	NT	NT	0.014	0.022	0.0056	0.0054	NT	NT	0.36
lead	0.05	mg/L	NT	NT	NT	NT	<0.0010	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.0025	0.0080	<0.0025	<0.0025	NT	NT	**0.19**
selenium	0.05	mg/L	NT	NT	NT	NT	0.0013	NT	NT	NT	NT	NT	NT	NT	NT	NT	0.046	**0.19**	<0.0025	0.010	NT	NT	0.0029
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	<0.0025
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	<0.00020
SM 2340B: Hardness																							
hardness (as CaCO3)	NE	mg/L	840	1100	960	910	870	1100	1000	890	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	630
USEPA Method SM 2320B: Alkalinity																							
alkalinity, total (As CaCO3)	NE	mg/L CaCO3	310	320	340	420	510	320	340	440	600	460	200	200	220	210	280	240	220	200	210	200	710
carbonate	NE	mg/L CaCO3	<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 CaCO3	310	320	340	420	510	320	340	440	600	460	200	200	220	210	280	240	220	200	210	200	710
USEPA Method 120.1: Specific Conductance																							
specific conductance	NE	µmhos/cm	3,600	3,200	3,500	3,300	3,500	3,200	3,500	3,300	3,200	3,500	2,700	4,100	3,900	3,300	5,200	4,700	3,900	3,200	2,900	3,100	2,600
USEPA Method SM4500-H+ B: pH																							
pH	6-9	pH units	7.41	7.43	7.31	7.26	7.45	7.40	7.28	7.24	7.26	7.47	7.35	7.78	7.33	7.26	7.19	7.29	6.93	7.24	7.27	7.38	7.05
USEPA Method SM2540C Modified: Total Dissolved Solids																							
total dissolved solids	1,000	mg/L	**2,670**	**2,780**	**2,750**	**2,740**	**2,660**	**2,760**	**2,760**	**2,730**	**2,620**	**2,760**	**2,700**	**3,430**	**3,340**	**2,720**	**4,320**	**4,020**	**3,290**	**2,830**	**2,540**	**2,770**	**1,900**

Notes:
BOLD - indicates concentration exceeds the NMWQCC standard
mg/L - milligrams per liter
NE - not established
NMWQCC - New Mexico Water Quality Control Commission
NT - not tested
µg/L - micrograms per liter
USEPA - United States Environmental Protection Agency

APPENDIX A

LABORATORY ANALYTICAL REPORTS

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

January 29, 2013

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

RE: GBR Annual Sampling OrderNo.: 1301596

Dear Ashley Ager:

Hall Environmental Analysis Laboratory received 12 sample(s) on 1/18/2013 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-24D
Project: GBR Annual Sampling **Collection Date:** 1/15/2013 12:35:00 PM
Lab ID: 1301596-002 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JRR**
Fluoride	1.1	0.10		mg/L	1	1/18/2013 4:56:18 PM
Chloride	200	10		mg/L	20	1/18/2013 5:33:32 PM
Bromide	0.96	0.10		mg/L	1	1/18/2013 4:56:18 PM
Sulfate	1700	50	*	mg/L	100	1/21/2013 10:17:16 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	1/18/2013 11:08:42 PM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Calcium	440	5.0		mg/L	5	1/22/2013 9:47:46 AM
Iron	3.6	0.10	*	mg/L	5	1/22/2013 9:47:46 AM
Magnesium	38	1.0		mg/L	1	1/22/2013 9:44:28 AM
Manganese	1.8	0.010	*	mg/L	5	1/22/2013 9:47:46 AM
Potassium	7.6	1.0		mg/L	1	1/22/2013 9:44:28 AM
Sodium	610	10		mg/L	10	1/22/2013 2:01:13 PM
EPA METHOD 8270C: PAHS						Analyst: **JDC**
Naphthalene	ND	0.50		µg/L	1	1/23/2013 2:12:14 PM
1-Methylnaphthalene	ND	0.50		µg/L	1	1/23/2013 2:12:14 PM
2-Methylnaphthalene	ND	0.50		µg/L	1	1/23/2013 2:12:14 PM
Acenaphthylene	ND	0.50		µg/L	1	1/23/2013 2:12:14 PM
Acenaphthene	ND	0.50		µg/L	1	1/23/2013 2:12:14 PM
Fluorene	ND	0.50		µg/L	1	1/23/2013 2:12:14 PM
Phenanthrene	ND	0.50		µg/L	1	1/23/2013 2:12:14 PM
Anthracene	ND	0.75		µg/L	1	1/23/2013 2:12:14 PM
Fluoranthene	ND	0.75		µg/L	1	1/23/2013 2:12:14 PM
Pyrene	ND	0.50		µg/L	1	1/23/2013 2:12:14 PM
Benz(a)anthracene	ND	0.50		µg/L	1	1/23/2013 2:12:14 PM
Chrysene	ND	0.50		µg/L	1	1/23/2013 2:12:14 PM
Benzo(b)fluoranthene	ND	0.50		µg/L	1	1/23/2013 2:12:14 PM
Benzo(k)fluoranthene	ND	0.50		µg/L	1	1/23/2013 2:12:14 PM
Benzo(a)pyrene	ND	0.50		µg/L	1	1/23/2013 2:12:14 PM
Dibenz(a,h)anthracene	ND	0.75		µg/L	1	1/23/2013 2:12:14 PM
Benzo(g,h,i)perylene	ND	0.75		µg/L	1	1/23/2013 2:12:14 PM
Indeno(1,2,3-cd)pyrene	ND	1.0		µg/L	1	1/23/2013 2:12:14 PM
Surr: Benzo(e)pyrene	63.9	38-145		%REC	1	1/23/2013 2:12:14 PM
Surr: N-hexadecane	59.3	40-107		%REC	1	1/23/2013 2:12:14 PM
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
Toluene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
Ethylbenzene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-24D
Project: GBR Annual Sampling **Collection Date:** 1/15/2013 12:35:00 PM
Lab ID: 1301596-002 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
1,2-Dichloroethane (EDC)	1.4	1.0		µg/L	1	1/22/2013 1:24:15 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
Naphthalene	ND	2.0		µg/L	1	1/22/2013 1:24:15 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 1:24:15 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 1:24:15 AM
Acetone	42	10		µg/L	1	1/22/2013 1:24:15 AM
Bromobenzene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
Bromodichloromethane	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
Bromoform	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
Bromomethane	ND	3.0		µg/L	1	1/22/2013 1:24:15 AM
2-Butanone	ND	10		µg/L	1	1/22/2013 1:24:15 AM
Carbon disulfide	ND	10		µg/L	1	1/22/2013 1:24:15 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
Chlorobenzene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
Chloroethane	ND	2.0		µg/L	1	1/22/2013 1:24:15 AM
Chloroform	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
Chloromethane	ND	3.0		µg/L	1	1/22/2013 1:24:15 AM
2-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
4-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
cis-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/22/2013 1:24:15 AM
Dibromochloromethane	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
Dibromomethane	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/22/2013 1:24:15 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
2-Hexanone	ND	10		µg/L	1	1/22/2013 1:24:15 AM
Isopropylbenzene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/22/2013 1:24:15 AM
Methylene Chloride	ND	3.0		µg/L	1	1/22/2013 1:24:15 AM
n-Butylbenzene	ND	3.0		µg/L	1	1/22/2013 1:24:15 AM
n-Propylbenzene	ND	1.0		µg/L	1	1/22/2013 1:24:15 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-24D
Project: GBR Annual Sampling **Collection Date:** 1/15/2013 12:35:00 PM
Lab ID: 1301596-002 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
sec-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
Styrene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
tert-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/22/2013 1:24:15 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
trans-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/22/2013 1:24:15 AM
Vinyl chloride	ND	1.0		µg/L	1	1/22/2013 1:24:15 AM
Xylenes, Total	ND	1.5		µg/L	1	1/22/2013 1:24:15 AM
Surr: 1,2-Dichloroethane-d4	89.5	70-130		%REC	1	1/22/2013 1:24:15 AM
Surr: 4-Bromofluorobenzene	90.5	69.5-130		%REC	1	1/22/2013 1:24:15 AM
Surr: Dibromofluoromethane	95.1	70-130		%REC	1	1/22/2013 1:24:15 AM
Surr: Toluene-d8	92.5	70-130		%REC	1	1/22/2013 1:24:15 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JML**
Conductivity	4100	0.010		µmhos/cm	1	1/21/2013 2:55:56 PM
SM4500-H+B: PH						Analyst: **JML**
pH	7.78	1.68	H	pH units	1	1/21/2013 2:55:56 PM
SM2320B: ALKALINITY						Analyst: **JML**
Bicarbonate (As CaCO3)	200	20		mg/L CaCO3	1	1/21/2013 2:55:56 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/21/2013 2:55:56 PM
Total Alkalinity (as CaCO3)	200	20		mg/L CaCO3	1	1/21/2013 2:55:56 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	3430	40.0		mg/L	1	1/23/2013

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-30
Project: GBR Annual Sampling **Collection Date:** 1/15/2013 2:00:00 PM
Lab ID: 1301596-003 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: JRR
Fluoride	0.67	0.50		mg/L	5	1/18/2013 5:45:56 PM
Chloride	310	10	*	mg/L	20	1/18/2013 5:58:21 PM
Bromide	1.0	0.50		mg/L	5	1/18/2013 5:45:56 PM
Sulfate	1500	25	*	mg/L	50	1/21/2013 10:29:40 PM
Nitrate+Nitrite as N	2.3	1.0		mg/L	5	1/18/2013 11:21:07 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	470	5.0		mg/L	5	1/22/2013 10:12:09 AM
Iron	130	4.0	*	mg/L	200	1/22/2013 2:08:42 PM
Magnesium	49	1.0		mg/L	1	1/22/2013 10:08:05 AM
Manganese	6.1	0.020	*	mg/L	10	1/22/2013 2:05:10 PM
Potassium	11	1.0		mg/L	1	1/22/2013 10:08:05 AM
Sodium	500	10		mg/L	10	1/22/2013 2:05:10 PM
EPA METHOD 8270C: PAHS						Analyst: JDC
Naphthalene	ND	0.50		µg/L	1	1/23/2013 3:00:21 PM
1-Methylnaphthalene	ND	0.50		µg/L	1	1/23/2013 3:00:21 PM
2-Methylnaphthalene	ND	0.50		µg/L	1	1/23/2013 3:00:21 PM
Acenaphthylene	ND	0.50		µg/L	1	1/23/2013 3:00:21 PM
Acenaphthene	ND	0.50		µg/L	1	1/23/2013 3:00:21 PM
Fluorene	ND	0.50		µg/L	1	1/23/2013 3:00:21 PM
Phenanthrene	ND	0.50		µg/L	1	1/23/2013 3:00:21 PM
Anthracene	ND	0.75		µg/L	1	1/23/2013 3:00:21 PM
Fluoranthene	ND	0.75		µg/L	1	1/23/2013 3:00:21 PM
Pyrene	ND	0.50		µg/L	1	1/23/2013 3:00:21 PM
Benz(a)anthracene	ND	0.50		µg/L	1	1/23/2013 3:00:21 PM
Chrysene	ND	0.50		µg/L	1	1/23/2013 3:00:21 PM
Benzo(b)fluoranthene	ND	0.50		µg/L	1	1/23/2013 3:00:21 PM
Benzo(k)fluoranthene	ND	0.50		µg/L	1	1/23/2013 3:00:21 PM
Benzo(a)pyrene	ND	0.50		µg/L	1	1/23/2013 3:00:21 PM
Dibenz(a,h)anthracene	ND	0.75		µg/L	1	1/23/2013 3:00:21 PM
Benzo(g,h,i)perylene	ND	0.75		µg/L	1	1/23/2013 3:00:21 PM
Indeno(1,2,3-cd)pyrene	ND	1.0		µg/L	1	1/23/2013 3:00:21 PM
Surr: Benzo(e)pyrene	77.6	38-145		%REC	1	1/23/2013 3:00:21 PM
Surr: N-hexadecane	82.1	40-107		%REC	1	1/23/2013 3:00:21 PM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
Toluene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
Ethylbenzene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 1:52:30 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-30
Project: GBR Annual Sampling **Collection Date:** 1/15/2013 2:00:00 PM
Lab ID: 1301596-003 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
Naphthalene	ND	2.0		µg/L	1	1/22/2013 1:52:30 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 1:52:30 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 1:52:30 AM
Acetone	ND	10		µg/L	1	1/22/2013 1:52:30 AM
Bromobenzene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
Bromodichloromethane	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
Bromoform	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
Bromomethane	ND	3.0		µg/L	1	1/22/2013 1:52:30 AM
2-Butanone	ND	10		µg/L	1	1/22/2013 1:52:30 AM
Carbon disulfide	ND	10		µg/L	1	1/22/2013 1:52:30 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
Chlorobenzene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
Chloroethane	ND	2.0		µg/L	1	1/22/2013 1:52:30 AM
Chloroform	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
Chloromethane	ND	3.0		µg/L	1	1/22/2013 1:52:30 AM
2-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
4-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
cis-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/22/2013 1:52:30 AM
Dibromochloromethane	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
Dibromomethane	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/22/2013 1:52:30 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
2-Hexanone	ND	10		µg/L	1	1/22/2013 1:52:30 AM
Isopropylbenzene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/22/2013 1:52:30 AM
Methylene Chloride	ND	3.0		µg/L	1	1/22/2013 1:52:30 AM
n-Butylbenzene	ND	3.0		µg/L	1	1/22/2013 1:52:30 AM
n-Propylbenzene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-30
Project: GBR Annual Sampling **Collection Date:** 1/15/2013 2:00:00 PM
Lab ID: 1301596-003 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
sec-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
Styrene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
tert-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/22/2013 1:52:30 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
trans-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/22/2013 1:52:30 AM
Vinyl chloride	ND	1.0		µg/L	1	1/22/2013 1:52:30 AM
Xylenes, Total	ND	1.5		µg/L	1	1/22/2013 1:52:30 AM
Surr: 1,2-Dichloroethane-d4	89.5	70-130		%REC	1	1/22/2013 1:52:30 AM
Surr: 4-Bromofluorobenzene	91.1	69.5-130		%REC	1	1/22/2013 1:52:30 AM
Surr: Dibromofluoromethane	95.5	70-130		%REC	1	1/22/2013 1:52:30 AM
Surr: Toluene-d8	92.0	70-130		%REC	1	1/22/2013 1:52:30 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JML**
Conductivity	3900	0.010		µmhos/cm	1	1/21/2013 3:08:38 PM
SM4500-H+B: PH						Analyst: **JML**
pH	7.33	1.68	H	pH units	1	1/21/2013 3:08:38 PM
SM2320B: ALKALINITY						Analyst: **JML**
Bicarbonate (As CaCO3)	220	20		mg/L CaCO3	1	1/21/2013 3:08:38 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/21/2013 3:08:38 PM
Total Alkalinity (as CaCO3)	220	20		mg/L CaCO3	1	1/21/2013 3:08:38 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	3340	200		mg/L	1	1/23/2013

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GRW-6
Project: GBR Annual Sampling **Collection Date:** 1/15/2013 2:50:00 PM
Lab ID: 1301596-004 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JRR**
Fluoride	0.66	0.50		mg/L	5	1/18/2013 6:10:46 PM
Chloride	100	2.5		mg/L	5	1/18/2013 6:10:46 PM
Bromide	ND	0.50		mg/L	5	1/18/2013 6:10:46 PM
Sulfate	1500	25	*	mg/L	50	1/21/2013 11:06:53 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	1/18/2013 11:33:32 PM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Calcium	370	5.0		mg/L	5	1/22/2013 10:18:43 AM
Iron	2.4	0.10	*	mg/L	5	1/22/2013 10:18:43 AM
Magnesium	37	1.0		mg/L	1	1/22/2013 10:15:27 AM
Manganese	1.2	0.010	*	mg/L	5	1/22/2013 10:18:43 AM
Potassium	2.5	1.0		mg/L	1	1/22/2013 10:15:27 AM
Sodium	540	10		mg/L	10	1/22/2013 2:12:29 PM
EPA METHOD 8270C: PAHS						Analyst: **JDC**
Naphthalene	ND	0.50		µg/L	1	1/23/2013 3:23:33 PM
1-Methylnaphthalene	ND	0.50		µg/L	1	1/23/2013 3:23:33 PM
2-Methylnaphthalene	ND	0.50		µg/L	1	1/23/2013 3:23:33 PM
Acenaphthylene	ND	0.50		µg/L	1	1/23/2013 3:23:33 PM
Acenaphthene	ND	0.50		µg/L	1	1/23/2013 3:23:33 PM
Fluorene	ND	0.50		µg/L	1	1/23/2013 3:23:33 PM
Phenanthrene	ND	0.50		µg/L	1	1/23/2013 3:23:33 PM
Anthracene	ND	0.75		µg/L	1	1/23/2013 3:23:33 PM
Fluoranthene	ND	0.75		µg/L	1	1/23/2013 3:23:33 PM
Pyrene	ND	0.50		µg/L	1	1/23/2013 3:23:33 PM
Benz(a)anthracene	ND	0.50		µg/L	1	1/23/2013 3:23:33 PM
Chrysene	ND	0.50		µg/L	1	1/23/2013 3:23:33 PM
Benzo(b)fluoranthene	ND	0.50		µg/L	1	1/23/2013 3:23:33 PM
Benzo(k)fluoranthene	ND	0.50		µg/L	1	1/23/2013 3:23:33 PM
Benzo(a)pyrene	ND	0.50		µg/L	1	1/23/2013 3:23:33 PM
Dibenz(a,h)anthracene	ND	0.75		µg/L	1	1/23/2013 3:23:33 PM
Benzo(g,h,i)perylene	ND	0.75		µg/L	1	1/23/2013 3:23:33 PM
Indeno(1,2,3-cd)pyrene	ND	1.0		µg/L	1	1/23/2013 3:23:33 PM
Surr: Benzo(e)pyrene	71.2	38-145		%REC	1	1/23/2013 3:23:33 PM
Surr: N-hexadecane	68.6	40-107		%REC	1	1/23/2013 3:23:33 PM
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
Toluene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
Ethylbenzene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 2:20:25 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GRW-6
Project: GBR Annual Sampling **Collection Date:** 1/15/2013 2:50:00 PM
Lab ID: 1301596-004 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
Naphthalene	ND	2.0		µg/L	1	1/22/2013 2:20:25 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 2:20:25 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 2:20:25 AM
Acetone	ND	10		µg/L	1	1/22/2013 2:20:25 AM
Bromobenzene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
Bromodichloromethane	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
Bromoform	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
Bromomethane	ND	3.0		µg/L	1	1/22/2013 2:20:25 AM
2-Butanone	ND	10		µg/L	1	1/22/2013 2:20:25 AM
Carbon disulfide	ND	10		µg/L	1	1/22/2013 2:20:25 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
Chlorobenzene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
Chloroethane	ND	2.0		µg/L	1	1/22/2013 2:20:25 AM
Chloroform	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
Chloromethane	ND	3.0		µg/L	1	1/22/2013 2:20:25 AM
2-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
4-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
cis-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/22/2013 2:20:25 AM
Dibromochloromethane	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
Dibromomethane	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/22/2013 2:20:25 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
2-Hexanone	ND	10		µg/L	1	1/22/2013 2:20:25 AM
Isopropylbenzene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/22/2013 2:20:25 AM
Methylene Chloride	ND	3.0		µg/L	1	1/22/2013 2:20:25 AM
n-Butylbenzene	ND	3.0		µg/L	1	1/22/2013 2:20:25 AM
n-Propylbenzene	ND	1.0		µg/L	1	1/22/2013 2:20:25 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GRW-6
Project: GBR Annual Sampling **Collection Date:** 1/15/2013 2:50:00 PM
Lab ID: 1301596-004 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
sec-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
Styrene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
tert-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/22/2013 2:20:25 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
trans-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/22/2013 2:20:25 AM
Vinyl chloride	ND	1.0		µg/L	1	1/22/2013 2:20:25 AM
Xylenes, Total	ND	1.5		µg/L	1	1/22/2013 2:20:25 AM
Surr: 1,2-Dichloroethane-d4	88.1	70-130		%REC	1	1/22/2013 2:20:25 AM
Surr: 4-Bromofluorobenzene	91.6	69.5-130		%REC	1	1/22/2013 2:20:25 AM
Surr: Dibromofluoromethane	93.6	70-130		%REC	1	1/22/2013 2:20:25 AM
Surr: Toluene-d8	93.7	70-130		%REC	1	1/22/2013 2:20:25 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JML**
Conductivity	3500	0.010		µmhos/cm	1	1/21/2013 3:22:16 PM
SM4500-H+B: PH						Analyst: **JML**
pH	7.47	1.68	H	pH units	1	1/21/2013 3:22:16 PM
SM2320B: ALKALINITY						Analyst: **JML**
Bicarbonate (As CaCO3)	460	20		mg/L CaCO3	1	1/21/2013 3:22:16 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/21/2013 3:22:16 PM
Total Alkalinity (as CaCO3)	460	20		mg/L CaCO3	1	1/21/2013 3:22:16 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2760	40.0		mg/L	1	1/23/2013

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GRW-3
Project: GBR Annual Sampling **Collection Date:** 1/15/2013 3:33:00 PM
Lab ID: 1301596-005 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JRR**
Fluoride	1.0	0.50		mg/L	5	1/18/2013 6:35:36 PM
Chloride	59	2.5		mg/L	5	1/18/2013 6:35:36 PM
Bromide	ND	0.50		mg/L	5	1/18/2013 6:35:36 PM
Sulfate	1300	25	*	mg/L	50	1/21/2013 11:19:18 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	1/19/2013 12:48:01 AM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Calcium	190	5.0		mg/L	5	1/22/2013 10:25:40 AM
Iron	2.8	0.10	*	mg/L	5	1/22/2013 10:25:40 AM
Magnesium	26	1.0		mg/L	1	1/22/2013 10:22:25 AM
Manganese	0.54	0.0020	*	mg/L	1	1/22/2013 10:22:25 AM
Potassium	2.5	1.0		mg/L	1	1/22/2013 10:22:25 AM
Sodium	540	10		mg/L	10	1/22/2013 2:16:21 PM
EPA METHOD 8270C: PAHS						Analyst: **JDC**
Naphthalene	ND	0.50		µg/L	1	1/23/2013 3:46:45 PM
1-Methylnaphthalene	ND	0.50		µg/L	1	1/23/2013 3:46:45 PM
2-Methylnaphthalene	ND	0.50		µg/L	1	1/23/2013 3:46:45 PM
Acenaphthylene	ND	0.50		µg/L	1	1/23/2013 3:46:45 PM
Acenaphthene	ND	0.50		µg/L	1	1/23/2013 3:46:45 PM
Fluorene	0.98	0.50		µg/L	1	1/23/2013 3:46:45 PM
Phenanthrene	ND	0.50		µg/L	1	1/23/2013 3:46:45 PM
Anthracene	ND	0.75		µg/L	1	1/23/2013 3:46:45 PM
Fluoranthene	ND	0.75		µg/L	1	1/23/2013 3:46:45 PM
Pyrene	ND	0.50		µg/L	1	1/23/2013 3:46:45 PM
Benz(a)anthracene	ND	0.50		µg/L	1	1/23/2013 3:46:45 PM
Chrysene	ND	0.50		µg/L	1	1/23/2013 3:46:45 PM
Benzo(b)fluoranthene	ND	0.50		µg/L	1	1/23/2013 3:46:45 PM
Benzo(k)fluoranthene	ND	0.50		µg/L	1	1/23/2013 3:46:45 PM
Benzo(a)pyrene	ND	0.50		µg/L	1	1/23/2013 3:46:45 PM
Dibenz(a,h)anthracene	ND	0.75		µg/L	1	1/23/2013 3:46:45 PM
Benzo(g,h,i)perylene	ND	0.75		µg/L	1	1/23/2013 3:46:45 PM
Indeno(1,2,3-cd)pyrene	ND	1.0		µg/L	1	1/23/2013 3:46:45 PM
Surr: Benzo(e)pyrene	69.2	38-145		%REC	1	1/23/2013 3:46:45 PM
Surr: N-hexadecane	70.6	40-107		%REC	1	1/23/2013 3:46:45 PM
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
Toluene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
Ethylbenzene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 2:48:28 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GRW-3
Project: GBR Annual Sampling **Collection Date:** 1/15/2013 3:33:00 PM
Lab ID: 1301596-005 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
Naphthalene	ND	2.0		µg/L	1	1/22/2013 2:48:28 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 2:48:28 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 2:48:28 AM
Acetone	ND	10		µg/L	1	1/22/2013 2:48:28 AM
Bromobenzene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
Bromodichloromethane	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
Bromoform	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
Bromomethane	ND	3.0		µg/L	1	1/22/2013 2:48:28 AM
2-Butanone	ND	10		µg/L	1	1/22/2013 2:48:28 AM
Carbon disulfide	ND	10		µg/L	1	1/22/2013 2:48:28 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
Chlorobenzene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
Chloroethane	ND	2.0		µg/L	1	1/22/2013 2:48:28 AM
Chloroform	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
Chloromethane	ND	3.0		µg/L	1	1/22/2013 2:48:28 AM
2-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
4-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
cis-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/22/2013 2:48:28 AM
Dibromochloromethane	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
Dibromomethane	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/22/2013 2:48:28 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
2-Hexanone	ND	10		µg/L	1	1/22/2013 2:48:28 AM
Isopropylbenzene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/22/2013 2:48:28 AM
Methylene Chloride	ND	3.0		µg/L	1	1/22/2013 2:48:28 AM
n-Butylbenzene	ND	3.0		µg/L	1	1/22/2013 2:48:28 AM
n-Propylbenzene	ND	1.0		µg/L	1	1/22/2013 2:48:28 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GRW-3
Project: GBR Annual Sampling **Collection Date:** 1/15/2013 3:33:00 PM
Lab ID: 1301596-005 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
sec-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
Styrene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
tert-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/22/2013 2:48:28 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
trans-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/22/2013 2:48:28 AM
Vinyl chloride	ND	1.0		µg/L	1	1/22/2013 2:48:28 AM
Xylenes, Total	ND	1.5		µg/L	1	1/22/2013 2:48:28 AM
Surr: 1,2-Dichloroethane-d4	88.3	70-130		%REC	1	1/22/2013 2:48:28 AM
Surr: 4-Bromofluorobenzene	90.6	69.5-130		%REC	1	1/22/2013 2:48:28 AM
Surr: Dibromofluoromethane	97.2	70-130		%REC	1	1/22/2013 2:48:28 AM
Surr: Toluene-d8	91.8	70-130		%REC	1	1/22/2013 2:48:28 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JML**
Conductivity	3200	0.010		µmhos/cm	1	1/22/2013 12:18:55 PM
SM4500-H+B: PH						Analyst: **JML**
pH	7.26	1.68	H	pH units	1	1/22/2013 12:18:55 PM
SM2320B: ALKALINITY						Analyst: **JML**
Bicarbonate (As CaCO3)	600	20		mg/L CaCO3	1	1/22/2013 12:18:55 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/22/2013 12:18:55 PM
Total Alkalinity (as CaCO3)	600	20		mg/L CaCO3	1	1/22/2013 12:18:55 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2620	40.0		mg/L	1	1/23/2013

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-51
Project: GBR Annual Sampling **Collection Date:** 1/16/2013 11:35:00 AM
Lab ID: 1301596-006 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JRR**
Fluoride	0.74	0.10		mg/L	1	1/18/2013 7:25:18 PM
Chloride	56	10		mg/L	20	1/18/2013 7:37:43 PM
Bromide	0.30	0.10		mg/L	1	1/18/2013 7:25:18 PM
Sulfate	1500	25	*	mg/L	50	1/21/2013 11:31:42 PM
Nitrate+Nitrite as N	5.6	2.0		mg/L	10	1/22/2013 1:48:12 AM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Calcium	420	5.0		mg/L	5	1/22/2013 10:33:02 AM
Iron	9.7	0.40	*	mg/L	20	1/22/2013 2:34:13 PM
Magnesium	35	1.0		mg/L	1	1/22/2013 10:29:35 AM
Manganese	0.88	0.0020	*	mg/L	1	1/22/2013 10:29:35 AM
Potassium	3.2	1.0		mg/L	1	1/22/2013 10:29:35 AM
Sodium	330	5.0		mg/L	5	1/22/2013 10:33:02 AM
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
Toluene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
Ethylbenzene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
Naphthalene	ND	2.0		µg/L	1	1/22/2013 3:16:48 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 3:16:48 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 3:16:48 AM
Acetone	ND	10		µg/L	1	1/22/2013 3:16:48 AM
Bromobenzene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
Bromodichloromethane	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
Bromoform	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
Bromomethane	ND	3.0		µg/L	1	1/22/2013 3:16:48 AM
2-Butanone	ND	10		µg/L	1	1/22/2013 3:16:48 AM
Carbon disulfide	ND	10		µg/L	1	1/22/2013 3:16:48 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
Chlorobenzene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
Chloroethane	ND	2.0		µg/L	1	1/22/2013 3:16:48 AM
Chloroform	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
Chloromethane	ND	3.0		µg/L	1	1/22/2013 3:16:48 AM
2-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
4-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
cis-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/22/2013 3:16:48 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-51
Project: GBR Annual Sampling **Collection Date:** 1/16/2013 11:35:00 AM
Lab ID: 1301596-006 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Dibromochloromethane	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
Dibromomethane	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/22/2013 3:16:48 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
2-Hexanone	ND	10		µg/L	1	1/22/2013 3:16:48 AM
Isopropylbenzene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/22/2013 3:16:48 AM
Methylene Chloride	ND	3.0		µg/L	1	1/22/2013 3:16:48 AM
n-Butylbenzene	ND	3.0		µg/L	1	1/22/2013 3:16:48 AM
n-Propylbenzene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
sec-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
Styrene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
tert-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/22/2013 3:16:48 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
trans-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/22/2013 3:16:48 AM
Vinyl chloride	ND	1.0		µg/L	1	1/22/2013 3:16:48 AM
Xylenes, Total	ND	1.5		µg/L	1	1/22/2013 3:16:48 AM
Surr: 1,2-Dichloroethane-d4	87.8	70-130		%REC	1	1/22/2013 3:16:48 AM
Surr: 4-Bromofluorobenzene	94.5	69.5-130		%REC	1	1/22/2013 3:16:48 AM
Surr: Dibromofluoromethane	97.9	70-130		%REC	1	1/22/2013 3:16:48 AM
Surr: Toluene-d8	91.9	70-130		%REC	1	1/22/2013 3:16:48 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-51
Project: GBR Annual Sampling **Collection Date:** 1/16/2013 11:35:00 AM
Lab ID: 1301596-006 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JML**
Conductivity	2900	0.010		µmhos/cm	1	1/22/2013 12:44:58 PM
SM4500-H+B: PH						Analyst: **JML**
pH	7.27	1.68	H	pH units	1	1/22/2013 12:44:58 PM
SM2320B: ALKALINITY						Analyst: **JML**
Bicarbonate (As CaCO3)	210	20		mg/L CaCO3	1	1/22/2013 12:44:58 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/22/2013 12:44:58 PM
Total Alkalinity (as CaCO3)	210	20		mg/L CaCO3	1	1/22/2013 12:44:58 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2540	40.0		mg/L	1	1/23/2013

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-52
Project: GBR Annual Sampling **Collection Date:** 1/16/2013 1:00:00 PM
Lab ID: 1301596-007 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JRR**
Fluoride	0.80	0.10		mg/L	1	1/18/2013 7:50:08 PM
Chloride	63	10		mg/L	20	1/18/2013 8:02:33 PM
Bromide	0.38	0.10		mg/L	1	1/18/2013 7:50:08 PM
Sulfate	1700	25	*	mg/L	50	1/21/2013 11:44:06 PM
Nitrate+Nitrite as N	5.3	2.0		mg/L	10	1/22/2013 2:00:37 AM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Calcium	470	5.0		mg/L	5	1/22/2013 10:41:35 AM
Iron	2.3	0.10	*	mg/L	5	1/22/2013 10:41:35 AM
Magnesium	36	1.0		mg/L	1	1/22/2013 10:37:52 AM
Manganese	0.036	0.0020		mg/L	1	1/22/2013 10:37:52 AM
Potassium	2.2	1.0		mg/L	1	1/22/2013 10:37:52 AM
Sodium	350	5.0		mg/L	5	1/22/2013 10:41:35 AM
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
Toluene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
Ethylbenzene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
Naphthalene	ND	2.0		µg/L	1	1/22/2013 3:44:31 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 3:44:31 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 3:44:31 AM
Acetone	ND	10		µg/L	1	1/22/2013 3:44:31 AM
Bromobenzene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
Bromodichloromethane	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
Bromoform	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
Bromomethane	ND	3.0		µg/L	1	1/22/2013 3:44:31 AM
2-Butanone	ND	10		µg/L	1	1/22/2013 3:44:31 AM
Carbon disulfide	ND	10		µg/L	1	1/22/2013 3:44:31 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
Chlorobenzene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
Chloroethane	ND	2.0		µg/L	1	1/22/2013 3:44:31 AM
Chloroform	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
Chloromethane	ND	3.0		µg/L	1	1/22/2013 3:44:31 AM
2-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
4-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
cis-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/22/2013 3:44:31 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-52
Project: GBR Annual Sampling **Collection Date:** 1/16/2013 1:00:00 PM
Lab ID: 1301596-007 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Dibromochloromethane	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
Dibromomethane	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/22/2013 3:44:31 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
2-Hexanone	ND	10		µg/L	1	1/22/2013 3:44:31 AM
Isopropylbenzene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/22/2013 3:44:31 AM
Methylene Chloride	ND	3.0		µg/L	1	1/22/2013 3:44:31 AM
n-Butylbenzene	ND	3.0		µg/L	1	1/22/2013 3:44:31 AM
n-Propylbenzene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
sec-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
Styrene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
tert-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/22/2013 3:44:31 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
trans-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/22/2013 3:44:31 AM
Vinyl chloride	ND	1.0		µg/L	1	1/22/2013 3:44:31 AM
Xylenes, Total	ND	1.5		µg/L	1	1/22/2013 3:44:31 AM
Surr: 1,2-Dichloroethane-d4	89.0	70-130		%REC	1	1/22/2013 3:44:31 AM
Surr: 4-Bromofluorobenzene	92.6	69.5-130		%REC	1	1/22/2013 3:44:31 AM
Surr: Dibromofluoromethane	95.7	70-130		%REC	1	1/22/2013 3:44:31 AM
Surr: Toluene-d8	92.5	70-130		%REC	1	1/22/2013 3:44:31 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-52
Project: GBR Annual Sampling **Collection Date:** 1/16/2013 1:00:00 PM
Lab ID: 1301596-007 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JML**
Conductivity	3100	0.010		µmhos/cm	1	1/22/2013 12:58:10 PM
SM4500-H+B: PH						Analyst: **JML**
pH	7.38	1.68	H	pH units	1	1/22/2013 12:58:10 PM
SM2320B: ALKALINITY						Analyst: **JML**
Bicarbonate (As CaCO3)	200	20		mg/L CaCO3	1	1/22/2013 12:58:10 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/22/2013 12:58:10 PM
Total Alkalinity (as CaCO3)	200	20		mg/L CaCO3	1	1/22/2013 12:58:10 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2770	40.0		mg/L	1	1/23/2013

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-50
Project: GBR Annual Sampling **Collection Date:** 1/16/2013 2:05:00 PM
Lab ID: 1301596-008 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JRR**
Fluoride	0.61	0.10		mg/L	1	1/18/2013 8:14:58 PM
Chloride	49	10		mg/L	20	1/18/2013 8:27:23 PM
Bromide	0.26	0.10		mg/L	1	1/18/2013 8:14:58 PM
Sulfate	1600	25	*	mg/L	50	1/21/2013 11:56:31 PM
Nitrate+Nitrite as N	3.4	1.0		mg/L	5	1/19/2013 1:25:15 AM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Barium	0.016	0.0020		mg/L	1	1/22/2013 11:02:05 AM
Beryllium	ND	0.0020		mg/L	1	1/22/2013 11:02:05 AM
Cadmium	ND	0.0020		mg/L	1	1/22/2013 11:02:05 AM
Calcium	440	5.0		mg/L	5	1/22/2013 11:06:01 AM
Chromium	ND	0.0060		mg/L	1	1/22/2013 11:02:05 AM
Iron	1.3	0.10	*	mg/L	5	1/22/2013 11:06:01 AM
Magnesium	33	1.0		mg/L	1	1/22/2013 11:02:05 AM
Manganese	0.12	0.0020	*	mg/L	1	1/22/2013 11:02:05 AM
Nickel	ND	0.010		mg/L	1	1/22/2013 11:02:05 AM
Potassium	3.0	1.0		mg/L	1	1/22/2013 11:02:05 AM
Silver	ND	0.0050		mg/L	1	1/22/2013 11:02:05 AM
Sodium	410	5.0		mg/L	5	1/22/2013 11:06:01 AM
Zinc	0.015	0.010		mg/L	1	1/22/2013 11:02:05 AM
EPA 200.8: METALS						Analyst: **DBD**
Antimony	ND	0.0025		mg/L	2.5	1/24/2013 10:45:36 AM
Arsenic	ND	0.0025		mg/L	2.5	1/24/2013 10:45:36 AM
Lead	ND	0.0025		mg/L	2.5	1/24/2013 10:45:36 AM
Copper	0.0054	0.0025		mg/L	2.5	1/24/2013 10:45:36 AM
Selenium	0.010	0.0025		mg/L	2.5	1/24/2013 10:45:36 AM
Thallium	ND	0.0025		mg/L	2.5	1/24/2013 10:45:36 AM
EPA METHOD 245.1: MERCURY						Analyst: **TMG**
Mercury	ND	0.00020		mg/L	1	1/22/2013 12:14:07 PM
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
Toluene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
Ethylbenzene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
Naphthalene	ND	2.0		µg/L	1	1/22/2013 4:12:18 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 4:12:18 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 4:12:18 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-50
Project: GBR Annual Sampling **Collection Date:** 1/16/2013 2:05:00 PM
Lab ID: 1301596-008 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Acetone	ND	10		µg/L	1	1/22/2013 4:12:18 AM
Bromobenzene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
Bromodichloromethane	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
Bromoform	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
Bromomethane	ND	3.0		µg/L	1	1/22/2013 4:12:18 AM
2-Butanone	ND	10		µg/L	1	1/22/2013 4:12:18 AM
Carbon disulfide	ND	10		µg/L	1	1/22/2013 4:12:18 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
Chlorobenzene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
Chloroethane	ND	2.0		µg/L	1	1/22/2013 4:12:18 AM
Chloroform	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
Chloromethane	ND	3.0		µg/L	1	1/22/2013 4:12:18 AM
2-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
4-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
cis-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/22/2013 4:12:18 AM
Dibromochloromethane	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
Dibromomethane	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/22/2013 4:12:18 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
2-Hexanone	ND	10		µg/L	1	1/22/2013 4:12:18 AM
Isopropylbenzene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/22/2013 4:12:18 AM
Methylene Chloride	ND	3.0		µg/L	1	1/22/2013 4:12:18 AM
n-Butylbenzene	ND	3.0		µg/L	1	1/22/2013 4:12:18 AM
n-Propylbenzene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
sec-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
Styrene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
tert-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/22/2013 4:12:18 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-50
Project: GBR Annual Sampling **Collection Date:** 1/16/2013 2:05:00 PM
Lab ID: 1301596-008 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
trans-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/22/2013 4:12:18 AM
Vinyl chloride	ND	1.0		µg/L	1	1/22/2013 4:12:18 AM
Xylenes, Total	ND	1.5		µg/L	1	1/22/2013 4:12:18 AM
Surr: 1,2-Dichloroethane-d4	85.6	70-130		%REC	1	1/22/2013 4:12:18 AM
Surr: 4-Bromofluorobenzene	93.5	69.5-130		%REC	1	1/22/2013 4:12:18 AM
Surr: Dibromofluoromethane	94.5	70-130		%REC	1	1/22/2013 4:12:18 AM
Surr: Toluene-d8	93.7	70-130		%REC	1	1/22/2013 4:12:18 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JML**
Conductivity	3200	0.010		µmhos/cm	1	1/22/2013 1:12:02 PM
SM4500-H+B: PH						Analyst: **JML**
pH	7.24	1.68	H	pH units	1	1/22/2013 1:12:02 PM
SM2320B: ALKALINITY						Analyst: **JML**
Bicarbonate (As CaCO3)	200	20		mg/L CaCO3	1	1/22/2013 1:12:02 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/22/2013 1:12:02 PM
Total Alkalinity (as CaCO3)	200	20		mg/L CaCO3	1	1/22/2013 1:12:02 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2830	40.0		mg/L	1	1/23/2013

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-48
Project: GBR Annual Sampling **Collection Date:** 1/16/2013 2:35:00 PM
Lab ID: 1301596-009 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: JRR
Fluoride	0.61	0.10		mg/L	1	1/18/2013 8:39:48 PM
Chloride	230	10		mg/L	20	1/18/2013 8:52:13 PM
Bromide	0.81	0.10		mg/L	1	1/18/2013 8:39:48 PM
Sulfate	2200	50	*	mg/L	100	1/22/2013 12:08:55 AM
Nitrate+Nitrite as N	6.9	2.0		mg/L	10	1/22/2013 2:13:02 AM
EPA METHOD 200.7: METALS						Analyst: ELS
Barium	0.072	0.0020		mg/L	1	1/22/2013 11:09:55 AM
Beryllium	ND	0.0020		mg/L	1	1/22/2013 11:09:55 AM
Cadmium	ND	0.0020		mg/L	1	1/22/2013 11:09:55 AM
Calcium	480	5.0		mg/L	5	1/22/2013 11:13:22 AM
Chromium	0.52	0.0060	*	mg/L	1	1/22/2013 11:09:55 AM
Iron	17	0.40	*	mg/L	20	1/22/2013 2:38:05 PM
Magnesium	48	1.0		mg/L	1	1/22/2013 11:09:55 AM
Manganese	0.94	0.0020	*	mg/L	1	1/22/2013 11:09:55 AM
Nickel	0.041	0.010		mg/L	1	1/22/2013 11:09:55 AM
Potassium	7.0	1.0		mg/L	1	1/22/2013 11:09:55 AM
Silver	ND	0.0050		mg/L	1	1/22/2013 11:09:55 AM
Sodium	730	20		mg/L	20	1/22/2013 2:38:05 PM
Zinc	0.034	0.010		mg/L	1	1/22/2013 11:09:55 AM
EPA 200.8: METALS						Analyst: DBD
Antimony	ND	0.0025		mg/L	2.5	1/24/2013 10:49:32 AM
Arsenic	0.0052	0.0025		mg/L	2.5	1/24/2013 10:49:32 AM
Lead	0.0080	0.0025		mg/L	2.5	1/24/2013 10:49:32 AM
Copper	0.022	0.0025		mg/L	2.5	1/24/2013 10:49:32 AM
Selenium	0.19	0.0050	*	mg/L	5	1/24/2013 11:21:03 AM
Thallium	ND	0.0025		mg/L	2.5	1/24/2013 10:49:32 AM
EPA METHOD 245.1: MERCURY						Analyst: TMG
Mercury	ND	0.00020		mg/L	1	1/22/2013 12:15:54 PM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
Toluene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
Ethylbenzene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
Naphthalene	ND	2.0		µg/L	1	1/22/2013 5:35:58 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 5:35:58 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 5:35:58 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-48
Project: GBR Annual Sampling **Collection Date:** 1/16/2013 2:35:00 PM
Lab ID: 1301596-009 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Acetone	ND	10		µg/L	1	1/22/2013 5:35:58 AM
Bromobenzene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
Bromodichloromethane	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
Bromoform	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
Bromomethane	ND	3.0		µg/L	1	1/22/2013 5:35:58 AM
2-Butanone	ND	10		µg/L	1	1/22/2013 5:35:58 AM
Carbon disulfide	ND	10		µg/L	1	1/22/2013 5:35:58 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
Chlorobenzene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
Chloroethane	ND	2.0		µg/L	1	1/22/2013 5:35:58 AM
Chloroform	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
Chloromethane	ND	3.0		µg/L	1	1/22/2013 5:35:58 AM
2-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
4-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
cis-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/22/2013 5:35:58 AM
Dibromochloromethane	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
Dibromomethane	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/22/2013 5:35:58 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
2-Hexanone	ND	10		µg/L	1	1/22/2013 5:35:58 AM
Isopropylbenzene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/22/2013 5:35:58 AM
Methylene Chloride	ND	3.0		µg/L	1	1/22/2013 5:35:58 AM
n-Butylbenzene	ND	3.0		µg/L	1	1/22/2013 5:35:58 AM
n-Propylbenzene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
sec-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
Styrene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
tert-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/22/2013 5:35:58 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-48
Project: GBR Annual Sampling **Collection Date:** 1/16/2013 2:35:00 PM
Lab ID: 1301596-009 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Tetrachloroethene (PCE)	1.0	1.0		µg/L	1	1/22/2013 5:35:58 AM
trans-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/22/2013 5:35:58 AM
Vinyl chloride	ND	1.0		µg/L	1	1/22/2013 5:35:58 AM
Xylenes, Total	ND	1.5		µg/L	1	1/22/2013 5:35:58 AM
Surr: 1,2-Dichloroethane-d4	88.7	70-130		%REC	1	1/22/2013 5:35:58 AM
Surr: 4-Bromofluorobenzene	88.0	69.5-130		%REC	1	1/22/2013 5:35:58 AM
Surr: Dibromofluoromethane	95.0	70-130		%REC	1	1/22/2013 5:35:58 AM
Surr: Toluene-d8	91.7	70-130		%REC	1	1/22/2013 5:35:58 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JML**
Conductivity	4700	0.010		µmhos/cm	1	1/22/2013 1:25:38 PM
SM4500-H+B: PH						Analyst: **JML**
pH	7.29	1.68	H	pH units	1	1/22/2013 1:25:38 PM
SM2320B: ALKALINITY						Analyst: **JML**
Bicarbonate (As CaCO3)	240	20		mg/L CaCO3	1	1/22/2013 1:25:38 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/22/2013 1:25:38 PM
Total Alkalinity (as CaCO3)	240	20		mg/L CaCO3	1	1/22/2013 1:25:38 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	4020	100		mg/L	1	1/23/2013

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-32
Project: GBR Annual Sampling **Collection Date:** 1/16/2013 3:20:00 PM
Lab ID: 1301596-010 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JRR**
Fluoride	0.56	0.10		mg/L	1	1/18/2013 9:04:37 PM
Chloride	400	50	*	mg/L	100	1/22/2013 12:21:20 AM
Bromide	1.5	0.10		mg/L	1	1/18/2013 9:04:37 PM
Sulfate	2200	50	*	mg/L	100	1/22/2013 12:21:20 AM
Nitrate+Nitrite as N	5.9	2.0		mg/L	10	1/22/2013 2:25:27 AM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Barium	0.020	0.0020		mg/L	1	1/22/2013 11:16:30 AM
Beryllium	ND	0.0020		mg/L	1	1/22/2013 11:16:30 AM
Cadmium	ND	0.0020		mg/L	1	1/22/2013 11:16:30 AM
Calcium	610	10		mg/L	10	1/22/2013 2:41:57 PM
Chromium	0.098	0.0060		mg/L	1	1/22/2013 11:16:30 AM
Iron	1.2	0.10	*	mg/L	5	1/22/2013 11:20:28 AM
Magnesium	60	1.0		mg/L	1	1/22/2013 11:16:30 AM
Manganese	0.40	0.0020	*	mg/L	1	1/22/2013 11:16:30 AM
Nickel	0.084	0.010		mg/L	1	1/22/2013 11:16:30 AM
Potassium	5.1	1.0		mg/L	1	1/22/2013 11:16:30 AM
Silver	ND	0.0050		mg/L	1	1/22/2013 11:16:30 AM
Sodium	760	10		mg/L	10	1/22/2013 2:41:57 PM
Zinc	0.021	0.010		mg/L	1	1/22/2013 11:16:30 AM
EPA 200.8: METALS						Analyst: **DBD**
Antimony	ND	0.0025		mg/L	2.5	1/24/2013 10:53:28 AM
Arsenic	ND	0.0025		mg/L	2.5	1/24/2013 10:53:28 AM
Lead	ND	0.0025		mg/L	2.5	1/24/2013 10:53:28 AM
Copper	0.014	0.0025		mg/L	2.5	1/24/2013 10:53:28 AM
Selenium	0.046	0.0025		mg/L	2.5	1/24/2013 10:53:28 AM
Thallium	ND	0.0025		mg/L	2.5	1/24/2013 10:53:28 AM
EPA METHOD 245.1: MERCURY						Analyst: **TMG**
Mercury	ND	0.00020		mg/L	1	1/22/2013 12:17:39 PM
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
Toluene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
Ethylbenzene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
Naphthalene	ND	2.0		µg/L	1	1/22/2013 6:04:11 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 6:04:11 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 6:04:11 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-32
Project: GBR Annual Sampling **Collection Date:** 1/16/2013 3:20:00 PM
Lab ID: 1301596-010 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Acetone	ND	10		µg/L	1	1/22/2013 6:04:11 AM
Bromobenzene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
Bromodichloromethane	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
Bromoform	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
Bromomethane	ND	3.0		µg/L	1	1/22/2013 6:04:11 AM
2-Butanone	ND	10		µg/L	1	1/22/2013 6:04:11 AM
Carbon disulfide	ND	10		µg/L	1	1/22/2013 6:04:11 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
Chlorobenzene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
Chloroethane	ND	2.0		µg/L	1	1/22/2013 6:04:11 AM
Chloroform	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
Chloromethane	ND	3.0		µg/L	1	1/22/2013 6:04:11 AM
2-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
4-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
cis-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/22/2013 6:04:11 AM
Dibromochloromethane	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
Dibromomethane	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/22/2013 6:04:11 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
2-Hexanone	ND	10		µg/L	1	1/22/2013 6:04:11 AM
Isopropylbenzene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/22/2013 6:04:11 AM
Methylene Chloride	ND	3.0		µg/L	1	1/22/2013 6:04:11 AM
n-Butylbenzene	ND	3.0		µg/L	1	1/22/2013 6:04:11 AM
n-Propylbenzene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
sec-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
Styrene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
tert-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/22/2013 6:04:11 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-32
Project: GBR Annual Sampling **Collection Date:** 1/16/2013 3:20:00 PM
Lab ID: 1301596-010 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Tetrachloroethene (PCE)	1.2	1.0		µg/L	1	1/22/2013 6:04:11 AM
trans-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/22/2013 6:04:11 AM
Vinyl chloride	ND	1.0		µg/L	1	1/22/2013 6:04:11 AM
Xylenes, Total	ND	1.5		µg/L	1	1/22/2013 6:04:11 AM
Surr: 1,2-Dichloroethane-d4	85.5	70-130		%REC	1	1/22/2013 6:04:11 AM
Surr: 4-Bromofluorobenzene	91.6	69.5-130		%REC	1	1/22/2013 6:04:11 AM
Surr: Dibromofluoromethane	95.7	70-130		%REC	1	1/22/2013 6:04:11 AM
Surr: Toluene-d8	93.5	70-130		%REC	1	1/22/2013 6:04:11 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JML**
Conductivity	5200	0.010		µmhos/cm	1	1/22/2013 1:40:10 PM
SM4500-H+B: PH						Analyst: **JML**
pH	7.19	1.68	H	pH units	1	1/22/2013 1:40:10 PM
SM2320B: ALKALINITY						Analyst: **JML**
Bicarbonate (As CaCO3)	280	20		mg/L CaCO3	1	1/22/2013 1:40:10 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/22/2013 1:40:10 PM
Total Alkalinity (as CaCO3)	280	20		mg/L CaCO3	1	1/22/2013 1:40:10 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	4320	100		mg/L	1	1/23/2013

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-49
Project: GBR Annual Sampling **Collection Date:** 1/16/2013 3:51:00 PM
Lab ID: 1301596-011 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JRR**
Fluoride	0.54	0.10		mg/L	1	1/18/2013 9:54:15 PM
Chloride	240	10		mg/L	20	1/18/2013 10:06:39 PM
Bromide	0.76	0.10		mg/L	1	1/18/2013 9:54:15 PM
Sulfate	1600	50	*	mg/L	100	1/22/2013 12:33:44 AM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	1/19/2013 2:02:28 AM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Barium	0.019	0.0020		mg/L	1	1/22/2013 11:24:18 AM
Beryllium	ND	0.0020		mg/L	1	1/22/2013 11:24:18 AM
Cadmium	ND	0.0020		mg/L	1	1/22/2013 11:24:18 AM
Calcium	540	10		mg/L	10	1/22/2013 2:45:46 PM
Chromium	0.041	0.0060		mg/L	1	1/22/2013 11:24:18 AM
Iron	4.6	0.20	*	mg/L	10	1/22/2013 2:45:46 PM
Magnesium	47	1.0		mg/L	1	1/22/2013 11:24:18 AM
Manganese	1.3	0.020	*	mg/L	10	1/22/2013 2:45:46 PM
Nickel	0.11	0.010	*	mg/L	1	1/22/2013 11:24:18 AM
Potassium	4.4	1.0		mg/L	1	1/22/2013 11:24:18 AM
Silver	ND	0.0050		mg/L	1	1/22/2013 11:24:18 AM
Sodium	530	10		mg/L	10	1/22/2013 2:45:46 PM
Zinc	0.020	0.010		mg/L	1	1/22/2013 11:24:18 AM
EPA 200.8: METALS						Analyst: **DBD**
Antimony	ND	0.0025		mg/L	2.5	1/24/2013 10:57:24 AM
Arsenic	ND	0.0025		mg/L	2.5	1/24/2013 10:57:24 AM
Lead	ND	0.0025		mg/L	2.5	1/24/2013 10:57:24 AM
Copper	0.0056	0.0025		mg/L	2.5	1/24/2013 10:57:24 AM
Selenium	ND	0.0025		mg/L	2.5	1/24/2013 10:57:24 AM
Thallium	ND	0.0025		mg/L	2.5	1/24/2013 10:57:24 AM
EPA METHOD 245.1: MERCURY						Analyst: **TMG**
Mercury	ND	0.00020		mg/L	1	1/22/2013 12:19:25 PM
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
Toluene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
Ethylbenzene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
Naphthalene	ND	2.0		µg/L	1	1/22/2013 6:32:03 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 6:32:03 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 6:32:03 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-49
Project: GBR Annual Sampling **Collection Date:** 1/16/2013 3:51:00 PM
Lab ID: 1301596-011 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Acetone	ND	10		µg/L	1	1/22/2013 6:32:03 AM
Bromobenzene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
Bromodichloromethane	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
Bromoform	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
Bromomethane	ND	3.0		µg/L	1	1/22/2013 6:32:03 AM
2-Butanone	ND	10		µg/L	1	1/22/2013 6:32:03 AM
Carbon disulfide	ND	10		µg/L	1	1/22/2013 6:32:03 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
Chlorobenzene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
Chloroethane	ND	2.0		µg/L	1	1/22/2013 6:32:03 AM
Chloroform	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
Chloromethane	ND	3.0		µg/L	1	1/22/2013 6:32:03 AM
2-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
4-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
cis-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/22/2013 6:32:03 AM
Dibromochloromethane	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
Dibromomethane	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/22/2013 6:32:03 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
2-Hexanone	ND	10		µg/L	1	1/22/2013 6:32:03 AM
Isopropylbenzene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/22/2013 6:32:03 AM
Methylene Chloride	ND	3.0		µg/L	1	1/22/2013 6:32:03 AM
n-Butylbenzene	ND	3.0		µg/L	1	1/22/2013 6:32:03 AM
n-Propylbenzene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
sec-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
Styrene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
tert-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/22/2013 6:32:03 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-49
Project: GBR Annual Sampling **Collection Date:** 1/16/2013 3:51:00 PM
Lab ID: 1301596-011 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Tetrachloroethene (PCE)	1.4	1.0		µg/L	1	1/22/2013 6:32:03 AM
trans-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/22/2013 6:32:03 AM
Vinyl chloride	ND	1.0		µg/L	1	1/22/2013 6:32:03 AM
Xylenes, Total	ND	1.5		µg/L	1	1/22/2013 6:32:03 AM
Surr: 1,2-Dichloroethane-d4	88.7	70-130		%REC	1	1/22/2013 6:32:03 AM
Surr: 4-Bromofluorobenzene	91.4	69.5-130		%REC	1	1/22/2013 6:32:03 AM
Surr: Dibromofluoromethane	99.5	70-130		%REC	1	1/22/2013 6:32:03 AM
Surr: Toluene-d8	91.8	70-130		%REC	1	1/22/2013 6:32:03 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JML**
Conductivity	3900	0.010		µmhos/cm	1	1/22/2013 1:55:24 PM
SM4500-H+B: PH						Analyst: **JML**
pH	6.93	1.68	H	pH units	1	1/22/2013 1:55:24 PM
SM2320B: ALKALINITY						Analyst: **JML**
Bicarbonate (As CaCO3)	220	20		mg/L CaCO3	1	1/22/2013 1:55:24 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/22/2013 1:55:24 PM
Total Alkalinity (as CaCO3)	220	20		mg/L CaCO3	1	1/22/2013 1:55:24 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	3290	40.0		mg/L	1	1/23/2013

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-17
Project: GBR Annual Sampling **Collection Date:** 1/17/2013 11:53:00 AM
Lab ID: 1301596-012 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JRR**
Fluoride	0.71	0.10		mg/L	1	1/18/2013 10:19:04 PM
Chloride	47	10		mg/L	20	1/18/2013 10:31:28 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	1/18/2013 10:19:04 PM
Bromide	0.22	0.10		mg/L	1	1/18/2013 10:19:04 PM
Nitrogen, Nitrate (As N)	5.3	0.10		mg/L	1	1/18/2013 10:19:04 PM
Sulfate	1300	25	*	mg/L	50	1/22/2013 12:46:09 AM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Calcium	390	5.0		mg/L	5	1/22/2013 11:35:06 AM
Iron	1.2	0.10	*	mg/L	5	1/22/2013 11:35:06 AM
Magnesium	31	5.0		mg/L	5	1/22/2013 11:35:06 AM
Manganese	0.045	0.010		mg/L	5	1/22/2013 11:35:06 AM
Potassium	ND	5.0		mg/L	5	1/22/2013 11:35:06 AM
Sodium	290	5.0		mg/L	5	1/22/2013 11:35:06 AM
EPA METHOD 8270C: PAHS						Analyst: **JDC**
Naphthalene	ND	0.50		µg/L	1	1/23/2013 4:09:55 PM
1-Methylnaphthalene	ND	0.50		µg/L	1	1/23/2013 4:09:55 PM
2-Methylnaphthalene	ND	0.50		µg/L	1	1/23/2013 4:09:55 PM
Acenaphthylene	ND	0.50		µg/L	1	1/23/2013 4:09:55 PM
Acenaphthene	ND	0.50		µg/L	1	1/23/2013 4:09:55 PM
Fluorene	ND	0.50		µg/L	1	1/23/2013 4:09:55 PM
Phenanthrene	ND	0.50		µg/L	1	1/23/2013 4:09:55 PM
Anthracene	ND	0.75		µg/L	1	1/23/2013 4:09:55 PM
Fluoranthene	ND	0.75		µg/L	1	1/23/2013 4:09:55 PM
Pyrene	ND	0.50		µg/L	1	1/23/2013 4:09:55 PM
Benz(a)anthracene	ND	0.50		µg/L	1	1/23/2013 4:09:55 PM
Chrysene	ND	0.50		µg/L	1	1/23/2013 4:09:55 PM
Benzo(b)fluoranthene	ND	0.50		µg/L	1	1/23/2013 4:09:55 PM
Benzo(k)fluoranthene	ND	0.50		µg/L	1	1/23/2013 4:09:55 PM
Benzo(a)pyrene	ND	0.50		µg/L	1	1/23/2013 4:09:55 PM
Dibenz(a,h)anthracene	ND	0.75		µg/L	1	1/23/2013 4:09:55 PM
Benzo(g,h,i)perylene	ND	0.75		µg/L	1	1/23/2013 4:09:55 PM
Indeno(1,2,3-cd)pyrene	ND	1.0		µg/L	1	1/23/2013 4:09:55 PM
Surr: Benzo(e)pyrene	66.0	38-145		%REC	1	1/23/2013 4:09:55 PM
Surr: N-hexadecane	73.2	40-107		%REC	1	1/23/2013 4:09:55 PM
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
Toluene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
Ethylbenzene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM

Qualifiers:
- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-17
Project: GBR Annual Sampling **Collection Date:** 1/17/2013 11:53:00 AM
Lab ID: 1301596-012 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
Naphthalene	ND	2.0		µg/L	1	1/22/2013 7:00:05 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 7:00:05 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 7:00:05 AM
Acetone	ND	10		µg/L	1	1/22/2013 7:00:05 AM
Bromobenzene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
Bromodichloromethane	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
Bromoform	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
Bromomethane	ND	3.0		µg/L	1	1/22/2013 7:00:05 AM
2-Butanone	ND	10		µg/L	1	1/22/2013 7:00:05 AM
Carbon disulfide	ND	10		µg/L	1	1/22/2013 7:00:05 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
Chlorobenzene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
Chloroethane	ND	2.0		µg/L	1	1/22/2013 7:00:05 AM
Chloroform	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
Chloromethane	ND	3.0		µg/L	1	1/22/2013 7:00:05 AM
2-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
4-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
cis-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/22/2013 7:00:05 AM
Dibromochloromethane	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
Dibromomethane	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/22/2013 7:00:05 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
2-Hexanone	ND	10		µg/L	1	1/22/2013 7:00:05 AM
Isopropylbenzene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/22/2013 7:00:05 AM
Methylene Chloride	ND	3.0		µg/L	1	1/22/2013 7:00:05 AM
n-Butylbenzene	ND	3.0		µg/L	1	1/22/2013 7:00:05 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-17
Project: GBR Annual Sampling **Collection Date:** 1/17/2013 11:53:00 AM
Lab ID: 1301596-012 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
n-Propylbenzene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
sec-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
Styrene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
tert-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/22/2013 7:00:05 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
trans-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/22/2013 7:00:05 AM
Vinyl chloride	ND	1.0		µg/L	1	1/22/2013 7:00:05 AM
Xylenes, Total	ND	1.5		µg/L	1	1/22/2013 7:00:05 AM
Surr: 1,2-Dichloroethane-d4	88.6	70-130		%REC	1	1/22/2013 7:00:05 AM
Surr: 4-Bromofluorobenzene	96.6	69.5-130		%REC	1	1/22/2013 7:00:05 AM
Surr: Dibromofluoromethane	99.5	70-130		%REC	1	1/22/2013 7:00:05 AM
Surr: Toluene-d8	92.2	70-130		%REC	1	1/22/2013 7:00:05 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JML**
Conductivity	2700	0.010		µmhos/cm	1	1/22/2013 2:09:38 PM
SM4500-H+B: PH						Analyst: **JML**
pH	7.35	1.68	H	pH units	1	1/22/2013 2:09:38 PM
SM2320B: ALKALINITY						Analyst: **JML**
Bicarbonate (As CaCO3)	200	20		mg/L CaCO3	1	1/22/2013 2:09:38 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/22/2013 2:09:38 PM
Total Alkalinity (as CaCO3)	200	20		mg/L CaCO3	1	1/22/2013 2:09:38 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2200	40.0		mg/L	1	1/23/2013

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-31
Project: GBR Annual Sampling **Collection Date:** 1/17/2013 1:19:00 PM
Lab ID: 1301596-013 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: JRR
Fluoride	0.65	0.50		mg/L	5	1/18/2013 10:43:52 PM
Chloride	79	2.5		mg/L	5	1/18/2013 10:43:52 PM
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	1/18/2013 10:43:52 PM
Bromide	ND	0.50		mg/L	5	1/18/2013 10:43:52 PM
Nitrogen, Nitrate (As N)	2.3	0.50		mg/L	5	1/18/2013 10:43:52 PM
Sulfate	1600	25	*	mg/L	50	1/22/2013 12:58:33 AM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	410	5.0		mg/L	5	1/22/2013 11:56:50 AM
Iron	15	0.40	*	mg/L	20	1/22/2013 2:49:37 PM
Magnesium	36	1.0		mg/L	1	1/22/2013 11:53:25 AM
Manganese	0.77	0.0020	*	mg/L	1	1/22/2013 11:53:25 AM
Potassium	5.1	1.0		mg/L	1	1/22/2013 11:53:25 AM
Sodium	430	5.0		mg/L	5	1/22/2013 11:56:50 AM
EPA METHOD 8270C: PAHS						Analyst: JDC
Naphthalene	ND	0.50		µg/L	1	1/23/2013 4:33:06 PM
1-Methylnaphthalene	ND	0.50		µg/L	1	1/23/2013 4:33:06 PM
2-Methylnaphthalene	ND	0.50		µg/L	1	1/23/2013 4:33:06 PM
Acenaphthylene	ND	0.50		µg/L	1	1/23/2013 4:33:06 PM
Acenaphthene	ND	0.50		µg/L	1	1/23/2013 4:33:06 PM
Fluorene	ND	0.50		µg/L	1	1/23/2013 4:33:06 PM
Phenanthrene	ND	0.50		µg/L	1	1/23/2013 4:33:06 PM
Anthracene	ND	0.75		µg/L	1	1/23/2013 4:33:06 PM
Fluoranthene	0.92	0.75		µg/L	1	1/23/2013 4:33:06 PM
Pyrene	0.92	0.50		µg/L	1	1/23/2013 4:33:06 PM
Benz(a)anthracene	0.53	0.50		µg/L	1	1/23/2013 4:33:06 PM
Chrysene	0.56	0.50		µg/L	1	1/23/2013 4:33:06 PM
Benzo(b)fluoranthene	0.54	0.50		µg/L	1	1/23/2013 4:33:06 PM
Benzo(k)fluoranthene	ND	0.50		µg/L	1	1/23/2013 4:33:06 PM
Benzo(a)pyrene	ND	0.50		µg/L	1	1/23/2013 4:33:06 PM
Dibenz(a,h)anthracene	ND	0.75		µg/L	1	1/23/2013 4:33:06 PM
Benzo(g,h,i)perylene	ND	0.75		µg/L	1	1/23/2013 4:33:06 PM
Indeno(1,2,3-cd)pyrene	ND	1.0		µg/L	1	1/23/2013 4:33:06 PM
Surr: Benzo(e)pyrene	58.1	38-145		%REC	1	1/23/2013 4:33:06 PM
Surr: N-hexadecane	51.8	40-107		%REC	1	1/23/2013 4:33:06 PM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
Toluene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
Ethylbenzene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 7:28:10 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-31
Project: GBR Annual Sampling **Collection Date:** 1/17/2013 1:19:00 PM
Lab ID: 1301596-013 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
Naphthalene	ND	2.0		µg/L	1	1/22/2013 7:28:10 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 7:28:10 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2013 7:28:10 AM
Acetone	ND	10		µg/L	1	1/22/2013 7:28:10 AM
Bromobenzene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
Bromodichloromethane	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
Bromoform	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
Bromomethane	ND	3.0		µg/L	1	1/22/2013 7:28:10 AM
2-Butanone	ND	10		µg/L	1	1/22/2013 7:28:10 AM
Carbon disulfide	ND	10		µg/L	1	1/22/2013 7:28:10 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
Chlorobenzene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
Chloroethane	ND	2.0		µg/L	1	1/22/2013 7:28:10 AM
Chloroform	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
Chloromethane	ND	3.0		µg/L	1	1/22/2013 7:28:10 AM
2-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
4-Chlorotoluene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
cis-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/22/2013 7:28:10 AM
Dibromochloromethane	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
Dibromomethane	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/22/2013 7:28:10 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
2-Hexanone	ND	10		µg/L	1	1/22/2013 7:28:10 AM
Isopropylbenzene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/22/2013 7:28:10 AM
Methylene Chloride	ND	3.0		µg/L	1	1/22/2013 7:28:10 AM
n-Butylbenzene	ND	3.0		µg/L	1	1/22/2013 7:28:10 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-31
Project: GBR Annual Sampling **Collection Date:** 1/17/2013 1:19:00 PM
Lab ID: 1301596-013 **Matrix:** AQUEOUS **Received Date:** 1/18/2013 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
n-Propylbenzene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
sec-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
Styrene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
tert-Butylbenzene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/22/2013 7:28:10 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
trans-1,2-DCE	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/22/2013 7:28:10 AM
Vinyl chloride	ND	1.0		µg/L	1	1/22/2013 7:28:10 AM
Xylenes, Total	ND	1.5		µg/L	1	1/22/2013 7:28:10 AM
Surr: 1,2-Dichloroethane-d4	88.6	70-130		%REC	1	1/22/2013 7:28:10 AM
Surr: 4-Bromofluorobenzene	98.6	69.5-130		%REC	1	1/22/2013 7:28:10 AM
Surr: Dibromofluoromethane	96.7	70-130		%REC	1	1/22/2013 7:28:10 AM
Surr: Toluene-d8	93.6	70-130		%REC	1	1/22/2013 7:28:10 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JML**
Conductivity	3300	0.010		µmhos/cm	1	1/22/2013 2:23:27 PM
SM4500-H+B: PH						Analyst: **JML**
pH	7.26	1.68	H	pH units	1	1/22/2013 2:23:27 PM
SM2320B: ALKALINITY						Analyst: **JML**
Bicarbonate (As CaCO3)	210	20		mg/L CaCO3	1	1/22/2013 2:23:27 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/22/2013 2:23:27 PM
Total Alkalinity (as CaCO3)	210	20		mg/L CaCO3	1	1/22/2013 2:23:27 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	2720	100		mg/L	1	1/23/2013

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

ESC
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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

January 28, 2013

ESC Sample # : L616482-01

Site ID :

Project # :

Date Received : January 22, 2013
Description :

Sample ID : 1301596-002E GBR-24D

Collected By :
Collection Date : 01/15/13 12:35

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Phosphorus,Total	BDL	0.10	mg/l	365.4	01/26/13	1

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

.
Reported: 01/28/13 14:33 Printed: 01/28/13 14:34

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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

January 28, 2013

Date Received : January 22, 2013
Description :

Sample ID : 1301596-003E GBR-30

Collected By :
Collection Date : 01/15/13 14:00

ESC Sample # : L616482-02

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Phosphorus,Total	0.65	0.10	mg/l	365.4	01/26/13	1

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

.
Reported: 01/28/13 14:33 Printed: 01/28/13 14:34

ESC
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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

January 28, 2013

Date Received : January 22, 2013
Description :

Sample ID : 1301596-004E GRW-6

Collected By :
Collection Date : 01/15/13 14:50

ESC Sample # : L616482-03

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Phosphorus,Total	BDL	0.10	mg/l	365.4	01/26/13	1

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

.
Reported: 01/28/13 14:33 Printed: 01/28/13 14:34

ESC
L·A·B S·C·I·E·N·C·E·S
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REPORT OF ANALYSIS

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

January 28, 2013

Date Received : January 22, 2013
Description :

Sample ID : 1301596-005E GRW-3

Collected By :
Collection Date : 01/15/13 15:33

ESC Sample # : L616482-04

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Phosphorus,Total	BDL	0.10	mg/l	365.4	01/26/13	1

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

.
Reported: 01/28/13 14:33 Printed: 01/28/13 14:34

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REPORT OF ANALYSIS

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

January 28, 2013

Date Received : January 22, 2013
Description :
Sample ID : 1301596-006D GBR-51
Collected By :
Collection Date : 01/16/13 11:35

ESC Sample # : L616482-05
Site ID :
Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Phosphorus,Total	0.13	0.10	mg/l	365.4	01/26/13	1

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

.
Reported: 01/28/13 14:33 Printed: 01/28/13 14:34

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REPORT OF ANALYSIS

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

January 28, 2013

Date Received : January 22, 2013
Description :

Sample ID : 1301596-007D GBR-52

Collected By :
Collection Date : 01/16/13 13:00

ESC Sample # : L616482-06

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Phosphorus,Total	BDL	0.10	mg/l	365.4	01/26/13	1

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

.
Reported: 01/28/13 14:33 Printed: 01/28/13 14:34

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REPORT OF ANALYSIS

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

January 28, 2013

Date Received : January 22, 2013
Description :

ESC Sample # : L616482-07

Site ID :

Sample ID : 1301596-008D GBR-50

Project # :

Collected By :
Collection Date : 01/16/13 14:05

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Phosphorus,Total	BDL	0.10	mg/l	365.4	01/26/13	1

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

Reported: 01/28/13 14:33 Printed: 01/28/13 14:34

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REPORT OF ANALYSIS

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

January 28, 2013

Date Received : January 22, 2013
Description :

Sample ID : 1301596-009D GBR-48

Collected By :
Collection Date : 01/16/13 14:35

ESC Sample # : L616482-08

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Phosphorus,Total	0.13	0.10	mg/l	365.4	01/26/13	1

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

.
Reported: 01/28/13 14:33 Printed: 01/28/13 14:34

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REPORT OF ANALYSIS

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

January 28, 2013

ESC Sample # : L616482-09

Date Received : January 22, 2013
Description :

Site ID :

Sample ID : 1301596-010D GBR-32

Project # :

Collected By :
Collection Date : 01/16/13 15:20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Phosphorus,Total	BDL	0.10	mg/l	365.4	01/26/13	1

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

.
Reported: 01/28/13 14:33 Printed: 01/28/13 14:34

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REPORT OF ANALYSIS

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

January 28, 2013

ESC Sample # : L616482-10

Site ID :

Project # :

Date Received : January 22, 2013
Description :

Sample ID : 1301596-011D GBR-49

Collected By :
Collection Date : 01/16/13 15:51

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Phosphorus,Total	BDL	0.10	mg/l	365.4	01/26/13	1

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

.
Reported: 01/28/13 14:33 Printed: 01/28/13 14:34

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REPORT OF ANALYSIS

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

January 28, 2013

ESC Sample # : L616482-11

Date Received : January 22, 2013
Description :

Site ID :

Sample ID : 1301596-012E GBR-17

Project # :

Collected By :
Collection Date : 01/17/13 11:53

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Phosphorus,Total	BDL	0.10	mg/l	365.4	01/26/13	1

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

.
Reported: 01/28/13 14:33 Printed: 01/28/13 14:34

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REPORT OF ANALYSIS

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

January 28, 2013

Date Received : January 22, 2013
Description :

Sample ID : 1301596-013E GBR-31

Collected By :
Collection Date : 01/17/13 13:19

ESC Sample # : L616482-12

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Phosphorus,Total	0.18	0.10	mg/l	365.4	01/26/13	1

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

.
Reported: 01/28/13 14:33 Printed: 01/28/13 14:34

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Hall Environmental Analysis Laboratory
Anne Thorne
4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report
Level II

L616482

January 28, 2013

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Phosphorus,Total	< .1	mg/l			WG633459	01/26/13 09:54

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Phosphorus,Total	mg/l	1.50	1.50	0	20	L616576-01	WG633459
Phosphorus,Total	mg/l	3.80	3.90	2.60	20	L616445-01	WG633459

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Phosphorus,Total	mg/l	1	1.01	101.	90-110	WG633459

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Phosphorus,Total	mg/l	1.01	1.01	101.	90-110	0	20	WG633459

Matrix Spike

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Phosphorus,Total	mg/l	2.50	0	2.5	100.	90-110	L616465-01	WG633459

Matrix Spike Duplicate

Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Phosphorus,Total	mg/l	2.47	2.50	98.8	90-110	1.21	20	L616465-01	WG633459

Batch number /Run number / Sample number cross reference

WG633459: R2518697: L616482-01 02 03 04 05 06 07 08 09 10 11 12

* * 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#: **1301596**

29-Jan-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	MB-5750	SampType:	MBLK	TestCode:	EPA Method 200.7: Metals				
Client ID:	PBW	Batch ID:	5750	RunNo:	8177				
Prep Date:	1/21/2013	Analysis Date:	1/22/2013	SeqNo:	236536	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								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID	LCS-5750	SampType:	LCS	TestCode:	EPA Method 200.7: Metals				
Client ID:	LCSW	Batch ID:	5750	RunNo:	8177				
Prep Date:	1/21/2013	Analysis Date:	1/22/2013	SeqNo:	236537	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.0020	0.5000	0	104	85	115			
Beryllium	0.54	0.0020	0.5000	0	107	85	115			
Cadmium	0.53	0.0020	0.5000	0	105	85	115			
Calcium	52	1.0	50.00	0	104	85	115			
Chromium	0.52	0.0060	0.5000	0	103	85	115			
Iron	0.51	0.020	0.5000	0	103	85	115			
Magnesium	53	1.0	50.00	0	106	85	115			
Manganese	0.51	0.0020	0.5000	0	102	85	115			
Nickel	0.49	0.010	0.5000	0	97.7	85	115			
Potassium	51	1.0	50.00	0	102	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			
Sodium	53	1.0	50.00	0	105	85	115			
Zinc	0.50	0.010	0.5000	0	100	85	115			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301596

29-Jan-13

Client: Western Refining Southwest, Inc.
Project: GBR Annual Sampling

Sample ID	LLLCS-5750	SampType:	LCSLL		TestCode:	EPA 200.8: Metals				
Client ID:	BatchQC	Batch ID:	5750		RunNo:	8242				
Prep Date:	1/21/2013	Analysis Date:	1/24/2013		SeqNo:	238213	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.053	0.0025	0.05000	0	106	85	115			
Arsenic	0.051	0.0025	0.05000	0	102	85	115			
Lead	0.051	0.0025	0.05000	0	103	85	115			
Copper	0.050	0.0025	0.05000	0	101	85	115			
Selenium	0.053	0.0025	0.05000	0	106	85	115			
Thallium	0.052	0.0025	0.05000	0	103	85	115			

Sample ID	MB-5750	SampType:	MBLK		TestCode:	EPA 200.8: Metals				
Client ID:	PBW	Batch ID:	5750		RunNo:	8242				
Prep Date:	1/21/2013	Analysis Date:	1/24/2013		SeqNo:	238216	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								
Lead	ND	0.0025								
Copper	ND	0.0025								
Selenium	ND	0.0025								
Thallium	ND	0.0025								

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1301596**

29-Jan-13

Client: Western Refining Southwest, Inc.
Project: GBR Annual Sampling

Sample ID	MB-5767	SampType:	MBLK	TestCode:	EPA Method 245.1: Mercury					
Client ID:	PBW	Batch ID:	5767	RunNo:	8180					
Prep Date:	1/22/2013	Analysis Date:	1/22/2013	SeqNo:	236595	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-5767	SampType:	LCS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	LCSW	Batch ID:	5767	RunNo:	8180					
Prep Date:	1/22/2013	Analysis Date:	1/22/2013	SeqNo:	236596	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:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301596

29-Jan-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions
Client ID: PBW	Batch ID: R8156	RunNo: 8156
Prep Date:	Analysis Date: 1/18/2013	SeqNo: 235888 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								
Nitrate+Nitrite as N	ND	0.20								

Sample ID LCS	SampType: LCS	TestCode: EPA Method 300.0: Anions
Client ID: LCSW	Batch ID: R8156	RunNo: 8156
Prep Date:	Analysis Date: 1/18/2013	SeqNo: 235889 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	102	90	110			
Chloride	4.8	0.50	5.000	0	95.7	90	110			
Nitrogen, Nitrite (As N)	0.92	0.10	1.000	0	91.9	90	110			
Bromide	2.4	0.10	2.500	0	96.8	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.5	90	110			

Sample ID 1301596-002BMS	SampType: MS	TestCode: EPA Method 300.0: Anions
Client ID: GBR-24D	Batch ID: R8156	RunNo: 8156
Prep Date:	Analysis Date: 1/18/2013	SeqNo: 235901 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.5	0.10	0.5000	1.066	84.7	76.6	110			
Bromide	3.3	0.10	2.500	0.9555	93.9	83.3	107			

Sample ID 1301596-002BMSD	SampType: MSD	TestCode: EPA Method 300.0: Anions
Client ID: GBR-24D	Batch ID: R8156	RunNo: 8156
Prep Date:	Analysis Date: 1/18/2013	SeqNo: 235902 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.5	0.10	0.5000	1.066	91.7	76.6	110	2.32	20	
Bromide	3.3	0.10	2.500	0.9555	95.0	83.3	107	0.763	20	

Sample ID MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions
Client ID: PBW	Batch ID: R8170	RunNo: 8170
Prep Date:	Analysis Date: 1/21/2013	SeqNo: 236183 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:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301596

29-Jan-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R8170	RunNo: 8170							
Prep Date:	Analysis Date: 1/21/2013	SeqNo: 236183	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: R8170	RunNo: 8170							
Prep Date:	Analysis Date: 1/21/2013	SeqNo: 236184	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.0	90	110			
Sulfate	9.5	0.50	10.00	0	94.7	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	96.6	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301596

29-Jan-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID 5ml-rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R8173	RunNo: 8173							
Prep Date:	Analysis Date: 1/21/2013	SeqNo: 236348	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#: 1301596

29-Jan-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID 5ml-rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R8173	RunNo: 8173
Prep Date:	Analysis Date: 1/21/2013	SeqNo: 236348 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	8.6		10.00		85.5	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		90.3	69.5	130			
Surr: Dibromofluoromethane	9.2		10.00		91.6	70	130			
Surr: Toluene-d8	9.4		10.00		93.8	70	130			

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: R8173	RunNo: 8173
Prep Date:	Analysis Date: 1/21/2013	SeqNo: 236350 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.0	70	130			
Toluene	18	1.0	20.00	0	90.7	80	120			
Chlorobenzene	19	1.0	20.00	0	92.6	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	96.1	73.7	122			
Trichloroethene (TCE)	17	1.0	20.00	0	85.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.5	70	130			
Surr: 4-Bromofluorobenzene	8.8		10.00		88.1	69.5	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#: 1301596

29-Jan-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: R8173	RunNo: 8173						
Prep Date:	Analysis Date: 1/21/2013	SeqNo: 236350	Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	9.3		10.00		93.1	70	130			
Surr: Toluene-d8	9.0		10.00		89.7	70	130			

Sample ID b4	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R8173	RunNo: 8173						
Prep Date:	Analysis Date: 1/21/2013	SeqNo: 236377	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#: 1301596

29-Jan-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID b4	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES	
Client ID: PBW	Batch ID: R8173	RunNo: 8173	
Prep Date:	Analysis Date: 1/21/2013	SeqNo: 236377	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	8.8		10.00		87.7	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.0	69.5	130			
Surr: Dibromofluoromethane	9.4		10.00		93.9	70	130			
Surr: Toluene-d8	9.3		10.00		92.9	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#: 1301596

29-Jan-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID 100ng lcs2	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R8173	RunNo: 8173							
Prep Date:	Analysis Date: 1/22/2013	SeqNo: 236379	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.2	70	130			
Toluene	19	1.0	20.00	0	96.2	80	120			
Chlorobenzene	19	1.0	20.00	0	95.5	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	116	73.7	122			
Trichloroethene (TCE)	18	1.0	20.00	0	91.4	70	130			
Surr: 1,2-Dichloroethane-d4	9.2		10.00		92.4	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.2	69.5	130			
Surr: Dibromofluoromethane	9.6		10.00		95.7	70	130			
Surr: Toluene-d8	9.2		10.00		91.8	70	130			

Sample ID 1301596-008a ms	SampType: MS	TestCode: EPA Method 8260B: VOLATILES							
Client ID: GBR-50	Batch ID: R8173	RunNo: 8173							
Prep Date:	Analysis Date: 1/22/2013	SeqNo: 236388	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.7	70	130			
Toluene	19	1.0	20.00	0	93.6	68.5	128			
Chlorobenzene	19	1.0	20.00	0	96.5	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	112	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	88.4	61.3	102			
Surr: 1,2-Dichloroethane-d4	9.0		10.00		89.8	70	130			
Surr: 4-Bromofluorobenzene	8.8		10.00		88.5	69.5	130			
Surr: Dibromofluoromethane	9.5		10.00		94.5	70	130			
Surr: Toluene-d8	9.0		10.00		90.1	70	130			

Sample ID 1301596-008a msd	SampType: MSD	TestCode: EPA Method 8260B: VOLATILES							
Client ID: GBR-50	Batch ID: R8173	RunNo: 8173							
Prep Date:	Analysis Date: 1/22/2013	SeqNo: 236390	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.5	70	130	1.21	20	
Toluene	19	1.0	20.00	0	92.7	68.5	128	1.03	20	
Chlorobenzene	19	1.0	20.00	0	94.3	70	130	2.34	20	
1,1-Dichloroethene	21	1.0	20.00	0	107	70	130	4.32	20	
Trichloroethene (TCE)	18	1.0	20.00	0	88.3	61.3	102	0.108	20	
Surr: 1,2-Dichloroethane-d4	8.8		10.00		88.4	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.1		10.00		91.0	69.5	130	0	0	
Surr: Dibromofluoromethane	9.2		10.00		92.3	70	130	0	0	
Surr: Toluene-d8	9.0		10.00		90.5	70	130	0	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#: 1301596

29-Jan-13

Client: Western Refining Southwest, Inc.
Project: GBR Annual Sampling

Sample ID mb-5749	SampType: MBLK	TestCode: EPA Method 8270C: PAHs
Client ID: PBW	Batch ID: 5749	RunNo: 8227
Prep Date: 1/21/2013	Analysis Date: 1/23/2013	SeqNo: 237632 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	0.75								
Fluoranthene	ND	0.75								
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	0.75								
Benzo(g,h,i)perylene	ND	0.75								
Indeno(1,2,3-cd)pyrene	ND	1.0								
Surr: Benzo(e)pyrene	16		20.00		79.4	38	145			
Surr: N-hexadecane	69		87.60		78.9	40	107			

Sample ID lcs-5749	SampType: LCS	TestCode: EPA Method 8270C: PAHs
Client ID: LCSW	Batch ID: 5749	RunNo: 8227
Prep Date: 1/21/2013	Analysis Date: 1/23/2013	SeqNo: 237633 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	18	0.50	20.00	0	91.2	33.9	106			
1-Methylnaphthalene	18	0.50	20.00	0	90.3	36.3	111			
2-Methylnaphthalene	18	0.50	20.00	0	89.7	36.5	105			
Acenaphthylene	20	0.50	20.00	0	97.8	28.4	122			
Acenaphthene	21	0.50	20.00	0	103	32.7	118			
Fluorene	20	0.50	20.00	0	99.2	39.1	119			
Phenanthrene	21	0.50	20.00	0	105	47.1	119			
Anthracene	21	0.75	20.00	0	106	51.1	117			
Fluoranthene	22	0.75	20.00	0	108	40	132			
Pyrene	20	0.50	20.00	0	99.9	43.9	123			
Benz(a)anthracene	23	0.50	20.00	0	115	35	163			
Chrysene	21	0.50	20.00	0	104	45.9	119			
Benzo(b)fluoranthene	19	0.50	20.00	0	97.3	36.5	137			
Benzo(k)fluoranthene	22	0.50	20.00	0	108	37.1	143			
Benzo(a)pyrene	20	0.50	20.00	0	98.5	26.7	144			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301596

29-Jan-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	lcs-5749	SampType:	LCS		TestCode:	EPA Method 8270C: PAHs				
Client ID:	LCSW	Batch ID:	5749		RunNo:	8227				
Prep Date:	1/21/2013	Analysis Date:	1/23/2013		SeqNo:	237633	Units:	µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dibenz(a,h)anthracene	20	0.75	20.00	0	102	31	146			
Benzo(g,h,i)perylene	20	0.75	20.00	0	102	30.9	150			
Indeno(1,2,3-cd)pyrene	20	1.0	20.00	0	102	35.2	169			
Surr: Benzo(e)pyrene	15		20.00		74.2	38	145			
Surr: N-hexadecane	60		87.60		69.1	40	107			

Sample ID	lcsd-5749	SampType:	LCSD		TestCode:	EPA Method 8270C: PAHs				
Client ID:	LCSS02	Batch ID:	5749		RunNo:	8227				
Prep Date:	1/21/2013	Analysis Date:	1/23/2013		SeqNo:	237634	Units:	µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	19	0.50	20.00	0	95.8	33.9	106	4.92	20	
1-Methylnaphthalene	20	0.50	20.00	0	99.7	36.3	111	9.89	20	
2-Methylnaphthalene	19	0.50	20.00	0	97.2	36.5	105	8.03	20	
Acenaphthylene	22	0.50	20.00	0	110	28.4	122	11.3	20	
Acenaphthene	21	0.50	20.00	0	105	32.7	118	1.92	20	
Fluorene	20	0.50	20.00	0	102	39.1	119	2.98	20	
Phenanthrene	22	0.50	20.00	0	108	47.1	119	3.28	20	
Anthracene	22	0.75	20.00	0	112	51.1	117	4.68	20	
Fluoranthene	24	0.75	20.00	0	122	40	132	12.2	20	
Pyrene	20	0.50	20.00	0	101	43.9	123	1.29	20	
Benz(a)anthracene	20	0.50	20.00	0	102	35	163	12.4	20	
Chrysene	20	0.50	20.00	0	102	45.9	119	1.95	20	
Benzo(b)fluoranthene	21	0.50	20.00	0	103	36.5	137	5.59	20	
Benzo(k)fluoranthene	22	0.50	20.00	0	108	37.1	143	0.277	20	
Benzo(a)pyrene	21	0.50	20.00	0	103	26.7	144	4.76	20	
Dibenz(a,h)anthracene	21	0.75	20.00	0	105	31	146	2.81	20	
Benzo(g,h,i)perylene	23	0.75	20.00	0	113	30.9	150	10.1	20	
Indeno(1,2,3-cd)pyrene	22	1.0	20.00	0	109	35.2	169	7.39	20	
Surr: Benzo(e)pyrene	12		20.00		59.1	38	145	0	0	
Surr: N-hexadecane	46		87.60		52.2	40	107	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1301596**

29-Jan-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	1301596-004b dup	SampType:	DUP			TestCode:	EPA 120.1: Specific Conductance				
Client ID:	GRW-6	Batch ID:	R8178			RunNo:	8178				
Prep Date:		Analysis Date:	1/21/2013			SeqNo:	236567	Units:	µmhos/cm		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity		3500	0.010						0.459	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1301596**

29-Jan-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	**1301596-004b dup**	SampType:	**DUP**		TestCode:	**SM4500-H+B: pH**					
Client ID:	**GRW-6**	Batch ID:	**R8178**		RunNo:	**8178**					
Prep Date:		Analysis Date:	**1/21/2013**		SeqNo:	**236578**	Units:	**pH units**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH		7.46	1.68								H

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#: 1301596

29-Jan-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID mb-1	SampType: MBLK	TestCode: SM2320B: Alkalinity							
Client ID: PBW	Batch ID: R8178	RunNo: 8178							
Prep Date:	Analysis Date: 1/21/2013	SeqNo: 236543	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: R8178	RunNo: 8178							
Prep Date:	Analysis Date: 1/21/2013	SeqNo: 236544	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	98.4	90	110			

Sample ID mb-1	SampType: MBLK	TestCode: SM2320B: Alkalinity							
Client ID: PBW	Batch ID: R8200	RunNo: 8200							
Prep Date:	Analysis Date: 1/22/2013	SeqNo: 237229	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: R8200	RunNo: 8200							
Prep Date:	Analysis Date: 1/22/2013	SeqNo: 237230	Units: mg/L CaCO3						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	78	20	80.00	0	98.0	90	110			

Sample ID mb-2	SampType: MBLK	TestCode: SM2320B: Alkalinity							
Client ID: PBW	Batch ID: R8200	RunNo: 8200							
Prep Date:	Analysis Date: 1/22/2013	SeqNo: 237249	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: R8200	RunNo: 8200							
Prep Date:	Analysis Date: 1/22/2013	SeqNo: 237250	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	100	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301596

29-Jan-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	MB-5752	SampType:	MBLK		TestCode:	SM2540C MOD: Total Dissolved Solids				
Client ID:	PBW	Batch ID:	5752		RunNo:	8201				
Prep Date:	1/21/2013	Analysis Date:	1/23/2013		SeqNo:	237308	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-5752	SampType:	LCS		TestCode:	SM2540C MOD: Total Dissolved Solids				
Client ID:	LCSW	Batch ID:	5752		RunNo:	8201				
Prep Date:	1/21/2013	Analysis Date:	1/23/2013		SeqNo:	237309	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	0	102	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

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: 1301596

Received by/date: AG 01/18/13

Logged By: Lindsay Mangin 1/18/2013 9:53:00 AM

Completed By: Lindsay Mangin 1/18/2013 10:15:18 AM

Reviewed By: 01/18/13

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: 36 (<2 or >12 unless noted)
Adjusted? NO.
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:
-001A - TRIP BLANK RECEIVED BROKEN - 01/18/13

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: Kelly Robinson
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 Annual Sampling
Project #:
Project Manager: Ashley Ager
Sampler: Devin Hencmann
On Ice: ☐ No
Sample Temperature: °C

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.
~~1/12/13~~	~~1400~~	~~Aq~~	~~Trip Blank~~	2	HCl	
1/15/13	1235	GW	GBR-24D	8	various	-002
1/15/13	1400	GW	GBR-30	8	various	-003
1/15/13	1450	GW	GRW-6	8	various	-004
1/15/13	1533	GW	GRW-3	8	various	-005
1/16/13	1135	GW	GBR-51	7	various	-006
1/16/13	1300	GW	GBR-52	7	various	-007
1/16/13	1405	GW	GBR-50	7	various	-008
1/16/13	1435	GW	GBR-48	7	various	-009
1/16/13	1520	GW	GBR-32	7	various	-010
1/16/13	1551	GW	GBR-49	7	various	-011
1/17/13	1153	GW	GBR-17	8	various	-012
1/17/13	1319	GW	GBR-31	8	various	-013

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	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)
											✓				
											✓				
											✓				
											✓				
											✓				
											✓				
											✓				
											✓				
											✓				
											✓				
											✓				
											✓				

Date:	Time:	Relinquished by:	Received by:	Date	Time
1/17/13	1541		Christine Walker	1/17/13	1541
Date:	Time:	Relinquished by:	Received by:	Date	Time
1/17/13	1737	Christine Walker		01/18/13	0953

Remarks:
Please email results to aager@ltenv.com
TRIP BLANK RECEIVED BROKEN 1/17/13

TABLE 1

2012 SAMPLING SCHEDULE
FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING

Sample ID	ANNUALLY (Jan)
[redacted]	[redacted]
[redacted]	[redacted]
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
[redacted]	[redacted]

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

February 14, 2013

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

RE: GBR Annual Sampling

OrderNo.: 1301846

Dear Ashley Ager:

Hall Environmental Analysis Laboratory received 4 sample(s) on 1/25/2013 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued February 06, 2013.

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1301846**
Date Reported: **2/14/2013**

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** SHS-8
Project: GBR Annual Sampling **Collection Date:** 1/24/2013 2:26:00 PM
Lab ID: 1301846-002 **Matrix:** AQUEOUS **Received Date:** 1/25/2013 10:00:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: **JRR**
Fluoride	1.3	0.10000	0.50		mg/L	5	1/25/2013 11:39:40 PM
Chloride	120	1.32400	10		mg/L	20	1/25/2013 11:52:05 PM
Nitrogen, Nitrite (As N)	ND	0.07400	0.50		mg/L	5	1/25/2013 11:39:40 PM
Bromide	0.48	0.38050	0.50	J	mg/L	5	1/25/2013 11:39:40 PM
Nitrogen, Nitrate (As N)	0.19	0.11300	0.50	J	mg/L	5	1/25/2013 11:39:40 PM
Phosphorus, Orthophosphate (As P)	ND	0.46150	2.5		mg/L	5	1/25/2013 11:39:40 PM
Sulfate	770	4.66600	10	*	mg/L	20	1/25/2013 11:52:05 PM
EPA METHOD 200.7: METALS							Analyst: **ELS**
Barium	2.2	0.00500	0.010	*	mg/L	5	1/30/2013 4:50:50 PM
Beryllium	0.0067	0.00060	0.0020	*	mg/L	1	1/30/2013 2:17:23 PM
Cadmium	0.0011	0.00060	0.0020	J	mg/L	1	1/30/2013 2:17:23 PM
Calcium	190	0.12950	5.0		mg/L	5	1/30/2013 4:50:50 PM
Chromium	0.099	0.00100	0.0060		mg/L	1	1/30/2013 2:17:23 PM
Iron	100	6.65000	10	*	mg/L	500	1/30/2013 5:29:10 PM
Magnesium	36	0.06300	1.0		mg/L	1	1/30/2013 2:17:23 PM
Manganese	4.7	0.00300	0.010	*	mg/L	5	1/30/2013 4:50:50 PM
Nickel	0.13	0.00130	0.010	*	mg/L	1	1/30/2013 2:17:23 PM
Potassium	12	0.48090	1.0		mg/L	1	1/30/2013 2:17:23 PM
Silver	ND	0.00370	0.0050		mg/L	1	1/30/2013 2:17:23 PM
Sodium	470	1.07750	5.0		mg/L	5	1/30/2013 4:50:50 PM
Zinc	0.36	0.00110	0.010		mg/L	1	1/30/2013 2:17:23 PM
EPA 200.8: METALS							Analyst: **DBD**
Antimony	0.00065	0.00058	0.0025	J	mg/L	2.5	1/30/2013 1:02:45 PM
Arsenic	0.025	0.00143	0.0025	*	mg/L	2.5	1/30/2013 1:02:45 PM
Lead	0.36	0.00080	0.010	*	mg/L	10	1/30/2013 1:31:46 PM
Copper	0.19	0.00080	0.0050		mg/L	5	1/30/2013 1:22:24 PM
Selenium	0.0029	0.00250	0.0025		mg/L	2.5	1/30/2013 1:02:45 PM
Thallium	0.0014	0.00007	0.0025	J	mg/L	2.5	1/30/2013 1:02:45 PM
EPA METHOD 245.1: MERCURY							Analyst: **TMG**
Mercury	ND	0.00009	0.00020		mg/L	1	1/30/2013 1:16:21 PM
SM2340B: HARDNESS							Analyst: **ELS**
Hardness (As CaCO3)	630	1.00000	6.6		mg/L	1	1/30/2013 7:43:00 AM
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**
Benzene	ND	3.98621	10		µg/L	10	1/29/2013 6:29:25 PM
Toluene	ND	4.73092	10		µg/L	10	1/29/2013 6:29:25 PM
Ethylbenzene	ND	3.81531	10		µg/L	10	1/29/2013 6:29:25 PM
Methyl tert-butyl ether (MTBE)	ND	9.62292	10		µg/L	10	1/29/2013 6:29:25 PM
1,2,4-Trimethylbenzene	ND	4.66690	10		µg/L	10	1/29/2013 6:29:25 PM
1,3,5-Trimethylbenzene	ND	3.75595	10		µg/L	10	1/29/2013 6:29:25 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** SHS-8
Project: GBR Annual Sampling **Collection Date:** 1/24/2013 2:26:00 PM
Lab ID: 1301846-002 **Matrix:** AQUEOUS **Received Date:** 1/25/2013 10:00:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**
1,2-Dichloroethane (EDC)	ND	2.86934	10		µg/L	10	1/29/2013 6:29:25 PM
1,2-Dibromoethane (EDB)	ND	3.76265	10		µg/L	10	1/29/2013 6:29:25 PM
Naphthalene	ND	3.71770	20		µg/L	10	1/29/2013 6:29:25 PM
1-Methylnaphthalene	28	7.17240	40	J	µg/L	10	1/29/2013 6:29:25 PM
2-Methylnaphthalene	7.3	5.98454	40	J	µg/L	10	1/29/2013 6:29:25 PM
Acetone	35	15.03885	100	J	µg/L	10	1/29/2013 6:29:25 PM
Bromobenzene	ND	6.28735	10		µg/L	10	1/29/2013 6:29:25 PM
Bromodichloromethane	ND	3.39929	10		µg/L	10	1/29/2013 6:29:25 PM
Bromoform	ND	4.31761	10		µg/L	10	1/29/2013 6:29:25 PM
Bromomethane	ND	5.58029	30		µg/L	10	1/29/2013 6:29:25 PM
2-Butanone	ND	22.44666	100		µg/L	10	1/29/2013 6:29:25 PM
Carbon disulfide	ND	8.35110	100		µg/L	10	1/29/2013 6:29:25 PM
Carbon Tetrachloride	ND	3.65769	10		µg/L	10	1/29/2013 6:29:25 PM
Chlorobenzene	ND	3.89653	10		µg/L	10	1/29/2013 6:29:25 PM
Chloroethane	ND	4.42414	20		µg/L	10	1/29/2013 6:29:25 PM
Chloroform	ND	3.53710	10		µg/L	10	1/29/2013 6:29:25 PM
Chloromethane	ND	6.51545	30		µg/L	10	1/29/2013 6:29:25 PM
2-Chlorotoluene	ND	5.33617	10		µg/L	10	1/29/2013 6:29:25 PM
4-Chlorotoluene	ND	4.14023	10		µg/L	10	1/29/2013 6:29:25 PM
cis-1,2-DCE	ND	3.43882	10		µg/L	10	1/29/2013 6:29:25 PM
cis-1,3-Dichloropropene	ND	5.65943	10		µg/L	10	1/29/2013 6:29:25 PM
1,2-Dibromo-3-chloropropane	ND	7.70171	20		µg/L	10	1/29/2013 6:29:25 PM
Dibromochloromethane	ND	3.21598	10		µg/L	10	1/29/2013 6:29:25 PM
Dibromomethane	ND	6.51040	10		µg/L	10	1/29/2013 6:29:25 PM
1,2-Dichlorobenzene	ND	4.65522	10		µg/L	10	1/29/2013 6:29:25 PM
1,3-Dichlorobenzene	ND	4.72508	10		µg/L	10	1/29/2013 6:29:25 PM
1,4-Dichlorobenzene	ND	4.27877	10		µg/L	10	1/29/2013 6:29:25 PM
Dichlorodifluoromethane	ND	9.76454	10		µg/L	10	1/29/2013 6:29:25 PM
1,1-Dichloroethane	ND	2.97747	10		µg/L	10	1/29/2013 6:29:25 PM
1,1-Dichloroethene	ND	3.80658	10		µg/L	10	1/29/2013 6:29:25 PM
1,2-Dichloropropane	ND	3.87410	10		µg/L	10	1/29/2013 6:29:25 PM
1,3-Dichloropropane	ND	5.27837	10		µg/L	10	1/29/2013 6:29:25 PM
2,2-Dichloropropane	ND	4.69766	20		µg/L	10	1/29/2013 6:29:25 PM
1,1-Dichloropropene	ND	3.70910	10		µg/L	10	1/29/2013 6:29:25 PM
Hexachlorobutadiene	ND	5.45330	10		µg/L	10	1/29/2013 6:29:25 PM
2-Hexanone	ND	8.91279	100		µg/L	10	1/29/2013 6:29:25 PM
Isopropylbenzene	ND	4.62196	10		µg/L	10	1/29/2013 6:29:25 PM
4-Isopropyltoluene	ND	4.92443	10		µg/L	10	1/29/2013 6:29:25 PM
4-Methyl-2-pentanone	ND	9.78599	100		µg/L	10	1/29/2013 6:29:25 PM
Methylene Chloride	ND	3.51424	30		µg/L	10	1/29/2013 6:29:25 PM
n-Butylbenzene	ND	3.98806	30		µg/L	10	1/29/2013 6:29:25 PM
n-Propylbenzene	6.1	4.00606	10	J	µg/L	10	1/29/2013 6:29:25 PM

Qualifiers:

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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
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** SHS-8
Project: GBR Annual Sampling **Collection Date:** 1/24/2013 2:26:00 PM
Lab ID: 1301846-002 **Matrix:** AQUEOUS **Received Date:** 1/25/2013 10:00:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**
sec-Butylbenzene	ND	4.66904	10		µg/L	10	1/29/2013 6:29:25 PM
Styrene	ND	4.07627	10		µg/L	10	1/29/2013 6:29:25 PM
tert-Butylbenzene	ND	4.17755	10		µg/L	10	1/29/2013 6:29:25 PM
1,1,1,2-Tetrachloroethane	ND	4.85436	10		µg/L	10	1/29/2013 6:29:25 PM
1,1,2,2-Tetrachloroethane	ND	6.16409	20		µg/L	10	1/29/2013 6:29:25 PM
Tetrachloroethene (PCE)	ND	4.74061	10		µg/L	10	1/29/2013 6:29:25 PM
trans-1,2-DCE	ND	3.23185	10		µg/L	10	1/29/2013 6:29:25 PM
trans-1,3-Dichloropropene	ND	6.42924	10		µg/L	10	1/29/2013 6:29:25 PM
1,2,3-Trichlorobenzene	ND	4.96307	10		µg/L	10	1/29/2013 6:29:25 PM
1,2,4-Trichlorobenzene	ND	4.28873	10		µg/L	10	1/29/2013 6:29:25 PM
1,1,1-Trichloroethane	ND	3.84172	10		µg/L	10	1/29/2013 6:29:25 PM
1,1,2-Trichloroethane	ND	5.39346	10		µg/L	10	1/29/2013 6:29:25 PM
Trichloroethene (TCE)	ND	3.00539	10		µg/L	10	1/29/2013 6:29:25 PM
Trichlorofluoromethane	ND	3.54465	10		µg/L	10	1/29/2013 6:29:25 PM
1,2,3-Trichloropropane	ND	6.13056	20		µg/L	10	1/29/2013 6:29:25 PM
Vinyl chloride	ND	4.77468	10		µg/L	10	1/29/2013 6:29:25 PM
Xylenes, Total	ND	12.73654	15		µg/L	10	1/29/2013 6:29:25 PM
Surr: 1,2-Dichloroethane-d4	75.9	0.00000	70-130		%REC	10	1/29/2013 6:29:25 PM
Surr: 4-Bromofluorobenzene	87.2	0.00000	69.5-130		%REC	10	1/29/2013 6:29:25 PM
Surr: Dibromofluoromethane	84.7	0.00000	70-130		%REC	10	1/29/2013 6:29:25 PM
Surr: Toluene-d8	103	0.00000	70-130		%REC	10	1/29/2013 6:29:25 PM
EPA 120.1: SPECIFIC CONDUCTANCE							Analyst: **JML**
Conductivity	2600	0.01000	0.010		µmhos/cm	1	1/28/2013 11:56:58 AM
SM4500-H+B: PH							Analyst: **JML**
pH	7.05	0.10000	1.68	H	pH units	1	1/28/2013 11:56:58 AM
SM2320B: ALKALINITY							Analyst: **JML**
Bicarbonate (As CaCO3)	710	5.00000	20		mg/L CaCO3	1	1/28/2013 11:56:58 AM
Carbonate (As CaCO3)	ND	2.00000	2.0		mg/L CaCO3	1	1/28/2013 11:56:58 AM
Total Alkalinity (as CaCO3)	710	5.00000	20		mg/L CaCO3	1	1/28/2013 11:56:58 AM
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **KS**
Total Dissolved Solids	1800	100.55600	200	*	mg/L	1	1/29/2013 3:04:00 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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301846

14-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	MB-5880	SampType:	MBLK	TestCode:	EPA Method 200.7: Metals				
Client ID:	PBW	Batch ID:	5880	RunNo:	8350				
Prep Date:	1/29/2013	Analysis Date:	1/30/2013	SeqNo:	241011	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								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID	LCS-5880	SampType:	LCS	TestCode:	EPA Method 200.7: Metals				
Client ID:	LCSW	Batch ID:	5880	RunNo:	8350				
Prep Date:	1/29/2013	Analysis Date:	1/30/2013	SeqNo:	241014	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	95.9	85	115			
Beryllium	0.50	0.0020	0.5000	0	99.0	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.4	85	115			
Calcium	47	1.0	50.00	0	94.7	85	115			
Chromium	0.48	0.0060	0.5000	0	95.3	85	115			
Iron	0.47	0.020	0.5000	0	93.9	85	115			
Magnesium	48	1.0	50.00	0	96.4	85	115			
Manganese	0.47	0.0020	0.5000	0	94.2	85	115			
Nickel	0.46	0.010	0.5000	0	91.5	85	115			
Potassium	47	1.0	50.00	0	93.6	85	115			
Silver	0.092	0.0050	0.1000	0	91.5	85	115			
Sodium	48	1.0	50.00	0	95.2	85	115			
Zinc	0.47	0.010	0.5000	0	93.8	85	115			

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#: 1301846

14-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	LLLCS-5880	SampType:	LCSLL	TestCode:	EPA 200.8: Metals				
Client ID:	BatchQC	Batch ID:	5880	RunNo:	8349				
Prep Date:	1/29/2013	Analysis Date:	1/30/2013	SeqNo:	240977	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.052	0.0025	0.05000	0	103	85	115			
Arsenic	0.050	0.0025	0.05000	0	100	85	115			
Lead	0.050	0.0025	0.05000	0	99.7	85	115			
Copper	0.049	0.0025	0.05000	0	97.1	85	115			
Selenium	0.054	0.0025	0.05000	0	108	85	115			
Thallium	0.050	0.0025	0.05000	0	100	85	115			

Sample ID	MB-5880	SampType:	MBLK	TestCode:	EPA 200.8: Metals				
Client ID:	PBW	Batch ID:	5880	RunNo:	8349				
Prep Date:	1/29/2013	Analysis Date:	1/30/2013	SeqNo:	240979	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								
Lead	ND	0.0025								
Copper	ND	0.0025								
Selenium	ND	0.0025								
Thallium	ND	0.0025								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1301846**

14-Feb-13

Client: Western Refining Southwest, Inc.
Project: GBR Annual Sampling

Sample ID	MB-5901	SampType:	MBLK	TestCode:	EPA Method 245.1: Mercury				
Client ID:	PBW	Batch ID:	5901	RunNo:	8347				
Prep Date:	1/30/2013	Analysis Date:	1/30/2013	SeqNo:	240926	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-5901	SampType:	LCS	TestCode:	EPA Method 245.1: Mercury				
Client ID:	LCSW	Batch ID:	5901	RunNo:	8347				
Prep Date:	1/30/2013	Analysis Date:	1/30/2013	SeqNo:	240927	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0046	0.00020	0.005000	0	92.6	80	120			

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#: **1301846**

14-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R8292**	RunNo: **8292**
Prep Date:	Analysis Date: **1/25/2013**	SeqNo: **239498** 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								
Sulfate	ND	0.50								

Sample ID **LCS- b**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R8292**	RunNo: **8292**
Prep Date:	Analysis Date: **1/25/2013**	SeqNo: **239500** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.55	0.10	0.5000	0	109	90	110			
Chloride	5.1	0.50	5.000	0	102	90	110			
Nitrogen, Nitrite (As N)	1.0	0.10	1.000	0	102	90	110			
Bromide	2.6	0.10	2.500	0	104	90	110			
Nitrogen, Nitrate (As N)	2.7	0.10	2.500	0	108	90	110			
Phosphorus, Orthophosphate (As P	5.4	0.50	5.000	0	108	90	110			
Sulfate	10	0.50	10.00	0	102	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1301846**

14-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	MB-5848	SampType:	MBLK		TestCode:	EPA Method 8015B: Diesel Range				
Client ID:	PBW	Batch ID:	5848		RunNo:	8285				
Prep Date:	1/25/2013	Analysis Date:	1/25/2013		SeqNo:	239356	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		106	75.4	146			

Sample ID	LCS-5848	SampType:	LCS		TestCode:	EPA Method 8015B: Diesel Range				
Client ID:	LCSW	Batch ID:	5848		RunNo:	8285				
Prep Date:	1/25/2013	Analysis Date:	1/25/2013		SeqNo:	239357	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.0	1.0	5.000	0	120	64.4	132			
Surr: DNOP	0.57		0.5000		113	75.4	146			

Sample ID	LCSD-5848	SampType:	LCSD		TestCode:	EPA Method 8015B: Diesel Range				
Client ID:	LCSS02	Batch ID:	5848		RunNo:	8285				
Prep Date:	1/25/2013	Analysis Date:	1/25/2013		SeqNo:	239358	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.5	1.0	5.000	0	129	64.4	132	7.58	20	
Surr: DNOP	0.58		0.5000		116	75.4	146	0	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#: **1301846**

14-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID 5ML RB	SampType: MBLK	TestCode: EPA Method 8015B: Gasoline Range							
Client ID: PBW	Batch ID: R8307	RunNo: 8307							
Prep Date:	Analysis Date: 1/28/2013	SeqNo: 239905	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		89.5	51.9	148			

Sample ID 2.5UG GRO LCS	SampType: LCS	TestCode: EPA Method 8015B: Gasoline Range							
Client ID: LCSW	Batch ID: R8307	RunNo: 8307							
Prep Date:	Analysis Date: 1/28/2013	SeqNo: 239906	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.55	0.050	0.5000	0	111	73.2	124			
Surr: BFB	21		20.00		103	51.9	148			

Sample ID 5ML RB	SampType: MBLK	TestCode: EPA Method 8015B: Gasoline Range							
Client ID: PBW	Batch ID: R8330	RunNo: 8330							
Prep Date:	Analysis Date: 1/29/2013	SeqNo: 240513	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		93.4	51.9	148			

Sample ID 2.5UG GRO LCS	SampType: LCS	TestCode: EPA Method 8015B: Gasoline Range							
Client ID: LCSW	Batch ID: R8330	RunNo: 8330							
Prep Date:	Analysis Date: 1/29/2013	SeqNo: 240514	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.54	0.050	0.5000	0	108	73.2	124			
Surr: BFB	20		20.00		98.9	51.9	148			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301846

14-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID 5ml rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R8284	RunNo: 8284
Prep Date:	Analysis Date: 1/25/2013	SeqNo: 239278 Units: %REC

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	7.4		10.00		74.2	70	130			
Surr: 4-Bromofluorobenzene	8.9		10.00		88.7	69.5	130			
Surr: Dibromofluoromethane	8.3		10.00		82.7	70	130			
Surr: Toluene-d8	11		10.00		105	70	130			

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: R8284	RunNo: 8284
Prep Date:	Analysis Date: 1/25/2013	SeqNo: 239280 Units: %REC

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	7.9		10.00		78.9	70	130			
Surr: 4-Bromofluorobenzene	8.6		10.00		86.0	69.5	130			
Surr: Dibromofluoromethane	8.4		10.00		84.1	70	130			
Surr: Toluene-d8	9.9		10.00		98.9	70	130			

Sample ID 5ml rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R8332	RunNo: 8332
Prep Date:	Analysis Date: 1/29/2013	SeqNo: 240554 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	2.6	10								J
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								

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#: 1301846

14-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID 5ml rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R8332	RunNo: 8332
Prep Date:	Analysis Date: 1/29/2013	SeqNo: 240554 Units: µg/L

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1301846**

14-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID **5ml rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R8332**	RunNo: **8332**
Prep Date:	Analysis Date: **1/29/2013**	SeqNo: **240554** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.2		10.00		81.9	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.3	69.5	130			
Surr: Dibromofluoromethane	9.1		10.00		90.9	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R8332**	RunNo: **8332**
Prep Date:	Analysis Date: **1/29/2013**	SeqNo: **240556** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.2	70	130			
Toluene	20	1.0	20.00	0	99.4	80	120			
Chlorobenzene	22	1.0	20.00	0	109	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	122	73.7	122			
Trichloroethene (TCE)	18	1.0	20.00	0	88.2	70	130			
Surr: 1,2-Dichloroethane-d4	8.4		10.00		84.1	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		90.0	69.5	130			
Surr: Dibromofluoromethane	8.9		10.00		89.4	70	130			
Surr: Toluene-d8	9.8		10.00		98.4	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#: **1301846**

14-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	mb-1	SampType:	MBLK	TestCode:	SM2320B: Alkalinity					
Client ID:	PBW	Batch ID:	R8309	RunNo:	8309					
Prep Date:		Analysis Date:	1/28/2013	SeqNo:	239973	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:	R8309	RunNo:	8309					
Prep Date:		Analysis Date:	1/28/2013	SeqNo:	239974	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	99.7	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1301846**

14-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	MB-5864	SampType:	MBLK		TestCode:	SM2540C MOD: Total Dissolved Solids				
Client ID:	PBW	Batch ID:	5864		RunNo:	8325				
Prep Date:	1/28/2013	Analysis Date:	1/29/2013		SeqNo:	240401	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-5864	SampType:	LCS		TestCode:	SM2540C MOD: Total Dissolved Solids				
Client ID:	LCSW	Batch ID:	5864		RunNo:	8325				
Prep Date:	1/28/2013	Analysis Date:	1/29/2013		SeqNo:	240402	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			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
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: 1301846

Received by/date: 01/25/13

Logged By: Michelle Garcia 1/25/2013 10:00:00 AM Michelle Garcia

Completed By: Michelle Garcia 1/25/2013 10:51:32 AM Michelle Garcia

Reviewed By: 01/25/13

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: _____ (<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: Kelly Robinson
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 Annual Sampling
Project #:
Project Manager: Ashley Ager
Sampler: Devin Hencmann
On Ice: Yes No
Sample Temperature: 1°C

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. 1301849	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	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	See Attached List			Air Bubbles (Y or N)
1/24/13	1453	GW	SHS-9	3 40mL	HCL	-001			X													X
1/24/13	1426	GW	SHS-8	7 various	various	-002													X			
1/24/13	1535	GW	SHS-2	3 40mL	HCL	-003			X													
1/24/13	1342	GW	SHS-6	3 40mL	HCL	-004			X													

Date:	Time:	Relinquished by:	Received by:	Date	Time
1/24/13	1710		Christine Walker	1/24/13	1710
1/24/13	1756	Christine Walker		01/25/13	1000

Remarks: Please Copy Results to aager@itenv.

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~~
~~GBW-3~~	~~VOC~~ ~~GWC~~ ~~PAH~~
~~GBW-6~~	~~VOC~~ ~~GWC~~ ~~PAH~~
~~GBR-17~~	~~VOC~~ ~~GWC~~ ~~PAH~~
~~GBR-24~~	~~VOC~~ ~~GWC~~ ~~PAH~~
~~GBR-30~~	~~VOC~~ ~~GWC~~ ~~PAH~~
~~GBR-31~~	~~VOC~~ ~~GWC~~ ~~PAH~~
~~GBR-32~~	~~VOC~~ ~~GWC~~ ~~METALS~~
~~GBR-48~~	~~VOC~~ ~~GWC~~ ~~METALS~~
~~GBR-50~~	~~VOC~~ ~~GWC~~ ~~METALS~~
~~GBR-51~~	~~VOC~~ ~~GWC~~ ~~METALS~~
~~GBR-51~~	~~VOC~~ ~~GWC~~
~~GBR-52~~	~~VOC~~ ~~GWC~~
SHS-8	VOC GWC

Notes:

VOC
method 8260

~~PAH~~
~~method 8270~~ Do not have an amber AT 01/25/13

GWC
pH
EC
TDS
alkalinity
hardness
anions
bromide
chloride
sulfate
fluoride
nitrate/nitrite
phosporus = PO4 per KR AT 01/25/13
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

February 11, 2013

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

RE: GBR Annual Sampling OrderNo.: 1301999

Dear Ashley Ager:

Hall Environmental Analysis Laboratory received 3 sample(s) on 1/31/2013 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

Analytical Report
Lab Order **1301999**
Date Reported: **2/11/2013**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Influent
Project: GBR Annual Sampling **Collection Date:** 1/30/2013 1:25:00 PM
Lab ID: 1301999-001 **Matrix:** AQUEOUS **Received Date:** 1/31/2013 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	1/31/2013 4:18:53 PM
Chloride	85	10		mg/L	20	1/31/2013 4:31:17 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	1/31/2013 4:18:53 PM
Bromide	0.49	0.10		mg/L	1	2/5/2013 10:56:53 PM
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	1/31/2013 4:18:53 PM
Phosphorus, Orthophosphate (As P	ND	10		mg/L	20	1/31/2013 4:31:17 PM
Sulfate	1400	25	*	mg/L	50	2/5/2013 11:09:18 PM
EPA METHOD 200.7: METALS						Analyst: JLF
Calcium	280	10		mg/L	10	2/4/2013 7:54:31 PM
Iron	0.14	0.020		mg/L	1	2/4/2013 7:50:20 PM
Magnesium	33	1.0		mg/L	1	2/4/2013 7:50:20 PM
Manganese	0.98	0.010	*	mg/L	5	2/1/2013 6:45:22 PM
Potassium	3.4	1.0		mg/L	1	2/4/2013 7:50:20 PM
Sodium	560	10		mg/L	10	2/4/2013 7:54:31 PM
SM2340B: HARDNESS						Analyst: JLF
Hardness (As CaCO3)	840	6.6		mg/L	1	2/4/2013 1:44:00 PM
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Benzene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
Toluene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
Ethylbenzene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
Naphthalene	ND	2.0		µg/L	1	2/1/2013 4:53:53 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	2/1/2013 4:53:53 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	2/1/2013 4:53:53 PM
Acetone	ND	10		µg/L	1	2/1/2013 4:53:53 PM
Bromobenzene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
Bromodichloromethane	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
Bromoform	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
Bromomethane	ND	3.0		µg/L	1	2/1/2013 4:53:53 PM
2-Butanone	ND	10		µg/L	1	2/1/2013 4:53:53 PM
Carbon disulfide	ND	10		µg/L	1	2/1/2013 4:53:53 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
Chlorobenzene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
Chloroethane	ND	2.0		µg/L	1	2/1/2013 4:53:53 PM
Chloroform	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
Chloromethane	ND	3.0		µg/L	1	2/1/2013 4:53:53 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Influent
Project: GBR Annual Sampling **Collection Date:** 1/30/2013 1:25:00 PM
Lab ID: 1301999-001 **Matrix:** AQUEOUS **Received Date:** 1/31/2013 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
2-Chlorotoluene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
4-Chlorotoluene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
cis-1,2-DCE	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/1/2013 4:53:53 PM
Dibromochloromethane	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
Dibromomethane	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	2/1/2013 4:53:53 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
2-Hexanone	ND	10		µg/L	1	2/1/2013 4:53:53 PM
Isopropylbenzene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	2/1/2013 4:53:53 PM
Methylene Chloride	ND	3.0		µg/L	1	2/1/2013 4:53:53 PM
n-Butylbenzene	ND	3.0		µg/L	1	2/1/2013 4:53:53 PM
n-Propylbenzene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
sec-Butylbenzene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
Styrene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
tert-Butylbenzene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/1/2013 4:53:53 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
trans-1,2-DCE	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/1/2013 4:53:53 PM
Vinyl chloride	ND	1.0		µg/L	1	2/1/2013 4:53:53 PM
Xylenes, Total	ND	1.5		µg/L	1	2/1/2013 4:53:53 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Influent
Project: GBR Annual Sampling **Collection Date:** 1/30/2013 1:25:00 PM
Lab ID: 1301999-001 **Matrix:** AQUEOUS **Received Date:** 1/31/2013 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**
Surr: 1,2-Dichloroethane-d4	74.9	70-130		%REC	1	2/1/2013 4:53:53 PM
Surr: 4-Bromofluorobenzene	97.2	69.5-130		%REC	1	2/1/2013 4:53:53 PM
Surr: Dibromofluoromethane	86.4	70-130		%REC	1	2/1/2013 4:53:53 PM
Surr: Toluene-d8	96.4	70-130		%REC	1	2/1/2013 4:53:53 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JML**
Conductivity	3600	0.010		µmhos/cm	1	2/4/2013 1:08:31 PM
SM4500-H+B: PH						Analyst: **JML**
pH	7.43	1.68	H	pH units	1	2/4/2013 1:08:31 PM
SM2320B: ALKALINITY						Analyst: **JML**
Bicarbonate (As CaCO3)	510	20		mg/L CaCO3	1	2/4/2013 1:08:31 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	2/4/2013 1:08:31 PM
Total Alkalinity (as CaCO3)	510	20		mg/L CaCO3	1	2/4/2013 1:08:31 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **JML**
Total Dissolved Solids	2670	20.0	*	mg/L	1	2/4/2013 9:31:00 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

Analytical Report
Lab Order 1301999
Date Reported: 2/11/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Effluent
Project: GBR Annual Sampling **Collection Date:** 1/30/2013 1:07:00 PM
Lab ID: 1301999-002 **Matrix:** AQUEOUS **Received Date:** 1/31/2013 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	1/31/2013 4:43:41 PM
Chloride	83	10		mg/L	20	1/31/2013 4:56:06 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	1/31/2013 4:43:41 PM
Bromide	0.33	0.10		mg/L	1	2/5/2013 11:46:32 PM
Nitrogen, Nitrate (As N)	0.21	0.10		mg/L	1	1/31/2013 4:43:41 PM
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	1/31/2013 4:56:06 PM
Sulfate	1400	25	*	mg/L	50	2/5/2013 11:58:57 PM
EPA METHOD 200.7: METALS						Analyst: JLF
Barium	0.019	0.010		mg/L	5	2/1/2013 7:15:29 PM
Beryllium	ND	0.010		mg/L	5	2/1/2013 7:15:29 PM
Cadmium	ND	0.010		mg/L	5	2/1/2013 7:15:29 PM
Calcium	300	10		mg/L	10	2/6/2013 5:49:28 PM
Chromium	ND	0.030		mg/L	5	2/1/2013 7:15:29 PM
Iron	0.021	0.020		mg/L	1	2/4/2013 7:58:38 PM
Magnesium	32	1.0		mg/L	1	2/4/2013 7:58:38 PM
Manganese	0.78	0.010	*	mg/L	5	2/1/2013 7:15:29 PM
Nickel	ND	0.050		mg/L	5	2/1/2013 7:15:29 PM
Potassium	3.4	1.0		mg/L	1	2/4/2013 7:58:38 PM
Silver	ND	0.025		mg/L	5	2/1/2013 7:15:29 PM
Sodium	560	10		mg/L	10	2/6/2013 5:49:28 PM
Zinc	0.030	0.010		mg/L	1	2/6/2013 5:37:03 PM
EPA 200.8: METALS						Analyst: DBD
Antimony	ND	0.0010		mg/L	1	2/1/2013 4:01:22 PM
Arsenic	ND	0.0010		mg/L	1	2/1/2013 4:01:22 PM
Lead	ND	0.0010		mg/L	1	2/1/2013 4:01:22 PM
Copper	0.0036	0.0010		mg/L	1	2/1/2013 4:01:22 PM
Selenium	0.0013	0.0010		mg/L	1	2/1/2013 4:01:22 PM
Thallium	ND	0.0010		mg/L	1	2/1/2013 4:01:22 PM
EPA METHOD 245.1: MERCURY						Analyst: TMG
Mercury	ND	0.00020		mg/L	1	2/6/2013 12:55:24 PM
SM2340B: HARDNESS						Analyst: ELS
Hardness (As CaCO3)	870	6.6		mg/L	1	2/6/2013 7:33:00 AM
EPA METHOD 8270C: PAHS						Analyst: JDC
Naphthalene	ND	0.50		µg/L	1	2/6/2013 1:58:18 PM
1-Methylnaphthalene	ND	0.50		µg/L	1	2/6/2013 1:58:18 PM
2-Methylnaphthalene	ND	0.50		µg/L	1	2/6/2013 1:58:18 PM
Acenaphthylene	ND	0.50		µg/L	1	2/6/2013 1:58:18 PM
Acenaphthene	ND	0.50		µg/L	1	2/6/2013 1:58:18 PM
Fluorene	ND	0.50		µg/L	1	2/6/2013 1:58:18 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Effluent
Project: GBR Annual Sampling **Collection Date:** 1/30/2013 1:07:00 PM
Lab ID: 1301999-002 **Matrix:** AQUEOUS **Received Date:** 1/31/2013 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: PAHS						Analyst: JDC
Phenanthrene	ND	0.50		µg/L	1	2/6/2013 1:58:18 PM
Anthracene	ND	0.75		µg/L	1	2/6/2013 1:58:18 PM
Fluoranthene	ND	0.75		µg/L	1	2/6/2013 1:58:18 PM
Pyrene	ND	0.50		µg/L	1	2/6/2013 1:58:18 PM
Benz(a)anthracene	ND	0.50		µg/L	1	2/6/2013 1:58:18 PM
Chrysene	ND	0.50		µg/L	1	2/6/2013 1:58:18 PM
Benzo(b)fluoranthene	ND	0.50		µg/L	1	2/6/2013 1:58:18 PM
Benzo(k)fluoranthene	ND	0.50		µg/L	1	2/6/2013 1:58:18 PM
Benzo(a)pyrene	ND	0.50		µg/L	1	2/6/2013 1:58:18 PM
Dibenz(a,h)anthracene	ND	0.75		µg/L	1	2/6/2013 1:58:18 PM
Benzo(g,h,i)perylene	ND	0.75		µg/L	1	2/6/2013 1:58:18 PM
Indeno(1,2,3-cd)pyrene	ND	1.0		µg/L	1	2/6/2013 1:58:18 PM
Surr: Benzo(e)pyrene	87.2	38-145		%REC	1	2/6/2013 1:58:18 PM
Surr: N-hexadecane	96.4	40-107		%REC	1	2/6/2013 1:58:18 PM
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Benzene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
Toluene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
Ethylbenzene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
Naphthalene	ND	2.0		µg/L	1	2/1/2013 5:26:15 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	2/1/2013 5:26:15 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	2/1/2013 5:26:15 PM
Acetone	10	10		µg/L	1	2/1/2013 5:26:15 PM
Bromobenzene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
Bromodichloromethane	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
Bromoform	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
Bromomethane	ND	3.0		µg/L	1	2/1/2013 5:26:15 PM
2-Butanone	ND	10		µg/L	1	2/1/2013 5:26:15 PM
Carbon disulfide	ND	10		µg/L	1	2/1/2013 5:26:15 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
Chlorobenzene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
Chloroethane	ND	2.0		µg/L	1	2/1/2013 5:26:15 PM
Chloroform	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
Chloromethane	ND	3.0		µg/L	1	2/1/2013 5:26:15 PM
2-Chlorotoluene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
4-Chlorotoluene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
cis-1,2-DCE	ND	1.0		µg/L	1	2/1/2013 5:26:15 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Effluent
Project: GBR Annual Sampling **Collection Date:** 1/30/2013 1:07:00 PM
Lab ID: 1301999-002 **Matrix:** AQUEOUS **Received Date:** 1/31/2013 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/1/2013 5:26:15 PM
Dibromochloromethane	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
Dibromomethane	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	2/1/2013 5:26:15 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
2-Hexanone	ND	10		µg/L	1	2/1/2013 5:26:15 PM
Isopropylbenzene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	2/1/2013 5:26:15 PM
Methylene Chloride	ND	3.0		µg/L	1	2/1/2013 5:26:15 PM
n-Butylbenzene	ND	3.0		µg/L	1	2/1/2013 5:26:15 PM
n-Propylbenzene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
sec-Butylbenzene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
Styrene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
tert-Butylbenzene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/1/2013 5:26:15 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
trans-1,2-DCE	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/1/2013 5:26:15 PM
Vinyl chloride	ND	1.0		µg/L	1	2/1/2013 5:26:15 PM
Xylenes, Total	ND	1.5		µg/L	1	2/1/2013 5:26:15 PM
Surr: 1,2-Dichloroethane-d4	82.4	70-130		%REC	1	2/1/2013 5:26:15 PM
Surr: 4-Bromofluorobenzene	92.8	69.5-130		%REC	1	2/1/2013 5:26:15 PM
Surr: Dibromofluoromethane	90.4	70-130		%REC	1	2/1/2013 5:26:15 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Effluent
Project: GBR Annual Sampling **Collection Date:** 1/30/2013 1:07:00 PM
Lab ID: 1301999-002 **Matrix:** AQUEOUS **Received Date:** 1/31/2013 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**
Surr: Toluene-d8	94.9	70-130		%REC	1	2/1/2013 5:26:15 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **JML**
Conductivity	3500	0.010		µmhos/cm	1	2/4/2013 1:33:35 PM
SM4500-H+B: PH						Analyst: **JML**
pH	7.45	1.68	H	pH units	1	2/4/2013 1:33:35 PM
SM2320B: ALKALINITY						Analyst: **JML**
Bicarbonate (As CaCO3)	510	20		mg/L CaCO3	1	2/4/2013 1:33:35 PM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	2/4/2013 1:33:35 PM
Total Alkalinity (as CaCO3)	510	20		mg/L CaCO3	1	2/4/2013 1:33:35 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **JML**
Total Dissolved Solids	2660	20.0	*	mg/L	1	2/4/2013 9:31:00 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** FIELD BLANK
Project: GBR Annual Sampling **Collection Date:** 1/31/2013 10:10:00 AM
Lab ID: 1301999-003 **Matrix:** AQUEOUS **Received Date:** 1/31/2013 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Benzene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
Toluene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
Ethylbenzene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
Naphthalene	ND	2.0		µg/L	1	2/1/2013 5:58:28 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	2/1/2013 5:58:28 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	2/1/2013 5:58:28 PM
Acetone	ND	10		µg/L	1	2/1/2013 5:58:28 PM
Bromobenzene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
Bromodichloromethane	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
Bromoform	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
Bromomethane	ND	3.0		µg/L	1	2/1/2013 5:58:28 PM
2-Butanone	ND	10		µg/L	1	2/1/2013 5:58:28 PM
Carbon disulfide	ND	10		µg/L	1	2/1/2013 5:58:28 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
Chlorobenzene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
Chloroethane	ND	2.0		µg/L	1	2/1/2013 5:58:28 PM
Chloroform	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
Chloromethane	ND	3.0		µg/L	1	2/1/2013 5:58:28 PM
2-Chlorotoluene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
4-Chlorotoluene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
cis-1,2-DCE	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/1/2013 5:58:28 PM
Dibromochloromethane	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
Dibromomethane	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	2/1/2013 5:58:28 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
2-Hexanone	ND	10		µg/L	1	2/1/2013 5:58:28 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** FIELD BLANK
Project: GBR Annual Sampling **Collection Date:** 1/31/2013 10:10:00 AM
Lab ID: 1301999-003 **Matrix:** AQUEOUS **Received Date:** 1/31/2013 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Isopropylbenzene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	2/1/2013 5:58:28 PM
Methylene Chloride	ND	3.0		µg/L	1	2/1/2013 5:58:28 PM
n-Butylbenzene	ND	3.0		µg/L	1	2/1/2013 5:58:28 PM
n-Propylbenzene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
sec-Butylbenzene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
Styrene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
tert-Butylbenzene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/1/2013 5:58:28 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
trans-1,2-DCE	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/1/2013 5:58:28 PM
Vinyl chloride	ND	1.0		µg/L	1	2/1/2013 5:58:28 PM
Xylenes, Total	ND	1.5		µg/L	1	2/1/2013 5:58:28 PM
Surr: 1,2-Dichloroethane-d4	81.5	70-130		%REC	1	2/1/2013 5:58:28 PM
Surr: 4-Bromofluorobenzene	102	69.5-130		%REC	1	2/1/2013 5:58:28 PM
Surr: Dibromofluoromethane	89.2	70-130		%REC	1	2/1/2013 5:58:28 PM
Surr: Toluene-d8	96.2	70-130		%REC	1	2/1/2013 5:58:28 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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301999

11-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID MB	SampType: MBLK	TestCode: EPA Method 200.7: Metals							
Client ID: PBW	Batch ID: R8417	RunNo: 8417							
Prep Date:	Analysis Date: 2/1/2013	SeqNo: 242416	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								
Manganese	ND	0.0020								
Nickel	ND	0.010								
Silver	ND	0.0050								

Sample ID LCS	SampType: LCS	TestCode: EPA Method 200.7: Metals							
Client ID: LCSW	Batch ID: R8417	RunNo: 8417							
Prep Date:	Analysis Date: 2/1/2013	SeqNo: 242417	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	95.7	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.6	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.3	85	115			
Chromium	0.47	0.0060	0.5000	0	95.0	85	115			
Manganese	0.47	0.0020	0.5000	0	93.7	85	115			
Nickel	0.45	0.010	0.5000	0	90.6	85	115			
Silver	0.098	0.0050	0.1000	0	98.1	85	115			

Sample ID 1301999-002EMS	SampType: MS	TestCode: EPA Method 200.7: Metals							
Client ID: Effluent	Batch ID: R8417	RunNo: 8417							
Prep Date:	Analysis Date: 2/1/2013	SeqNo: 242446	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	2.3	0.010	2.500	0.01940	92.6	70	130			
Beryllium	2.3	0.010	2.500	0	92.7	70	130			
Cadmium	2.4	0.010	2.500	0	95.1	70	130			
Chromium	2.3	0.030	2.500	0	91.1	70	130			
Manganese	3.1	0.010	2.500	0.7818	91.6	70	130			
Nickel	2.1	0.050	2.500	0.01090	85.6	70	130			
Silver	0.46	0.025	0.5000	0	91.8	70	130			

Sample ID 1301999-002EMSD	SampType: MSD	TestCode: EPA Method 200.7: Metals							
Client ID: Effluent	Batch ID: R8417	RunNo: 8417							
Prep Date:	Analysis Date: 2/1/2013	SeqNo: 242447	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	2.3	0.010	2.500	0.01940	90.8	70	130	1.92	20	
Beryllium	2.3	0.010	2.500	0	90.2	70	130	2.74	20	
Cadmium	2.3	0.010	2.500	0	92.8	70	130	2.40	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#: 1301999

11-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID 1301999-002EMSD	SampType: MSD	TestCode: EPA Method 200.7: Metals							
Client ID: Effluent	Batch ID: R8417	RunNo: 8417							
Prep Date:	Analysis Date: 2/1/2013	SeqNo: 242447	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	2.2	0.030	2.500	0	89.4	70	130	1.93	20	
Manganese	3.0	0.010	2.500	0.7818	89.4	70	130	1.75	20	
Nickel	2.1	0.050	2.500	0.01090	83.8	70	130	2.02	20	
Silver	0.45	0.025	0.5000	0	90.0	70	130	1.94	20	

Sample ID MB	SampType: MBLK	TestCode: EPA Method 200.7: Metals							
Client ID: PBW	Batch ID: R8434	RunNo: 8434							
Prep Date:	Analysis Date: 2/4/2013	SeqNo: 242905	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								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID LCS	SampType: LCS	TestCode: EPA Method 200.7: Metals							
Client ID: LCSW	Batch ID: R8434	RunNo: 8434							
Prep Date:	Analysis Date: 2/4/2013	SeqNo: 242906	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	0.47	0.020	0.5000	0	94.7	85	115			
Magnesium	51	1.0	50.00	0	102	85	115			
Potassium	49	1.0	50.00	0	97.7	85	115			
Sodium	50	1.0	50.00	0	101	85	115			

Sample ID 1301999-002EMS	SampType: MS	TestCode: EPA Method 200.7: Metals							
Client ID: Effluent	Batch ID: R8434	RunNo: 8434							
Prep Date:	Analysis Date: 2/4/2013	SeqNo: 242952	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.48	0.020	0.5000	0.02107	91.5	70	130			
Magnesium	83	1.0	50.00	31.71	102	70	130			
Potassium	56	1.0	50.00	3.354	105	70	130			

Sample ID 1301999-002EMSD	SampType: MSD	TestCode: EPA Method 200.7: Metals							
Client ID: Effluent	Batch ID: R8434	RunNo: 8434							
Prep Date:	Analysis Date: 2/4/2013	SeqNo: 242953	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.47	0.020	0.5000	0.02107	90.1	70	130	1.40	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301999

11-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	1301999-002EMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Metals				
Client ID:	Effluent	Batch ID:	R8434	RunNo:	8434				
Prep Date:		Analysis Date:	2/4/2013	SeqNo:	242953	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	85	1.0	50.00	31.71	108	70	130	3.14	20	
Potassium	58	1.0	50.00	3.354	110	70	130	4.54	20	

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Metals				
Client ID:	PBW	Batch ID:	R8478	RunNo:	8478				
Prep Date:		Analysis Date:	2/6/2013	SeqNo:	244275	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 200.7: Metals				
Client ID:	LCSW	Batch ID:	R8478	RunNo:	8478				
Prep Date:		Analysis Date:	2/6/2013	SeqNo:	244276	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	57	1.0	50.00	0.06023	113	85	115			
Sodium	57	1.0	50.00	0	114	85	115			
Zinc	0.52	0.010	0.5000	0	104	85	115			

Sample ID	1301999-002EMS	SampType:	MS	TestCode:	EPA Method 200.7: Metals				
Client ID:	Effluent	Batch ID:	R8478	RunNo:	8478				
Prep Date:		Analysis Date:	2/6/2013	SeqNo:	244576	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.53	0.010	0.5000	0.02961	99.6	70	130			

Sample ID	1301999-002EMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Metals				
Client ID:	Effluent	Batch ID:	R8478	RunNo:	8478				
Prep Date:		Analysis Date:	2/6/2013	SeqNo:	244577	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.55	0.010	0.5000	0.02961	103	70	130	3.29	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#: 1301999

11-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	1301943-002AMS	SampType:	MS	TestCode:	EPA 200.8: Metals				
Client ID:	BatchQC	Batch ID:	R8404	RunNo:	8404				
Prep Date:		Analysis Date:	2/1/2013	SeqNo:	242110	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.030	0.0010	0.02500	0.003515	105	70	130			

Sample ID	1301987-001CMS	SampType:	MS	TestCode:	EPA 200.8: Metals				
Client ID:	BatchQC	Batch ID:	R8404	RunNo:	8404				
Prep Date:		Analysis Date:	2/1/2013	SeqNo:	242112	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.026	0.0010	0.02500	0.001471	97.7	70	130			

Sample ID	LCS	SampType:	LCS	TestCode:	EPA 200.8: Metals				
Client ID:	LCSW	Batch ID:	R8404	RunNo:	8404				
Prep Date:		Analysis Date:	2/1/2013	SeqNo:	242138	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	97.4	85	115			
Arsenic	0.024	0.0010	0.02500	0	96.6	85	115			
Lead	0.024	0.0010	0.02500	0	97.6	85	115			
Copper	0.025	0.0010	0.02500	0	99.5	85	115			
Selenium	0.024	0.0010	0.02500	0	96.8	85	115			
Thallium	0.025	0.0010	0.02500	0	98.9	85	115			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA 200.8: Metals				
Client ID:	PBW	Batch ID:	R8404	RunNo:	8404				
Prep Date:	1/24/2013	Analysis Date:	2/1/2013	SeqNo:	242141	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								
Lead	ND	0.0010								
Copper	ND	0.0010								
Selenium	ND	0.0010								
Thallium	ND	0.0010								

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#: 1301999

11-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	MB-6006	SampType:	MBLK	TestCode:	EPA Method 245.1: Mercury					
Client ID:	PBW	Batch ID:	6006	RunNo:	8477					
Prep Date:	2/6/2013	Analysis Date:	2/6/2013	SeqNo:	244246	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-6006	SampType:	LCS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	LCSW	Batch ID:	6006	RunNo:	8477					
Prep Date:	2/6/2013	Analysis Date:	2/6/2013	SeqNo:	244247	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0	104	80	120			

Sample ID	1302104-001BMS	SampType:	MS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	6006	RunNo:	8477					
Prep Date:	2/6/2013	Analysis Date:	2/6/2013	SeqNo:	244249	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0042	0.00020	0.005000	0	84.0	75	125			

Sample ID	1302104-001BMSD	SampType:	MSD	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	6006	RunNo:	8477					
Prep Date:	2/6/2013	Analysis Date:	2/6/2013	SeqNo:	244251	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0046	0.00020	0.005000	0	92.8	75	125	9.96	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301999

11-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R8389	RunNo: 8389							
Prep Date:	Analysis Date: 1/31/2013	SeqNo: 241807	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								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								

Sample ID LCS-b	SampType: LCS	TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R8389	RunNo: 8389							
Prep Date:	Analysis Date: 1/31/2013	SeqNo: 241809	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	95.3	90	110			
Chloride	4.7	0.50	5.000	0	93.5	90	110			
Nitrogen, Nitrite (As N)	0.90	0.10	1.000	0	90.4	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	96.5	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.4	90	110			

Sample ID 1301987-001BMS	SampType: MS	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R8389	RunNo: 8389							
Prep Date:	Analysis Date: 1/31/2013	SeqNo: 241820	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	3.9	0.10	0.5000	3.482	74.4	76.6	110			S
Chloride	18	0.50	5.000	13.41	98.0	87.8	111			
Nitrogen, Nitrite (As N)	0.85	0.10	1.000	0	84.7	72.5	111			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0.04500	96.6	90.4	113			
Phosphorus, Orthophosphate (As P	4.5	0.50	5.000	0	90.1	74.5	115			

Sample ID 1301987-001BMSD	SampType: MSD	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R8389	RunNo: 8389							
Prep Date:	Analysis Date: 1/31/2013	SeqNo: 241821	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	3.9	0.10	0.5000	3.482	75.8	76.6	110	0.181	20	S
Chloride	18	0.50	5.000	13.41	96.3	87.8	111	0.443	20	
Nitrogen, Nitrite (As N)	0.84	0.10	1.000	0	83.7	72.5	111	1.21	20	
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0.04500	94.7	90.4	113	1.99	20	
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	101	74.5	115	11.2	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#: 1301999

11-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID 1301991-001AMS	SampType: MS	TestCode: EPA Method 300.0: Anions
Client ID: BatchQC	Batch ID: R8389	RunNo: 8389
Prep Date:	Analysis Date: 1/31/2013	SeqNo: 241824 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.0	0.10	0.5000	0.5696	93.2	76.6	110			
Chloride	9.4	0.50	5.000	4.580	96.9	87.8	111			
Nitrogen, Nitrite (As N)	0.89	0.10	1.000	0	89.4	72.5	111			
Nitrogen, Nitrate (As N)	2.7	0.10	2.500	0.2649	98.5	90.4	113			
Phosphorus, Orthophosphate (As P	4.4	0.50	5.000	0.3252	81.8	74.5	115			

Sample ID 1301991-001AMSD	SampType: MSD	TestCode: EPA Method 300.0: Anions
Client ID: BatchQC	Batch ID: R8389	RunNo: 8389
Prep Date:	Analysis Date: 1/31/2013	SeqNo: 241825 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.0	0.10	0.5000	0.5696	93.6	76.6	110	0.183	20	
Chloride	9.4	0.50	5.000	4.580	95.4	87.8	111	0.800	20	
Nitrogen, Nitrite (As N)	0.88	0.10	1.000	0	88.3	72.5	111	1.18	20	
Nitrogen, Nitrate (As N)	2.7	0.10	2.500	0.2649	97.0	90.4	113	1.41	20	
Phosphorus, Orthophosphate (As P	4.4	0.50	5.000	0.3252	80.9	74.5	115	0.981	20	

Sample ID MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions
Client ID: PBW	Batch ID: R8389	RunNo: 8389
Prep Date:	Analysis Date: 1/31/2013	SeqNo: 241861 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								
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: R8389	RunNo: 8389
Prep Date:	Analysis Date: 1/31/2013	SeqNo: 241862 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	99.0	90	110			
Chloride	4.6	0.50	5.000	0	91.9	90	110			
Nitrogen, Nitrite (As N)	0.91	0.10	1.000	0	90.7	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	95.9	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	100	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#: **1301999**

11-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	1301A07-001AMS	SampType:	MS		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC	Batch ID:	R8389		RunNo:	8389				
Prep Date:		Analysis Date:	1/31/2013		SeqNo:	241867	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.94	0.10	0.5000	0.4760	93.1	76.6	110			

Sample ID	1301A07-001AMSD	SampType:	MSD		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC	Batch ID:	R8389		RunNo:	8389				
Prep Date:		Analysis Date:	1/31/2013		SeqNo:	241868	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.95	0.10	0.5000	0.4760	94.6	76.6	110	0.762	20	

Sample ID	1301A01-001AMS	SampType:	MS		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC	Batch ID:	R8389		RunNo:	8389				
Prep Date:		Analysis Date:	2/1/2013		SeqNo:	241870	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.98	0.10	0.5000	0.5401	88.2	76.6	110			

Sample ID	1301A01-001AMSD	SampType:	MSD		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC	Batch ID:	R8389		RunNo:	8389				
Prep Date:		Analysis Date:	2/1/2013		SeqNo:	241871	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.99	0.10	0.5000	0.5401	89.7	76.6	110	0.761	20	

Sample ID	MB	SampType:	MBLK		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBW	Batch ID:	R8466		RunNo:	8466				
Prep Date:		Analysis Date:	2/5/2013		SeqNo:	243903	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	ND	0.10								
Sulfate	ND	0.50								

Sample ID	LCS	SampType:	LCS		TestCode:	EPA Method 300.0: Anions				
Client ID:	LCSW	Batch ID:	R8466		RunNo:	8466				
Prep Date:		Analysis Date:	2/5/2013		SeqNo:	243904	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.4	0.10	2.500	0	95.4	90	110			
Sulfate	9.4	0.50	10.00	0	94.2	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301999

11-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	1302104-001AMS	SampType:	MS		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC	Batch ID:	R8466		RunNo:	8466				
Prep Date:		Analysis Date:	2/5/2013		SeqNo:	243929	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.4	0.10	2.500	0.07800	93.6	83.3	107			

Sample ID	1302104-001AMSD	SampType:	MSD		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC	Batch ID:	R8466		RunNo:	8466				
Prep Date:		Analysis Date:	2/5/2013		SeqNo:	243930	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.5	0.10	2.500	0.07800	95.2	83.3	107	1.68	20	

Sample ID	1302103-001BMS	SampType:	MS		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC	Batch ID:	R8466		RunNo:	8466				
Prep Date:		Analysis Date:	2/5/2013		SeqNo:	243932	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.5	0.10	2.500	0.1469	94.7	83.3	107			

Sample ID	1302103-001BMSD	SampType:	MSD		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC	Batch ID:	R8466		RunNo:	8466				
Prep Date:		Analysis Date:	2/5/2013		SeqNo:	243933	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.5	0.10	2.500	0.1469	94.8	83.3	107	0.151	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301999

11-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID 5ml rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R8415	RunNo: 8415
Prep Date:	Analysis Date: 2/1/2013	SeqNo: 242320 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#: 1301999

11-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID 5ml rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R8415	RunNo: 8415
Prep Date:	Analysis Date: 2/1/2013	SeqNo: 242320 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	7.4		10.00		74.1	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		90.7	69.5	130			
Surr: Dibromofluoromethane	8.3		10.00		82.6	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: R8415	RunNo: 8415
Prep Date:	Analysis Date: 2/1/2013	SeqNo: 242322 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	91.6	70	130			
Toluene	20	1.0	20.00	0	98.3	80	120			
Chlorobenzene	21	1.0	20.00	0	104	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	108	73.7	122			
Trichloroethene (TCE)	16	1.0	20.00	0	81.7	70	130			
Surr: 1,2-Dichloroethane-d4	7.5		10.00		75.4	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.7	69.5	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#: 1301999

11-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R8415	RunNo: 8415							
Prep Date:	Analysis Date: 2/1/2013	SeqNo: 242322		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	7.9		10.00		78.7	70	130			
Surr: Toluene-d8	9.2		10.00		92.5	70	130			

Sample ID 1301978-014ams	SampType: MS	TestCode: EPA Method 8260B: VOLATILES							
Client ID: BatchQC	Batch ID: R8415	RunNo: 8415							
Prep Date:	Analysis Date: 2/1/2013	SeqNo: 242326		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	130	5.0	100.0	13.50	114	68.5	128			
Chlorobenzene	110	5.0	100.0	0	109	70	130			
1,1-Dichloroethene	120	5.0	100.0	0	122	70	130			
Trichloroethene (TCE)	98	5.0	100.0	0	97.9	61.3	102			
Surr: 1,2-Dichloroethane-d4	43		50.00		87.0	70	130			
Surr: 4-Bromofluorobenzene	48		50.00		95.5	69.5	130			
Surr: Dibromofluoromethane	45		50.00		90.4	70	130			
Surr: Toluene-d8	52		50.00		103	70	130			

Sample ID 1301978-014amsd	SampType: MSD	TestCode: EPA Method 8260B: VOLATILES							
Client ID: BatchQC	Batch ID: R8415	RunNo: 8415							
Prep Date:	Analysis Date: 2/1/2013	SeqNo: 242327		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	100	5.0	100.0	13.50	87.2	68.5	128	23.5	20	R
Chlorobenzene	100	5.0	100.0	0	100	70	130	8.00	20	
1,1-Dichloroethene	110	5.0	100.0	0	110	70	130	10.7	20	
Trichloroethene (TCE)	91	5.0	100.0	0	90.7	61.3	102	7.57	20	
Surr: 1,2-Dichloroethane-d4	41		50.00		81.6	70	130	0	0	
Surr: 4-Bromofluorobenzene	48		50.00		96.3	69.5	130	0	0	
Surr: Dibromofluoromethane	44		50.00		87.6	70	130	0	0	
Surr: Toluene-d8	45		50.00		90.8	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301999

11-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID mb-5964	SampType: MBLK	TestCode: EPA Method 8270C: PAHs						
Client ID: PBW	Batch ID: 5964	RunNo: 8492						
Prep Date: 2/4/2013	Analysis Date: 2/6/2013	SeqNo: 244616	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	0.75								
Fluoranthene	ND	0.75								
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	0.75								
Benzo(g,h,i)perylene	ND	0.75								
Indeno(1,2,3-cd)pyrene	ND	1.0								
Surr: Benzo(e)pyrene	15		20.00		74.9	38	145			
Surr: N-hexadecane	63		87.60		72.4	40	107			

Sample ID lcs-5964	SampType: LCS	TestCode: EPA Method 8270C: PAHs						
Client ID: LCSW	Batch ID: 5964	RunNo: 8492						
Prep Date: 2/4/2013	Analysis Date: 2/6/2013	SeqNo: 244617	Units: µg/L					

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	15	0.50	20.00	0	76.7	33.9	106			
1-Methylnaphthalene	16	0.50	20.00	0	79.0	36.3	111			
2-Methylnaphthalene	15	0.50	20.00	0	74.1	36.5	105			
Acenaphthylene	17	0.50	20.00	0	84.0	28.4	122			
Acenaphthene	17	0.50	20.00	0	84.9	32.7	118			
Fluorene	16	0.50	20.00	0	81.2	39.1	119			
Phenanthrene	17	0.50	20.00	0	84.4	47.1	119			
Anthracene	16	0.75	20.00	0	81.5	51.1	117			
Fluoranthene	16	0.75	20.00	0	80.5	40	132			
Pyrene	17	0.50	20.00	0	82.9	43.9	123			
Benz(a)anthracene	18	0.50	20.00	0	87.7	35	163			
Chrysene	17	0.50	20.00	0	84.5	45.9	119			
Benzo(b)fluoranthene	15	0.50	20.00	0	75.7	36.5	137			
Benzo(k)fluoranthene	17	0.50	20.00	0	84.5	37.1	143			
Benzo(a)pyrene	14	0.50	20.00	0	71.7	26.7	144			

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#: 1301999

11-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID lcs-5964	SampType: LCS	TestCode: EPA Method 8270C: PAHs
Client ID: LCSW	Batch ID: 5964	RunNo: 8492
Prep Date: 2/4/2013	Analysis Date: 2/6/2013	SeqNo: 244617 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dibenz(a,h)anthracene	15	0.75	20.00	0	74.9	31	146			
Benzo(g,h,i)perylene	17	0.75	20.00	0	84.3	30.9	150			
Indeno(1,2,3-cd)pyrene	17	1.0	20.00	0	83.5	35.2	169			
Surr: Benzo(e)pyrene	14		20.00		67.5	38	145			
Surr: N-hexadecane	67		87.60		76.7	40	107			

Sample ID lcsd-5964	SampType: LCSD	TestCode: EPA Method 8270C: PAHs
Client ID: LCSS02	Batch ID: 5964	RunNo: 8492
Prep Date: 2/4/2013	Analysis Date: 2/6/2013	SeqNo: 244618 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	15	0.50	20.00	0	74.6	33.9	106	2.78	20	
1-Methylnaphthalene	16	0.50	20.00	0	82.4	36.3	111	4.21	20	
2-Methylnaphthalene	14	0.50	20.00	0	71.7	36.5	105	3.29	20	
Acenaphthylene	17	0.50	20.00	0	84.0	28.4	122	0	20	
Acenaphthene	17	0.50	20.00	0	86.6	32.7	118	1.98	20	
Fluorene	17	0.50	20.00	0	83.4	39.1	119	2.67	20	
Phenanthrene	18	0.50	20.00	0	89.4	47.1	119	5.75	20	
Anthracene	17	0.75	20.00	0	87.2	51.1	117	6.76	20	
Fluoranthene	16	0.75	20.00	0	81.9	40	132	1.72	20	
Pyrene	16	0.50	20.00	0	80.9	43.9	123	2.44	20	
Benz(a)anthracene	18	0.50	20.00	0	88.2	35	163	0.569	20	
Chrysene	18	0.50	20.00	0	89.3	45.9	119	5.52	20	
Benzo(b)fluoranthene	17	0.50	20.00	0	83.1	36.5	137	9.32	20	
Benzo(k)fluoranthene	19	0.50	20.00	0	92.6	37.1	143	9.15	20	
Benzo(a)pyrene	16	0.50	20.00	0	78.5	26.7	144	9.05	20	
Dibenz(a,h)anthracene	18	0.75	20.00	0	89.8	31	146	18.1	20	
Benzo(g,h,i)perylene	18	0.75	20.00	0	91.1	30.9	150	7.75	20	
Indeno(1,2,3-cd)pyrene	18	1.0	20.00	0	89.1	35.2	169	6.49	20	
Surr: Benzo(e)pyrene	15		20.00		76.2	38	145	0	0	
Surr: N-hexadecane	68		87.60		77.2	40	107	0	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#: 1301999

11-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	1301999-001b dup	SampType:	DUP			TestCode:	EPA 120.1: Specific Conductance				
Client ID:	Influent	Batch ID:	R8443			RunNo:	8443				
Prep Date:		Analysis Date:	2/4/2013			SeqNo:	243293	Units:	µmhos/cm		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity		3600	0.010						0.223	20	

Sample ID	1302045-001a dup	SampType:	DUP			TestCode:	EPA 120.1: Specific Conductance				
Client ID:	BatchQC	Batch ID:	R8443			RunNo:	8443				
Prep Date:		Analysis Date:	2/4/2013			SeqNo:	243306	Units:	µmhos/cm		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity		1100	0.010						3.07	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1301999**

11-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	1301999-001b dup	SampType:	DUP			TestCode:	SM4500-H+B: pH				
Client ID:	Influent	Batch ID:	R8443			RunNo:	8443				
Prep Date:		Analysis Date:	2/4/2013			SeqNo:	243409	Units:	pH units		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
pH	7.42	1.68								H	

Sample ID	1302007-001c dup	SampType:	DUP			TestCode:	SM4500-H+B: pH				
Client ID:	BatchQC	Batch ID:	R8443			RunNo:	8443				
Prep Date:		Analysis Date:	2/4/2013			SeqNo:	243422	Units:	pH units		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
pH	7.38	1.68								H	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301999

11-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID mb-1	SampType: MBLK	TestCode: SM2320B: Alkalinity						
Client ID: PBW	Batch ID: R8443	RunNo: 8443						
Prep Date:	Analysis Date: 2/4/2013	SeqNo: 243260	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: R8443	RunNo: 8443						
Prep Date:	Analysis Date: 2/4/2013	SeqNo: 243261	Units: mg/L CaCO3					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	78	20	80.00	0	97.9	90	110			

Sample ID 1301a24-001b ms	SampType: MS	TestCode: SM2320B: Alkalinity						
Client ID: BatchQC	Batch ID: R8443	RunNo: 8443						
Prep Date:	Analysis Date: 2/4/2013	SeqNo: 243273	Units: mg/L CaCO3					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	180	20	80.00	102.9	92.8	65.3	113			

Sample ID 1301a24-001b msd	SampType: MSD	TestCode: SM2320B: Alkalinity						
Client ID: BatchQC	Batch ID: R8443	RunNo: 8443						
Prep Date:	Analysis Date: 2/4/2013	SeqNo: 243274	Units: mg/L CaCO3					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	180	20	80.00	102.9	91.2	65.3	113	0.748	10	

Sample ID mb-2	SampType: MBLK	TestCode: SM2320B: Alkalinity						
Client ID: PBW	Batch ID: R8443	RunNo: 8443						
Prep Date:	Analysis Date: 2/4/2013	SeqNo: 243277	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: R8443	RunNo: 8443						
Prep Date:	Analysis Date: 2/4/2013	SeqNo: 243278	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	98.4	90	110			

Sample ID 1302004-003a ms	SampType: MS	TestCode: SM2320B: Alkalinity						
Client ID: BatchQC	Batch ID: R8443	RunNo: 8443						
Prep Date:	Analysis Date: 2/4/2013	SeqNo: 243281	Units: mg/L CaCO3					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	120	20	80.00	95.16	34.9	65.3	113			S

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#: **1301999**

11-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	1302004-003a msd	SampType:	MSD			TestCode:	SM2320B: Alkalinity				
Client ID:	BatchQC	Batch ID:	R8443			RunNo:	8443				
Prep Date:		Analysis Date:	2/4/2013			SeqNo:	243282	Units:	mg/L CaCO3		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)		120	20	80.00	95.16	29.0	65.3	113	3.88	10	S

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#: 1301999

11-Feb-13

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID MB-5947	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids							
Client ID: PBW	Batch ID: 5947	RunNo: 8440							
Prep Date: 2/1/2013	Analysis Date: 2/4/2013	SeqNo: 243197	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-5947	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids							
Client ID: LCSW	Batch ID: 5947	RunNo: 8440							
Prep Date: 2/1/2013	Analysis Date: 2/4/2013	SeqNo: 243198	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	0	102	80	120			

Sample ID 1301992-002AMS	SampType: MS	TestCode: SM2540C MOD: Total Dissolved Solids							
Client ID: BatchQC	Batch ID: 5947	RunNo: 8440							
Prep Date: 2/1/2013	Analysis Date: 2/4/2013	SeqNo: 243210	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1030	20.0	1000	13.00	102	80	120			

Sample ID 1301992-002AMSD	SampType: MSD	TestCode: SM2540C MOD: Total Dissolved Solids							
Client ID: BatchQC	Batch ID: 5947	RunNo: 8440							
Prep Date: 2/1/2013	Analysis Date: 2/4/2013	SeqNo: 243211	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1030	20.0	1000	13.00	102	80	120	0.0969	5	

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

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: 1301999

Received by/date: AG 01/31/13

Logged By: Michelle Garcia 1/31/2013 10:10:00 AM Michelle Garcia

Completed By: Michelle Garcia 1/31/2013 10:33:07 AM Michelle Garcia

Reviewed By:

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? NO

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 Annual Sampling

Project #:

Project Manager: Ashley Ager

Sampler: Devin Hencmann

On Ice: [illegible]

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 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	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			
1/30/13	1325	GW	Influent	Various 8	Various	-001												✓			
1/30/13	1307	GW	Effluent	Various 7	Various	-002												✓			
			~~Trip~~ Blank Field [initials] 01/31/13			-003	~~#~~									X	~~[initials]~~	01/31/13			

Date:	Time:	Relinquished by:	Received by:	Date	Time
1/30/13	1506	[signature]	Christina Waeler	1/30/13	1506
1/30/13	1741	Christina Waeler	[signature]	01/30/13	10:10

Remarks: Please copy 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
[redacted]	

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 14, 2013

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

RE: GBR OrderNo.: 1304981

Dear Ashley Ager:

Hall Environmental Analysis Laboratory received 3 sample(s) on 4/24/2013 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

Analytical Report
Lab Order **1304981**
Date Reported: **5/14/2013**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.
Project: GBR
Lab ID: 1304981-001 **Matrix:** AQUEOUS

Client Sample ID: Influent
Collection Date: 4/23/2013 3:13:00 PM
Received Date: 4/24/2013 9:54:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Fluoride	0.67	0.10		mg/L	1	4/24/2013 10:58:21 PM	R10108
Chloride	76	10		mg/L	20	4/24/2013 11:35:36 PM	R10108
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	4/24/2013 10:58:21 PM	R10108
Bromide	0.33	0.10		mg/L	1	4/24/2013 10:58:21 PM	R10108
Nitrogen, Nitrate (As N)	1.7	0.10		mg/L	1	4/24/2013 10:58:21 PM	R10108
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	4/24/2013 11:35:36 PM	R10108
Sulfate	1600	25	*	mg/L	50	5/1/2013 2:40:34 PM	R10260
EPA METHOD 200.7: METALS						Analyst: **JLF**	
Calcium	390	10		mg/L	10	5/7/2013 10:57:59 PM	R10460
Iron	0.066	0.020		mg/L	1	5/7/2013 10:53:49 PM	R10460
Magnesium	31	1.0		mg/L	1	5/7/2013 10:53:49 PM	R10460
Manganese	0.43	0.0020	*	mg/L	1	5/7/2013 10:53:49 PM	R10460
Potassium	2.5	1.0		mg/L	1	5/7/2013 10:53:49 PM	R10460
Sodium	410	10		mg/L	10	5/7/2013 10:57:59 PM	R10460
SM2340B: HARDNESS						Analyst: **JLF**	
Hardness (As CaCO3)	1100	6.6		mg/L	1	5/7/2013 3:25:00 PM	R10460
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Toluene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Ethylbenzene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Naphthalene	ND	2.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
1-Methylnaphthalene	ND	4.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
2-Methylnaphthalene	ND	4.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Acetone	ND	10		µg/L	1	4/26/2013 1:39:53 AM	R10124
Bromobenzene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Bromodichloromethane	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Bromoform	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Bromomethane	ND	3.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
2-Butanone	ND	10		µg/L	1	4/26/2013 1:39:53 AM	R10124
Carbon disulfide	ND	10		µg/L	1	4/26/2013 1:39:53 AM	R10124
Carbon Tetrachloride	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Chlorobenzene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Chloroethane	ND	2.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Chloroform	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Chloromethane	ND	3.0		µg/L	1	4/26/2013 1:39:53 AM	R10124

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH greater than 2
RL	Reporting Detection Limit
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Influent
Project: GBR **Collection Date:** 4/23/2013 3:13:00 PM
Lab ID: 1304981-001 **Matrix:** AQUEOUS **Received Date:** 4/24/2013 9:54:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
2-Chlorotoluene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
4-Chlorotoluene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
cis-1,2-DCE	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Dibromochloromethane	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Dibromomethane	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
1,1-Dichloroethane	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
1,1-Dichloroethene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
1,2-Dichloropropane	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
1,3-Dichloropropane	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
2,2-Dichloropropane	ND	2.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
1,1-Dichloropropene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Hexachlorobutadiene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
2-Hexanone	ND	10		µg/L	1	4/26/2013 1:39:53 AM	R10124
Isopropylbenzene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
4-Isopropyltoluene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
4-Methyl-2-pentanone	ND	10		µg/L	1	4/26/2013 1:39:53 AM	R10124
Methylene Chloride	ND	3.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
n-Butylbenzene	ND	3.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
n-Propylbenzene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
sec-Butylbenzene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Styrene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
tert-Butylbenzene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
trans-1,2-DCE	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Trichlorofluoromethane	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Vinyl chloride	ND	1.0		µg/L	1	4/26/2013 1:39:53 AM	R10124
Xylenes, Total	ND	1.5		µg/L	1	4/26/2013 1:39:53 AM	R10124

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Influent
Project: GBR **Collection Date:** 4/23/2013 3:13:00 PM
Lab ID: 1304981-001 **Matrix:** AQUEOUS **Received Date:** 4/24/2013 9:54:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Surr: 1,2-Dichloroethane-d4	92.1	70-130		%REC	1	4/26/2013 1:39:53 AM	R10124
Surr: 4-Bromofluorobenzene	95.5	69.5-130		%REC	1	4/26/2013 1:39:53 AM	R10124
Surr: Dibromofluoromethane	93.7	70-130		%REC	1	4/26/2013 1:39:53 AM	R10124
Surr: Toluene-d8	96.1	70-130		%REC	1	4/26/2013 1:39:53 AM	R10124
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **JML**	
Conductivity	3200	0.010		µmhos/cm	1	4/24/2013 6:56:45 PM	R10173
SM4500-H+B: PH						Analyst: **JML**	
pH	7.43	1.68	H	pH units	1	4/24/2013 6:56:45 PM	R10173
SM2320B: ALKALINITY						Analyst: **JML**	
Bicarbonate (As CaCO3)	320	20		mg/L CaCO3	1	4/24/2013 6:56:45 PM	R10173
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	4/24/2013 6:56:45 PM	R10173
Total Alkalinity (as CaCO3)	320	20		mg/L CaCO3	1	4/24/2013 6:56:45 PM	R10173
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	2780	20.0	*	mg/L	1	4/30/2013 5:48:00 PM	7202

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Effluent
Project: GBR **Collection Date:** 4/23/2013 3:28:00 PM
Lab ID: 1304981-002 **Matrix:** AQUEOUS **Received Date:** 4/24/2013 9:54:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.66	0.10		mg/L	1	4/24/2013 11:48:01 PM	R10108
Chloride	76	10		mg/L	20	4/25/2013 12:00:26 AM	R10108
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	4/24/2013 11:48:01 PM	R10108
Bromide	0.32	0.10		mg/L	1	4/24/2013 11:48:01 PM	R10108
Nitrogen, Nitrate (As N)	1.7	0.10		mg/L	1	4/24/2013 11:48:01 PM	R10108
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	4/25/2013 12:00:26 AM	R10108
Sulfate	1600	25	*	mg/L	50	5/1/2013 2:52:59 PM	R10260
EPA METHOD 200.7: METALS						Analyst:	**JLF**
Calcium	390	10		mg/L	10	5/7/2013 11:21:18 PM	R10460
Iron	ND	0.020		mg/L	1	5/7/2013 11:17:09 PM	R10460
Magnesium	30	1.0		mg/L	1	5/7/2013 11:17:09 PM	R10460
Manganese	0.43	0.0020	*	mg/L	1	5/7/2013 11:17:09 PM	R10460
Potassium	2.5	1.0		mg/L	1	5/7/2013 11:17:09 PM	R10460
Sodium	420	10		mg/L	10	5/7/2013 11:21:18 PM	R10460
SM2340B: HARDNESS						Analyst:	**JLF**
Hardness (As CaCO3)	1100	6.6		mg/L	1	5/7/2013 3:25:00 PM	R10460
EPA METHOD 8260B: VOLATILES						Analyst:	**RAA**
Benzene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Toluene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Ethylbenzene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Naphthalene	ND	2.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
1-Methylnaphthalene	ND	4.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
2-Methylnaphthalene	ND	4.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Acetone	ND	10		µg/L	1	4/26/2013 2:35:31 AM	R10124
Bromobenzene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Bromodichloromethane	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Bromoform	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Bromomethane	ND	3.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
2-Butanone	ND	10		µg/L	1	4/26/2013 2:35:31 AM	R10124
Carbon disulfide	ND	10		µg/L	1	4/26/2013 2:35:31 AM	R10124
Carbon Tetrachloride	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Chlorobenzene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Chloroethane	ND	2.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Chloroform	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Chloromethane	ND	3.0		µg/L	1	4/26/2013 2:35:31 AM	R10124

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Effluent
Project: GBR **Collection Date:** 4/23/2013 3:28:00 PM
Lab ID: 1304981-002 **Matrix:** AQUEOUS **Received Date:** 4/24/2013 9:54:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: RAA	
2-Chlorotoluene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
4-Chlorotoluene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
cis-1,2-DCE	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Dibromochloromethane	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Dibromomethane	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
1,1-Dichloroethane	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
1,1-Dichloroethene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
1,2-Dichloropropane	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
1,3-Dichloropropane	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
2,2-Dichloropropane	ND	2.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
1,1-Dichloropropene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Hexachlorobutadiene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
2-Hexanone	ND	10		µg/L	1	4/26/2013 2:35:31 AM	R10124
Isopropylbenzene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
4-Isopropyltoluene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
4-Methyl-2-pentanone	ND	10		µg/L	1	4/26/2013 2:35:31 AM	R10124
Methylene Chloride	ND	3.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
n-Butylbenzene	ND	3.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
n-Propylbenzene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
sec-Butylbenzene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Styrene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
tert-Butylbenzene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
trans-1,2-DCE	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Trichlorofluoromethane	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Vinyl chloride	ND	1.0		µg/L	1	4/26/2013 2:35:31 AM	R10124
Xylenes, Total	ND	1.5		µg/L	1	4/26/2013 2:35:31 AM	R10124

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

Analytical Report
Lab Order 1304981
Date Reported: 5/14/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: Effluent
Project: GBR
Collection Date: 4/23/2013 3:28:00 PM
Lab ID: 1304981-002 **Matrix:** AQUEOUS **Received Date:** 4/24/2013 9:54:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst:	**RAA**
Surr: 1,2-Dichloroethane-d4	91.5	70-130		%REC	1	4/26/2013 2:35:31 AM	R10124
Surr: 4-Bromofluorobenzene	105	69.5-130		%REC	1	4/26/2013 2:35:31 AM	R10124
Surr: Dibromofluoromethane	92.5	70-130		%REC	1	4/26/2013 2:35:31 AM	R10124
Surr: Toluene-d8	95.2	70-130		%REC	1	4/26/2013 2:35:31 AM	R10124
SM2510B: SPECIFIC CONDUCTANCE						Analyst:	**JML**
Conductivity	3200	0.010		µmhos/cm	1	4/24/2013 7:11:37 PM	R10173
SM4500-H+B: PH						Analyst:	**JML**
pH	7.40	1.68	H	pH units	1	4/24/2013 7:11:37 PM	R10173
SM2320B: ALKALINITY						Analyst:	**JML**
Bicarbonate (As CaCO3)	320	20		mg/L CaCO3	1	4/24/2013 7:11:37 PM	R10173
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	4/24/2013 7:11:37 PM	R10173
Total Alkalinity (as CaCO3)	320	20		mg/L CaCO3	1	4/24/2013 7:11:37 PM	R10173
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	**KS**
Total Dissolved Solids	2760	20.0	*	mg/L	1	4/30/2013 5:48:00 PM	7202

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Trip Blank
Project: GBR **Collection Date:**
Lab ID: 1304981-003 **Matrix:** TRIP BLANK **Received Date:** 4/24/2013 9:54:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Toluene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Ethylbenzene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Naphthalene	ND	2.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
1-Methylnaphthalene	ND	4.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
2-Methylnaphthalene	ND	4.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Acetone	ND	10		µg/L	1	4/26/2013 3:03:31 AM	R10124
Bromobenzene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Bromodichloromethane	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Bromoform	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Bromomethane	ND	3.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
2-Butanone	ND	10		µg/L	1	4/26/2013 3:03:31 AM	R10124
Carbon disulfide	ND	10		µg/L	1	4/26/2013 3:03:31 AM	R10124
Carbon Tetrachloride	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Chlorobenzene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Chloroethane	ND	2.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Chloroform	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Chloromethane	ND	3.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
2-Chlorotoluene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
4-Chlorotoluene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
cis-1,2-DCE	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Dibromochloromethane	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Dibromomethane	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
1,1-Dichloroethane	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
1,1-Dichloroethene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
1,2-Dichloropropane	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
1,3-Dichloropropane	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
2,2-Dichloropropane	ND	2.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
1,1-Dichloropropene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Hexachlorobutadiene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
2-Hexanone	ND	10		µg/L	1	4/26/2013 3:03:31 AM	R10124

Qualifiers:

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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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Trip Blank
Project: GBR **Collection Date:**
Lab ID: 1304981-003 **Matrix:** TRIP BLANK **Received Date:** 4/24/2013 9:54:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Isopropylbenzene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
4-Isopropyltoluene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
4-Methyl-2-pentanone	ND	10		µg/L	1	4/26/2013 3:03:31 AM	R10124
Methylene Chloride	ND	3.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
n-Butylbenzene	ND	3.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
n-Propylbenzene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
sec-Butylbenzene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Styrene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
tert-Butylbenzene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
trans-1,2-DCE	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Trichlorofluoromethane	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Vinyl chloride	ND	1.0		µg/L	1	4/26/2013 3:03:31 AM	R10124
Xylenes, Total	ND	1.5		µg/L	1	4/26/2013 3:03:31 AM	R10124
Surr: 1,2-Dichloroethane-d4	92.3	70-130		%REC	1	4/26/2013 3:03:31 AM	R10124
Surr: 4-Bromofluorobenzene	102	69.5-130		%REC	1	4/26/2013 3:03:31 AM	R10124
Surr: Dibromofluoromethane	94.1	70-130		%REC	1	4/26/2013 3:03:31 AM	R10124
Surr: Toluene-d8	94.2	70-130		%REC	1	4/26/2013 3:03:31 AM	R10124

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

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

REPORT OF ANALYSIS

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

May 03, 2013

ESC Sample # : L632634-01

Date Received : April 26, 2013
Description :

Site ID :

Sample ID : 1304981-001D INFLUENT

Project # :

Collected By :
Collection Date : 04/23/13 15:13

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Phosphorus,Total	BDL	0.10	mg/l	365.4	05/03/13	1

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

Reported: 05/03/13 16:16 Printed: 05/03/13 16:27

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 03, 2013

ESC Sample # : L632634-02

Date Received : April 26, 2013
Description :

Site ID :

Sample ID : 1304981-002D EFFLUENT

Project # :

Collected By :
Collection Date : 04/23/13 15:28

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Phosphorus,Total	BDL	0.10	mg/l	365.4	05/03/13	1

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

Reported: 05/03/13 16:16 Printed: 05/03/13 16:27

ESC
L·A·B S·C·I·E·N·C·E·S

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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

L632634

May 03, 2013

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Phosphorus,Total	< .1	mg/l			WG658962	05/03/13 11:55

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Phosphorus,Total	mg/l	2.30	2.00	14.0	20	L633082-02	WG658962
Phosphorus,Total	mg/l	0	0	0	20	L632634-01	WG658962

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Phosphorus,Total	mg/l	1	0.965	96.5	90-110	WG658962

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Phosphorus,Total	mg/l	0.953	0.965	95.0	90-110	1.25	20	WG658962

Matrix Spike

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Phosphorus,Total	mg/l	2.33	0	2.5	93.2	90-110	L632634-02	WG658962

Matrix Spike Duplicate

Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Phosphorus,Total	mg/l	2.32	2.33	92.8	90-110	0.430	20	L632634-02	WG658962

Batch number /Run number / Sample number cross reference

WG658962: R2651560: L632634-01 02

* * 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#: 1304981

14-May-13

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID MB	SampType: MBLK	TestCode: EPA Method 200.7: Metals							
Client ID: PBW	Batch ID: R10460	RunNo: 10460							
Prep Date:	Analysis Date: 5/7/2013	SeqNo: 295594	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: R10460	RunNo: 10460							
Prep Date:	Analysis Date: 5/7/2013	SeqNo: 295595	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	49	1.0	50.00	0	97.8	85	115			
Iron	0.49	0.020	0.5000	0	98.5	85	115			
Magnesium	50	1.0	50.00	0	99.5	85	115			
Manganese	0.48	0.0020	0.5000	0	96.6	85	115			
Potassium	48	1.0	50.00	0	96.7	85	115			
Sodium	49	1.0	50.00	0	97.4	85	115			

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1304981

14-May-13

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions
Client ID: PBW	Batch ID: R10108	RunNo: 10108
Prep Date:	Analysis Date: 4/24/2013	SeqNo: 287947 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: R10108	RunNo: 10108
Prep Date:	Analysis Date: 4/24/2013	SeqNo: 287948 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	99.0	90	110			
Chloride	4.8	0.50	5.000	0	95.7	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.4	90	110			
Bromide	2.4	0.10	2.500	0	98.0	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	100	90	110			

Sample ID MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions
Client ID: PBW	Batch ID: R10108	RunNo: 10108
Prep Date:	Analysis Date: 4/24/2013	SeqNo: 288003 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: R10108	RunNo: 10108
Prep Date:	Analysis Date: 4/24/2013	SeqNo: 288005 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	99.5	90	110			
Chloride	4.8	0.50	5.000	0	95.6	90	110			
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	94.9	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	100	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
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1304981

14-May-13

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID LCS	SampType: LCS	TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R10108	RunNo: 10108							
Prep Date:	Analysis Date: 4/24/2013	SeqNo: 288005	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.5	90	110			

Sample ID 1304981-001BMS	SampType: MS	TestCode: EPA Method 300.0: Anions							
Client ID: Influent	Batch ID: R10108	RunNo: 10108							
Prep Date:	Analysis Date: 4/24/2013	SeqNo: 288026	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.1	0.10	0.5000	0.6666	85.6	76.6	110			
Nitrogen, Nitrite (As N)	0.87	0.10	1.000	0	87.1	72.5	111			
Bromide	2.7	0.10	2.500	0.3269	94.2	83.3	107			
Nitrogen, Nitrate (As N)	4.2	0.10	2.500	1.677	102	90.4	113			

Sample ID 1304981-001BMSD	SampType: MSD	TestCode: EPA Method 300.0: Anions							
Client ID: Influent	Batch ID: R10108	RunNo: 10108							
Prep Date:	Analysis Date: 4/24/2013	SeqNo: 288027	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.1	0.10	0.5000	0.6666	86.2	76.6	110	0.265	20	
Nitrogen, Nitrite (As N)	0.87	0.10	1.000	0	87.2	72.5	111	0.161	20	
Bromide	2.7	0.10	2.500	0.3269	94.0	83.3	107	0.194	20	
Nitrogen, Nitrate (As N)	4.2	0.10	2.500	1.677	102	90.4	113	0.0592	20	

Sample ID MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R10260	RunNo: 10260							
Prep Date:	Analysis Date: 5/1/2013	SeqNo: 292611	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: R10260	RunNo: 10260							
Prep Date:	Analysis Date: 5/1/2013	SeqNo: 292612	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.6	0.50	10.00	0	95.9	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1304981

14-May-13

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID 5ml rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R10124	RunNo: 10124
Prep Date:	Analysis Date: 4/25/2013	SeqNo: 288477 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								

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1304981

14-May-13

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID 5ml rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R10124	RunNo: 10124
Prep Date:	Analysis Date: 4/25/2013	SeqNo: 288477 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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	9.1		10.00		91.4	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	69.5	130			
Surr: Dibromofluoromethane	9.2		10.00		92.1	70	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: R10124	RunNo: 10124
Prep Date:	Analysis Date: 4/25/2013	SeqNo: 288478 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	21	1.0	20.00	0	103	80	120			
Chlorobenzene	20	1.0	20.00	0	100	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	95.9	85.8	133			
Trichloroethene (TCE)	20	1.0	20.00	0	99.0	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
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1304981**

14-May-13

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	LCSW	Batch ID:	R10124	RunNo:	10124				
Prep Date:		Analysis Date:	4/25/2013	SeqNo:	288478	Units:	µg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.4		10.00		93.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	69.5	130			
Surr: Dibromofluoromethane	9.6		10.00		95.7	70	130			
Surr: Toluene-d8	9.2		10.00		92.1	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
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1304981

14-May-13

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID	1304981-002Bdup	SampType:	dup	TestCode:	SM2510B: Specific Conductance					
Client ID:	Effluent	Batch ID:	R10173	RunNo:	10173					
Prep Date:		Analysis Date:	4/24/2013	SeqNo:	289852	Units:	µmhos/cm			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	3300	0.010						0.708	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
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1304981**

14-May-13

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID	1304981-002Bdup	SampType:	dup		TestCode:	SM4500-H+B: pH				
Client ID:	Effluent	Batch ID:	R10173		RunNo:	10173				
Prep Date:		Analysis Date:	4/24/2013		SeqNo:	289860	Units:	pH units		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	7.38	1.68								H

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1304981**

14-May-13

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID	mb-1	SampType:	mblk	TestCode:	SM2320B: Alkalinity					
Client ID:	PBW	Batch ID:	R10173	RunNo:	10173					
Prep Date:		Analysis Date:	4/24/2013	SeqNo:	289837	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:	R10173	RunNo:	10173					
Prep Date:		Analysis Date:	4/24/2013	SeqNo:	289838	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	99.7	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
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1304981**

14-May-13

Client: Western Refining Southwest, Inc.

Project: GBR

Sample ID	MB-7202	SampType:	MBLK	TestCode:	SM2540C MOD: Total Dissolved Solids					
Client ID:	PBW	Batch ID:	7202	RunNo:	10211					
Prep Date:	4/29/2013	Analysis Date:	4/30/2013	SeqNo:	291255	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-7202	SampType:	LCS	TestCode:	SM2540C MOD: Total Dissolved Solids					
Client ID:	LCSW	Batch ID:	7202	RunNo:	10211					
Prep Date:	4/29/2013	Analysis Date:	4/30/2013	SeqNo:	291256	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	0	102	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

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 Southw Work Order Number: 1304981 RcptNo: 1

Received by/date: AS 04/24/13

Logged By: Lindsay Mangin 4/24/2013 9:54:00 AM

Completed By: Lindsay Mangin 4/24/2013 2:35:10 PM

Reviewed By: mg 04/24/13

Chain of Custody

1. Custody seals intact on sample bottles?	Yes	No	Not Present ✔
2. Is Chain of Custody complete?	Yes ✔	No	Not Present
3. How was the sample delivered?	UPS		

Log In

4. Was an attempt made to cool the samples?	Yes ✔	No	NA
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ✔	No	NA
6. Sample(s) in proper container(s)?	Yes ✔	No	
7. Sufficient sample volume for indicated test(s)?	Yes ✔	No	
8. Are samples (except VOA and ONG) properly preserved?	Yes ✔	No	
9. Was preservative added to bottles?	Yes	No ✔	NA
10. VOA vials have zero headspace?	Yes ✔	No	No VOA Vials
11. Were any sample containers received broken?	Yes	No ✔	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ✔	No	# of preserved bottles checked for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ✔	No	Adjusted?
14. Is it clear what analyses were requested?	Yes ✔	No	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ✔	No	Checked by:

Special Handling (if applicable)

16. 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: _____

17. Additional remarks:

18. 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: Devin Hencmann

On Ice: ☒ Yes ☐ No

Sample Temperature:

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. 1304174	Analysis Request: BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	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, Alkalinity, EC, pH	Sec attached	Air Bubbles (Y or N)
4/23/13	1513	Aq	Influent	6 various	various	-001												X	X	X	X	
4/23/13	1529	Aq	Effluent	6 various	various	-002												X	X	X	X	
4/23/13	0800	Aq	Trip Blank			-003												X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
4/23/13	1617			4/23/13	1617
4/23/13	1740			04/24/13	0954

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.

VOCs 8260

General Chemistry:

- pH
- EC
- TDS
- alkalinity
- hardness
- anions
  - bromide
  - chloride
  - sulfate
  - fluoride
  - nitrate/nitrite
  - phosporus
- 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

July 22, 2013

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

RE: GBR Quarterly Sampling OrderNo.: 1307488

Dear Ashley Ager:

Hall Environmental Analysis Laboratory received 3 sample(s) on 7/11/2013 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. In order to properly interpret your results it is imperative that you review this report in its entirety. 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. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. 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.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order 1307488
Date Reported: 7/22/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Influent
Project: GBR Quarterly Sampling **Collection Date:** 7/10/2013 9:30:00 AM
Lab ID: 1307488-001 **Matrix:** AQUEOUS **Received Date:** 7/11/2013 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Fluoride	0.54	0.10		mg/L	1	7/15/2013 9:33:23 PM	R11962
Chloride	78	10		mg/L	20	7/12/2013 3:32:25 AM	R11891
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	7/12/2013 3:20:00 AM	R11891
Bromide	0.35	0.10		mg/L	1	7/12/2013 3:20:00 AM	R11891
Nitrogen, Nitrate (As N)	1.3	0.10		mg/L	1	7/12/2013 3:20:00 AM	R11891
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	7/12/2013 3:20:00 AM	R11891
Sulfate	1400	25	*	mg/L	50	7/15/2013 9:45:47 PM	R11962
EPA METHOD 200.7: METALS						Analyst: **JLF**	
Calcium	330	5.0		mg/L	5	7/12/2013 4:05:52 PM	R11905
Iron	0.13	0.020		mg/L	1	7/12/2013 4:03:05 PM	R11905
Magnesium	31	1.0		mg/L	1	7/12/2013 4:03:05 PM	R11905
Manganese	0.38	0.0020	*	mg/L	1	7/12/2013 4:03:05 PM	R11905
Potassium	3.9	1.0		mg/L	1	7/12/2013 4:03:05 PM	R11905
Sodium	440	5.0		mg/L	5	7/17/2013 12:10:53 PM	R12024
SM2340B: HARDNESS						Analyst: **JLF**	
Hardness (As CaCO3)	960	6.6		mg/L	1	7/12/2013 12:55:00 PM	R11905
EPA METHOD 8260B: VOLATILES						Analyst: **CWS**	
Benzene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
Toluene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
Ethylbenzene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
Naphthalene	ND	2.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
1-Methylnaphthalene	ND	4.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
2-Methylnaphthalene	ND	4.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
Acetone	ND	10		µg/L	1	7/12/2013 5:56:33 PM	R11924
Bromobenzene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
Bromodichloromethane	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
Bromoform	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
Bromomethane	ND	3.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
2-Butanone	ND	10		µg/L	1	7/12/2013 5:56:33 PM	R11924
Carbon disulfide	ND	10		µg/L	1	7/12/2013 5:56:33 PM	R11924
Carbon Tetrachloride	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
Chlorobenzene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
Chloroethane	ND	2.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
Chloroform	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1307488**
Date Reported: **7/22/2013**

CLIENT: Western Refining Southwest, Inc.
Project: GBR Quarterly Sampling
Lab ID: 1307488-001 **Matrix:** AQUEOUS

Client Sample ID: Influent
Collection Date: 7/10/2013 9:30:00 AM
Received Date: 7/11/2013 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CWS**	
Chloromethane	ND	3.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
2-Chlorotoluene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
4-Chlorotoluene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
cis-1,2-DCE	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
Dibromochloromethane	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
Dibromomethane	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
1,1-Dichloroethane	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
1,1-Dichloroethene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
1,2-Dichloropropane	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
1,3-Dichloropropane	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
2,2-Dichloropropane	ND	2.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
1,1-Dichloropropene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
Hexachlorobutadiene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
2-Hexanone	ND	10		µg/L	1	7/12/2013 5:56:33 PM	R11924
Isopropylbenzene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
4-Isopropyltoluene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
4-Methyl-2-pentanone	ND	10		µg/L	1	7/12/2013 5:56:33 PM	R11924
Methylene Chloride	ND	3.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
n-Butylbenzene	ND	3.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
n-Propylbenzene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
sec-Butylbenzene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
Styrene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
tert-Butylbenzene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
trans-1,2-DCE	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
Trichlorofluoromethane	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Analytical Report
Lab Order 1307488
Date Reported: 7/22/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.
Project: GBR Quarterly Sampling
Lab ID: 1307488-001 **Matrix:** AQUEOUS

Client Sample ID: Influent
Collection Date: 7/10/2013 9:30:00 AM
Received Date: 7/11/2013 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst:	**CWS**
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
Vinyl chloride	ND	1.0		µg/L	1	7/12/2013 5:56:33 PM	R11924
Xylenes, Total	ND	1.5		µg/L	1	7/12/2013 5:56:33 PM	R11924
Surr: 1,2-Dichloroethane-d4	111	70-130		%REC	1	7/12/2013 5:56:33 PM	R11924
Surr: 4-Bromofluorobenzene	98.1	70-130		%REC	1	7/12/2013 5:56:33 PM	R11924
Surr: Dibromofluoromethane	105	70-130		%REC	1	7/12/2013 5:56:33 PM	R11924
Surr: Toluene-d8	99.8	70-130		%REC	1	7/12/2013 5:56:33 PM	R11924
SM2510B: SPECIFIC CONDUCTANCE						Analyst:	**JML**
Conductivity	3500	0.010		µmhos/cm	1	7/12/2013 5:02:14 PM	R11927
SM4500-H+B: PH						Analyst:	**JML**
pH	7.31	1.68	H	pH units	1	7/12/2013 5:02:14 PM	R11927
SM2320B: ALKALINITY						Analyst:	**JML**
Bicarbonate (As CaCO3)	340	20		mg/L CaCO3	1	7/12/2013 5:02:14 PM	R11927
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	7/12/2013 5:02:14 PM	R11927
Total Alkalinity (as CaCO3)	340	20		mg/L CaCO3	1	7/12/2013 5:02:14 PM	R11927
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	**KS**
Total Dissolved Solids	2750	20.0	*	mg/L	1	7/16/2013 9:46:00 AM	8364

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Analytical Report
Lab Order **1307488**
Date Reported: **7/22/2013**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.
Project: GBR Quarterly Sampling
Lab ID: 1307488-002 **Matrix:** AQUEOUS

Client Sample ID: Effluent
Collection Date: 7/10/2013 9:45:00 AM
Received Date: 7/11/2013 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Fluoride	0.56	0.10		mg/L	1	7/15/2013 9:58:12 PM	R11962
Chloride	78	10		mg/L	20	7/12/2013 3:57:15 AM	R11891
Nitrogen, Nitrite (As N)	0.13	0.10		mg/L	1	7/12/2013 3:44:50 AM	R11891
Bromide	0.33	0.10		mg/L	1	7/12/2013 3:44:50 AM	R11891
Nitrogen, Nitrate (As N)	0.90	0.10		mg/L	1	7/12/2013 3:44:50 AM	R11891
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	7/12/2013 3:44:50 AM	R11891
Sulfate	1400	25	*	mg/L	50	7/15/2013 10:10:37 PM	R11962
EPA METHOD 200.7: METALS						Analyst: **JLF**	
Calcium	360	5.0		mg/L	5	7/16/2013 3:34:46 PM	R11972
Iron	ND	0.020		mg/L	1	7/16/2013 3:31:58 PM	R11972
Magnesium	31	1.0		mg/L	1	7/16/2013 3:31:58 PM	R11972
Manganese	0.45	0.0020	*	mg/L	1	7/16/2013 3:31:58 PM	R11972
Potassium	3.3	1.0		mg/L	1	7/16/2013 3:31:58 PM	R11972
Sodium	440	10		mg/L	10	7/17/2013 12:13:20 PM	R12024
SM2340B: HARDNESS						Analyst: **JLF**	
Hardness (As CaCO3)	1000	6.6		mg/L	1	7/16/2013 10:58:00 AM	R11972
EPA METHOD 8260B: VOLATILES						Analyst: **CWS**	
Benzene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
Toluene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
Ethylbenzene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
Naphthalene	ND	2.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
1-Methylnaphthalene	ND	4.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
2-Methylnaphthalene	ND	4.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
Acetone	ND	10		µg/L	1	7/12/2013 7:22:52 PM	R11924
Bromobenzene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
Bromodichloromethane	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
Bromoform	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
Bromomethane	ND	3.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
2-Butanone	ND	10		µg/L	1	7/12/2013 7:22:52 PM	R11924
Carbon disulfide	ND	10		µg/L	1	7/12/2013 7:22:52 PM	R11924
Carbon Tetrachloride	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
Chlorobenzene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
Chloroethane	ND	2.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
Chloroform	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Effluent
Project: GBR Quarterly Sampling **Collection Date:** 7/10/2013 9:45:00 AM
Lab ID: 1307488-002 **Matrix:** AQUEOUS **Received Date:** 7/11/2013 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CWS**	
Chloromethane	ND	3.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
2-Chlorotoluene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
4-Chlorotoluene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
cis-1,2-DCE	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
Dibromochloromethane	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
Dibromomethane	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
1,1-Dichloroethane	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
1,1-Dichloroethene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
1,2-Dichloropropane	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
1,3-Dichloropropane	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
2,2-Dichloropropane	ND	2.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
1,1-Dichloropropene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
Hexachlorobutadiene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
2-Hexanone	ND	10		µg/L	1	7/12/2013 7:22:52 PM	R11924
Isopropylbenzene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
4-Isopropyltoluene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
4-Methyl-2-pentanone	ND	10		µg/L	1	7/12/2013 7:22:52 PM	R11924
Methylene Chloride	ND	3.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
n-Butylbenzene	ND	3.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
n-Propylbenzene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
sec-Butylbenzene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
Styrene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
tert-Butylbenzene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
trans-1,2-DCE	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
Trichlorofluoromethane	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Effluent
Project: GBR Quarterly Sampling **Collection Date:** 7/10/2013 9:45:00 AM
Lab ID: 1307488-002 **Matrix:** AQUEOUS **Received Date:** 7/11/2013 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst:	**CWS**
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
Vinyl chloride	ND	1.0		µg/L	1	7/12/2013 7:22:52 PM	R11924
Xylenes, Total	ND	1.5		µg/L	1	7/12/2013 7:22:52 PM	R11924
Surr: 1,2-Dichloroethane-d4	107	70-130		%REC	1	7/12/2013 7:22:52 PM	R11924
Surr: 4-Bromofluorobenzene	104	70-130		%REC	1	7/12/2013 7:22:52 PM	R11924
Surr: Dibromofluoromethane	104	70-130		%REC	1	7/12/2013 7:22:52 PM	R11924
Surr: Toluene-d8	100	70-130		%REC	1	7/12/2013 7:22:52 PM	R11924
SM2510B: SPECIFIC CONDUCTANCE						Analyst:	**JML**
Conductivity	3500	0.010		µmhos/cm	1	7/12/2013 5:18:03 PM	R11927
SM4500-H+B: PH						Analyst:	**JML**
pH	7.28	1.68	H	pH units	1	7/12/2013 5:18:03 PM	R11927
SM2320B: ALKALINITY						Analyst:	**JML**
Bicarbonate (As CaCO3)	340	20		mg/L CaCO3	1	7/12/2013 5:18:03 PM	R11927
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	7/12/2013 5:18:03 PM	R11927
Total Alkalinity (as CaCO3)	340	20		mg/L CaCO3	1	7/12/2013 5:18:03 PM	R11927
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	**KS**
Total Dissolved Solids	2760	20.0	*	mg/L	1	7/16/2013 9:46:00 AM	8364

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Analytical Report
Lab Order **1307488**
Date Reported: **7/22/2013**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Trip Blank
Project: GBR Quarterly Sampling **Collection Date:**
Lab ID: 1307488-003 **Matrix:** TRIP BLANK **Received Date:** 7/11/2013 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CWS**	
Benzene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
Toluene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
Ethylbenzene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
Naphthalene	ND	2.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
1-Methylnaphthalene	ND	4.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
2-Methylnaphthalene	ND	4.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
Acetone	ND	10		µg/L	1	7/12/2013 7:51:39 PM	R11924
Bromobenzene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
Bromodichloromethane	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
Bromoform	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
Bromomethane	ND	3.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
2-Butanone	ND	10		µg/L	1	7/12/2013 7:51:39 PM	R11924
Carbon disulfide	ND	10		µg/L	1	7/12/2013 7:51:39 PM	R11924
Carbon Tetrachloride	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
Chlorobenzene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
Chloroethane	ND	2.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
Chloroform	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
Chloromethane	ND	3.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
2-Chlorotoluene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
4-Chlorotoluene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
cis-1,2-DCE	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
Dibromochloromethane	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
Dibromomethane	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
1,1-Dichloroethane	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
1,1-Dichloroethene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
1,2-Dichloropropane	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
1,3-Dichloropropane	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
2,2-Dichloropropane	ND	2.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
1,1-Dichloropropene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Trip Blank
Project: GBR Quarterly Sampling **Collection Date:**
Lab ID: 1307488-003 **Matrix:** TRIP BLANK **Received Date:** 7/11/2013 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CWS**	
Hexachlorobutadiene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
2-Hexanone	ND	10		µg/L	1	7/12/2013 7:51:39 PM	R11924
Isopropylbenzene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
4-Isopropyltoluene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
4-Methyl-2-pentanone	ND	10		µg/L	1	7/12/2013 7:51:39 PM	R11924
Methylene Chloride	ND	3.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
n-Butylbenzene	ND	3.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
n-Propylbenzene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
sec-Butylbenzene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
Styrene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
tert-Butylbenzene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
trans-1,2-DCE	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
Trichlorofluoromethane	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
Vinyl chloride	ND	1.0		µg/L	1	7/12/2013 7:51:39 PM	R11924
Xylenes, Total	ND	1.5		µg/L	1	7/12/2013 7:51:39 PM	R11924
Surr: 1,2-Dichloroethane-d4	107	70-130		%REC	1	7/12/2013 7:51:39 PM	R11924
Surr: 4-Bromofluorobenzene	100	70-130		%REC	1	7/12/2013 7:51:39 PM	R11924
Surr: Dibromofluoromethane	104	70-130		%REC	1	7/12/2013 7:51:39 PM	R11924
Surr: Toluene-d8	97.0	70-130		%REC	1	7/12/2013 7:51:39 PM	R11924

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307488

22-Jul-13

Client: Western Refining Southwest, Inc.
Project: GBR Quarterly Sampling

Sample ID LCS	SampType: LCS	TestCode: EPA Method 200.7: Metals							
Client ID: LCSW	Batch ID: R11905	RunNo: 11905							
Prep Date:	Analysis Date: 7/12/2013	SeqNo: 338406	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	48	1.0	50.00	0	96.1	85	115			
Iron	0.51	0.020	0.5000	0	101	85	115			
Magnesium	48	1.0	50.00	0	96.7	85	115			
Manganese	0.50	0.0020	0.5000	0	99.1	85	115			
Potassium	47	1.0	50.00	0	94.5	85	115			

Sample ID MB	SampType: MBLK	TestCode: EPA Method 200.7: Metals							
Client ID: PBW	Batch ID: R11905	RunNo: 11905							
Prep Date:	Analysis Date: 7/12/2013	SeqNo: 338407	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								

Sample ID MB	SampType: MBLK	TestCode: EPA Method 200.7: Metals							
Client ID: PBW	Batch ID: R11972	RunNo: 11972							
Prep Date:	Analysis Date: 7/16/2013	SeqNo: 340213	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								

Sample ID LCS	SampType: LCS	TestCode: EPA Method 200.7: Metals							
Client ID: LCSW	Batch ID: R11972	RunNo: 11972							
Prep Date:	Analysis Date: 7/16/2013	SeqNo: 340214	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	49	1.0	50.00	0	97.3	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Magnesium	49	1.0	50.00	0	98.9	85	115			
Manganese	0.52	0.0020	0.5000	0	103	85	115			
Potassium	48	1.0	50.00	0	95.5	85	115			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1307488**

22-Jul-13

Client: Western Refining Southwest, Inc.
Project: GBR Quarterly Sampling

Sample ID MB	SampType: MBLK	TestCode: EPA Method 200.7: Metals							
Client ID: PBW	Batch ID: R12024	RunNo: 12024							
Prep Date:	Analysis Date: 7/17/2013	SeqNo: 341697	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID LCS	SampType: LCS	TestCode: EPA Method 200.7: Metals							
Client ID: LCSW	Batch ID: R12024	RunNo: 12024							
Prep Date:	Analysis Date: 7/17/2013	SeqNo: 341698	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	48	1.0	50.00	0	95.7	85	115			

Sample ID MB2	SampType: MBLK	TestCode: EPA Method 200.7: Metals							
Client ID: PBW	Batch ID: R12024	RunNo: 12024							
Prep Date:	Analysis Date: 7/17/2013	SeqNo: 341750	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID LCS2	SampType: LCS	TestCode: EPA Method 200.7: Metals							
Client ID: LCSW	Batch ID: R12024	RunNo: 12024							
Prep Date:	Analysis Date: 7/17/2013	SeqNo: 341751	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	49	1.0	50.00	0	97.7	85	115			

Qualifiers:

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- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307488

22-Jul-13

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R11891	RunNo: 11891							
Prep Date:	Analysis Date: 7/11/2013	SeqNo: 337962	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: R11891	RunNo: 11891							
Prep Date:	Analysis Date: 7/11/2013	SeqNo: 337963	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.8	90	110			
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	95.4	90	110			
Bromide	2.5	0.10	2.500	0	100	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.6	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.6	90	110			

Sample ID MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R11891	RunNo: 11891							
Prep Date:	Analysis Date: 7/12/2013	SeqNo: 338016	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: R11891	RunNo: 11891							
Prep Date:	Analysis Date: 7/12/2013	SeqNo: 338017	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.4	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	96.7	90	110			
Bromide	2.5	0.10	2.500	0	99.8	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.2	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.9	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1307488**

22-Jul-13

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R11962**	RunNo: **11962**
Prep Date:	Analysis Date: **7/15/2013**	SeqNo: **339981** 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-b**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R11962**	RunNo: **11962**
Prep Date:	Analysis Date: **7/15/2013**	SeqNo: **339983** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.45	0.10	0.5000	0	90.4	90	110			
Sulfate	9.3	0.50	10.00	0	93.5	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1307488**

22-Jul-13

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID 5ml rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R11924	RunNo: 11924
Prep Date:	Analysis Date: 7/12/2013	SeqNo: 338811 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								

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
- O RSD is greater than RSDlimit
- P Sample pH greater than 2 for VOA and TOC only.
- R RPD outside accepted recovery limits
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1307488**

22-Jul-13

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID 5ml rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R11924	RunNo: 11924
Prep Date:	Analysis Date: 7/12/2013	SeqNo: 338811 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.6		10.00		95.9	70	130			

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: R11924	RunNo: 11924
Prep Date:	Analysis Date: 7/12/2013	SeqNo: 338814 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.5	70	130			
Toluene	18	1.0	20.00	0	90.6	80	120			
Chlorobenzene	17	1.0	20.00	0	85.3	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	84.4	85.8	133			S
Trichloroethene (TCE)	17	1.0	20.00	0	86.1	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307488

22-Jul-13

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R11924	RunNo: 11924							
Prep Date:	Analysis Date: 7/12/2013	SeqNo: 338814	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID 1307488-001a ms	SampType: MS	TestCode: EPA Method 8260B: VOLATILES							
Client ID: Influent	Batch ID: R11924	RunNo: 11924							
Prep Date:	Analysis Date: 7/12/2013	SeqNo: 338821	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.8	67.9	137			
Toluene	19	1.0	20.00	0	94.0	77	127			
Chlorobenzene	17	1.0	20.00	0	87.2	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	84.7	66.5	131			
Trichloroethene (TCE)	18	1.0	20.00	0	88.7	66.3	134			
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.0	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.8		10.00		98.4	70	130			

Sample ID 1307488-001a msd	SampType: MSD	TestCode: EPA Method 8260B: VOLATILES							
Client ID: Influent	Batch ID: R11924	RunNo: 11924							
Prep Date:	Analysis Date: 7/12/2013	SeqNo: 338822	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.1	67.9	137	6.91	20	
Toluene	19	1.0	20.00	0	92.6	77	127	1.58	20	
Chlorobenzene	17	1.0	20.00	0	84.4	70	130	3.28	20	
1,1-Dichloroethene	16	1.0	20.00	0	82.3	66.5	131	2.88	20	
Trichloroethene (TCE)	17	1.0	20.00	0	83.3	66.3	134	6.28	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		108	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.6		10.00		95.6	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		106	70	130	0	0	
Surr: Toluene-d8	9.8		10.00		98.4	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1307488**

22-Jul-13

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID	mb-1	SampType:	mblk	TestCode:	SM2320B: Alkalinity					
Client ID:	PBW	Batch ID:	R11927	RunNo:	11927					
Prep Date:		Analysis Date:	7/12/2013	SeqNo:	339134	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:	R11927	RunNo:	11927					
Prep Date:		Analysis Date:	7/12/2013	SeqNo:	339135	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	100	90	110			

Sample ID	mb-2	SampType:	mblk	TestCode:	SM2320B: Alkalinity					
Client ID:	PBW	Batch ID:	R11927	RunNo:	11927					
Prep Date:		Analysis Date:	7/12/2013	SeqNo:	339154	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:	R11927	RunNo:	11927					
Prep Date:		Analysis Date:	7/12/2013	SeqNo:	339155	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	99.7	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307488

22-Jul-13

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID	MB-8364	SampType:	MBLK		TestCode:	SM2540C MOD: Total Dissolved Solids				
Client ID:	PBW	Batch ID:	8364		RunNo:	11956				
Prep Date:	7/14/2013	Analysis Date:	7/16/2013		SeqNo:	339808	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-8364	SampType:	LCS		TestCode:	SM2540C MOD: Total Dissolved Solids				
Client ID:	LCSW	Batch ID:	8364		RunNo:	11956				
Prep Date:	7/14/2013	Analysis Date:	7/16/2013		SeqNo:	339809	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	0	102	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- 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 Southw Work Order Number: 1307488 RcptNo: 1

Received by/date: AB 07/11/13

Logged By: Lindsay Mangin 7/11/2013 9:45:00 AM

Completed By: Lindsay Mangin 7/11/2013 12:00:47 PM

Reviewed By: JO 07/11/13

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: ____ (<2 or >12 unless noted)

Adjusted? ____

Checked by: ____

Special Handling (if applicable)

16. 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: ____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			

Chain-of-Custody Record

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

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: GBR Quarterly Sampling
Project #:
Project Manager: Ashley Ager
Sampler: Daniel newman
On Ice: ☐ No
Sample Temperature:

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.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	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				Air Bubbles (Y or N)
7/10/13	930	GW	Influent	6	Various	-001												X				
7/10/13	945	GW	Effluent	6	Various	-002												X				
		~~GW~~	Trip Blank	2	HCl	-003																

Date:	Time:	Relinquished by:	Received by:	Date	Time
7/10/13	1336			7/10/13	1336
7/10/13	1756	Christian Walls		07/11/13	0945

Remarks: Please email 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.

- VOCs 8260
- General Chemistry:
  - pH
  - EC
  - TDS
  - alkalinity
  - hardness
  - anions
    - bromide
    - chloride
    - sulfate
    - fluoride
  - nitrate/nitrite
  - ~~phosporus~~ PO_4 PER AA
  - cations
    - calcium
    - iron
  - magnesium
  - manganese
  - potassium
  - sodium

04/11/13

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 25, 2013

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

RE: GBR Quarterly Sampling OrderNo.: 1310301

Dear Ashley Ager:

Hall Environmental Analysis Laboratory received 3 sample(s) on 10/5/2013 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. In order to properly interpret your results it is imperative that you review this report in its entirety. 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. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. 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.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 1310301
Date Reported: 10/25/2013

CLIENT: Western Refining Southwest, Inc.
Project: GBR Quarterly Sampling
Lab ID: 1310301-001 **Matrix:** AQUEOUS

Client Sample ID: Influent
Collection Date: 10/4/2013 11:40:00 AM
Received Date: 10/5/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: JRR	
Fluoride	0.70	0.10		mg/L	1	10/8/2013 9:48:48 AM	R13948
Chloride	82	10		mg/L	20	10/8/2013 10:01:13 AM	R13948
Bromide	0.36	0.10		mg/L	1	10/8/2013 9:48:48 AM	R13948
Phosphorus, Orthophosphate (As P	ND	10	H	mg/L	20	10/8/2013 10:01:13 AM	R13948
Sulfate	1500	25	*	mg/L	50	10/10/2013 4:36:34 PM	R14005
Nitrate+Nitrite as N	ND	1.0		mg/L	5	10/9/2013 4:15:22 PM	R13985
EPA METHOD 200.7: METALS						Analyst: JLF	
Calcium	310	5.0		mg/L	5	10/11/2013 1:12:10 PM	R14004
Iron	0.14	0.020		mg/L	1	10/11/2013 1:10:08 PM	R14004
Magnesium	30	1.0		mg/L	1	10/11/2013 1:10:08 PM	R14004
Manganese	0.59	0.0020	*	mg/L	1	10/11/2013 1:10:08 PM	R14004
Potassium	4.0	1.0		mg/L	1	10/11/2013 1:10:08 PM	R14004
Sodium	490	10		mg/L	10	10/14/2013 12:34:06 PM	R14049
SM2340B: HARDNESS						Analyst: JLF	
Hardness (As CaCO3)	910	6.6		mg/L	1	10/11/2013 10:47:00 AM	R14004
EPA METHOD 8260B: VOLATILES						Analyst: cadg	
Benzene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
Toluene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
Ethylbenzene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
Naphthalene	ND	2.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
1-Methylnaphthalene	ND	4.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
2-Methylnaphthalene	ND	4.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
Acetone	ND	10		µg/L	1	10/7/2013 11:25:32 PM	R13891
Bromobenzene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
Bromodichloromethane	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
Bromoform	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
Bromomethane	ND	3.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
2-Butanone	ND	10		µg/L	1	10/7/2013 11:25:32 PM	R13891
Carbon disulfide	ND	10		µg/L	1	10/7/2013 11:25:32 PM	R13891
Carbon Tetrachloride	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
Chlorobenzene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
Chloroethane	ND	2.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
Chloroform	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
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:** Influent
Project: GBR Quarterly Sampling **Collection Date:** 10/4/2013 11:40:00 AM
Lab ID: 1310301-001 **Matrix:** AQUEOUS **Received Date:** 10/5/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Chloromethane	ND	3.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
2-Chlorotoluene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
4-Chlorotoluene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
cis-1,2-DCE	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
Dibromochloromethane	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
Dibromomethane	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
1,1-Dichloroethane	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
1,1-Dichloroethene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
1,2-Dichloropropane	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
1,3-Dichloropropane	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
2,2-Dichloropropane	ND	2.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
1,1-Dichloropropene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
Hexachlorobutadiene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
2-Hexanone	ND	10		µg/L	1	10/7/2013 11:25:32 PM	R13891
Isopropylbenzene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
4-Isopropyltoluene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
4-Methyl-2-pentanone	ND	10		µg/L	1	10/7/2013 11:25:32 PM	R13891
Methylene Chloride	ND	3.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
n-Butylbenzene	ND	3.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
n-Propylbenzene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
sec-Butylbenzene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
Styrene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
tert-Butylbenzene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
trans-1,2-DCE	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Influent
Project: GBR Quarterly Sampling **Collection Date:** 10/4/2013 11:40:00 AM
Lab ID: 1310301-001 **Matrix:** AQUEOUS **Received Date:** 10/5/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Trichlorofluoromethane	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
Vinyl chloride	ND	1.0		µg/L	1	10/7/2013 11:25:32 PM	R13891
Xylenes, Total	ND	1.5		µg/L	1	10/7/2013 11:25:32 PM	R13891
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	1	10/7/2013 11:25:32 PM	R13891
Surr: 4-Bromofluorobenzene	96.5	70-130		%REC	1	10/7/2013 11:25:32 PM	R13891
Surr: Dibromofluoromethane	109	70-130		%REC	1	10/7/2013 11:25:32 PM	R13891
Surr: Toluene-d8	98.5	70-130		%REC	1	10/7/2013 11:25:32 PM	R13891
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **JML**	
Conductivity	3300	0.010		µmhos/cm	1	10/7/2013 4:36:57 PM	R13890
SM4500-H+B: PH						Analyst: **JML**	
pH	7.26	1.68	H	pH units	1	10/7/2013 4:36:57 PM	R13890
SM2320B: ALKALINITY						Analyst: **JML**	
Bicarbonate (As CaCO3)	420	20		mg/L CaCO3	1	10/7/2013 4:36:57 PM	R13890
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	10/7/2013 4:36:57 PM	R13890
Total Alkalinity (as CaCO3)	420	20		mg/L CaCO3	1	10/7/2013 4:36:57 PM	R13890
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	2740	20.0	*	mg/L	1	10/10/2013 1:30:00 PM	9728

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
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 Quarterly Sampling **Collection Date:** 10/4/2013 11:34:00 AM
Lab ID: 1310301-002 **Matrix:** AQUEOUS **Received Date:** 10/5/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Fluoride	0.68	0.10		mg/L	1	10/8/2013 10:13:37 AM	R13948
Chloride	85	10		mg/L	20	10/8/2013 10:26:01 AM	R13948
Bromide	0.40	0.10		mg/L	1	10/8/2013 10:13:37 AM	R13948
Phosphorus, Orthophosphate (As P	ND	10	H	mg/L	20	10/8/2013 10:26:01 AM	R13948
Sulfate	1400	25	*	mg/L	50	10/10/2013 4:48:58 PM	R14005
Nitrate+Nitrite as N	ND	1.0		mg/L	5	10/9/2013 4:27:47 PM	R13985
EPA METHOD 200.7: METALS						Analyst: **JLF**	
Calcium	300	5.0		mg/L	5	10/11/2013 1:15:54 PM	R14004
Iron	ND	0.020		mg/L	1	10/11/2013 1:13:55 PM	R14004
Magnesium	31	1.0		mg/L	1	10/11/2013 1:13:55 PM	R14004
Manganese	0.70	0.0020	*	mg/L	1	10/11/2013 1:13:55 PM	R14004
Potassium	4.1	1.0		mg/L	1	10/11/2013 1:13:55 PM	R14004
Sodium	510	10		mg/L	10	10/14/2013 12:36:08 PM	R14049
SM2340B: HARDNESS						Analyst: **JLF**	
Hardness (As CaCO3)	890	6.6		mg/L	1	10/11/2013 10:47:00 AM	R14004
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
Toluene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
Ethylbenzene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
Naphthalene	ND	2.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
1-Methylnaphthalene	ND	4.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
2-Methylnaphthalene	ND	4.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
Acetone	ND	10		µg/L	1	10/8/2013 12:51:31 AM	R13891
Bromobenzene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
Bromodichloromethane	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
Bromoform	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
Bromomethane	ND	3.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
2-Butanone	ND	10		µg/L	1	10/8/2013 12:51:31 AM	R13891
Carbon disulfide	ND	10		µg/L	1	10/8/2013 12:51:31 AM	R13891
Carbon Tetrachloride	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
Chlorobenzene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
Chloroethane	ND	2.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
Chloroform	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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
- O RSD is greater than RSDlimit
- P Sample pH greater than 2 for VOA and TOC only.
- 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 Quarterly Sampling **Collection Date:** 10/4/2013 11:34:00 AM
Lab ID: 1310301-002 **Matrix:** AQUEOUS **Received Date:** 10/5/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Chloromethane	ND	3.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
2-Chlorotoluene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
4-Chlorotoluene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
cis-1,2-DCE	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
Dibromochloromethane	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
Dibromomethane	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
1,1-Dichloroethane	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
1,1-Dichloroethene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
1,2-Dichloropropane	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
1,3-Dichloropropane	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
2,2-Dichloropropane	ND	2.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
1,1-Dichloropropene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
Hexachlorobutadiene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
2-Hexanone	ND	10		µg/L	1	10/8/2013 12:51:31 AM	R13891
Isopropylbenzene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
4-Isopropyltoluene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
4-Methyl-2-pentanone	ND	10		µg/L	1	10/8/2013 12:51:31 AM	R13891
Methylene Chloride	ND	3.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
n-Butylbenzene	ND	3.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
n-Propylbenzene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
sec-Butylbenzene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
Styrene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
tert-Butylbenzene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
trans-1,2-DCE	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
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 Quarterly Sampling
Collection Date: 10/4/2013 11:34:00 AM
Lab ID: 1310301-002
Matrix: AQUEOUS
Received Date: 10/5/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Trichlorofluoromethane	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
Vinyl chloride	ND	1.0		µg/L	1	10/8/2013 12:51:31 AM	R13891
Xylenes, Total	ND	1.5		µg/L	1	10/8/2013 12:51:31 AM	R13891
Surr: 1,2-Dichloroethane-d4	101	70-130		%REC	1	10/8/2013 12:51:31 AM	R13891
Surr: 4-Bromofluorobenzene	101	70-130		%REC	1	10/8/2013 12:51:31 AM	R13891
Surr: Dibromofluoromethane	104	70-130		%REC	1	10/8/2013 12:51:31 AM	R13891
Surr: Toluene-d8	101	70-130		%REC	1	10/8/2013 12:51:31 AM	R13891
SM2510B: SPECIFIC CONDUCTANCE						Analyst:	**JML**
Conductivity	3300	0.010		µmhos/cm	1	10/7/2013 4:57:40 PM	R13890
SM4500-H+B: PH						Analyst:	**JML**
pH	7.24	1.68	H	pH units	1	10/7/2013 4:57:40 PM	R13890
SM2320B: ALKALINITY						Analyst:	**JML**
Bicarbonate (As CaCO3)	440	20		mg/L CaCO3	1	10/7/2013 4:57:40 PM	R13890
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	10/7/2013 4:57:40 PM	R13890
Total Alkalinity (as CaCO3)	440	20		mg/L CaCO3	1	10/7/2013 4:57:40 PM	R13890
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	**KS**
Total Dissolved Solids	2730	20.0	*	mg/L	1	10/10/2013 1:30:00 PM	9728

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
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:** Trip Blank
Project: GBR Quarterly Sampling **Collection Date:**
Lab ID: 1310301-003 **Matrix:** TRIP BLANK **Received Date:** 10/5/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Toluene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Ethylbenzene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Naphthalene	ND	2.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
1-Methylnaphthalene	ND	4.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
2-Methylnaphthalene	ND	4.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Acetone	ND	10		µg/L	1	10/8/2013 1:20:08 AM	R13891
Bromobenzene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Bromodichloromethane	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Bromoform	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Bromomethane	ND	3.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
2-Butanone	ND	10		µg/L	1	10/8/2013 1:20:08 AM	R13891
Carbon disulfide	ND	10		µg/L	1	10/8/2013 1:20:08 AM	R13891
Carbon Tetrachloride	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Chlorobenzene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Chloroethane	ND	2.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Chloroform	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Chloromethane	ND	3.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
2-Chlorotoluene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
4-Chlorotoluene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
cis-1,2-DCE	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Dibromochloromethane	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Dibromomethane	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
1,1-Dichloroethane	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
1,1-Dichloroethene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
1,2-Dichloropropane	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
1,3-Dichloropropane	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
2,2-Dichloropropane	ND	2.0		µg/L	1	10/8/2013 1:20:08 AM	R13891

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
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:** Trip Blank
Project: GBR Quarterly Sampling **Collection Date:**
Lab ID: 1310301-003 **Matrix:** TRIP BLANK **Received Date:** 10/5/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Hexachlorobutadiene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
2-Hexanone	ND	10		µg/L	1	10/8/2013 1:20:08 AM	R13891
Isopropylbenzene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
4-Isopropyltoluene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
4-Methyl-2-pentanone	ND	10		µg/L	1	10/8/2013 1:20:08 AM	R13891
Methylene Chloride	ND	3.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
n-Butylbenzene	ND	3.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
n-Propylbenzene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
sec-Butylbenzene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Styrene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
tert-Butylbenzene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
trans-1,2-DCE	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Trichlorofluoromethane	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Vinyl chloride	ND	1.0		µg/L	1	10/8/2013 1:20:08 AM	R13891
Xylenes, Total	ND	1.5		µg/L	1	10/8/2013 1:20:08 AM	R13891
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	1	10/8/2013 1:20:08 AM	R13891
Surr: 4-Bromofluorobenzene	99.5	70-130		%REC	1	10/8/2013 1:20:08 AM	R13891
Surr: Dibromofluoromethane	108	70-130		%REC	1	10/8/2013 1:20:08 AM	R13891
Surr: Toluene-d8	104	70-130		%REC	1	10/8/2013 1:20:08 AM	R13891

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
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#: **1310301**

25-Oct-13

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **R14004**	RunNo: **14004**
Prep Date:	Analysis Date: **10/11/2013**	SeqNo: **400439** 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								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **R14004**	RunNo: **14004**
Prep Date:	Analysis Date: **10/11/2013**	SeqNo: **400440** 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	0.53	0.020	0.5000	0	107	85	115			
Magnesium	50	1.0	50.00	0	101	85	115			
Manganese	0.50	0.0020	0.5000	0	99.7	85	115			
Potassium	49	1.0	50.00	0	98.9	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **R14049**	RunNo: **14049**
Prep Date:	Analysis Date: **10/14/2013**	SeqNo: **401963** Units: **mg/L**

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

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **R14049**	RunNo: **14049**
Prep Date:	Analysis Date: **10/14/2013**	SeqNo: **401964** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	51	1.0	50.00	0	103	85	115			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1310301**

25-Oct-13

Client: Western Refining Southwest, Inc.
Project: GBR Quarterly Sampling

Sample ID A5	SampType: CCV_5	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R13948	RunNo: 13948							
Prep Date:	Analysis Date: 10/8/2013	SeqNo: 398454	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.6	0.10	1.600	0	102	90	110			
Chloride	7.8	0.50	8.000	0	97.1	90	110			
Bromide	7.9	0.10	8.000	0	98.5	90	110			
Phosphorus, Orthophosphate (As P	7.9	0.50	8.000	0	98.3	90	110			

Sample ID MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R13948	RunNo: 13948							
Prep Date:	Analysis Date: 10/8/2013	SeqNo: 398456	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: R13948	RunNo: 13948							
Prep Date:	Analysis Date: 10/8/2013	SeqNo: 398457	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.54	0.10	0.5000	0	107	90	110			
Chloride	5.1	0.50	5.000	0	101	90	110			
Bromide	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 A6	SampType: CCV_6	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R13948	RunNo: 13948							
Prep Date:	Analysis Date: 10/8/2013	SeqNo: 398466	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.6	0.10	2.400	0	107	90	110			
Chloride	12	0.50	12.00	0	102	90	110			
Bromide	12	0.10	12.00	0	100	90	110			
Phosphorus, Orthophosphate (As P	12	0.50	12.00	0	103	90	110			

Sample ID A4	SampType: CCV_4	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R13948	RunNo: 13948							
Prep Date:	Analysis Date: 10/8/2013	SeqNo: 398478	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1310301

25-Oct-13

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID A4	SampType: CCV_4	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R13948	RunNo: 13948							
Prep Date:	Analysis Date: 10/8/2013	SeqNo: 398478	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.0	0.10	1.000	0	103	90	110			
Chloride	4.7	0.50	5.000	0	93.8	90	110			
Bromide	4.8	0.10	5.000	0	96.9	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.3	90	110			

Sample ID A5	SampType: CCV_5	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R13948	RunNo: 13948							
Prep Date:	Analysis Date: 10/8/2013	SeqNo: 398490	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.7	0.10	1.600	0	107	90	110			
Chloride	7.8	0.50	8.000	0	97.3	90	110			
Bromide	7.8	0.10	8.000	0	98.1	90	110			
Phosphorus, Orthophosphate (As P	7.9	0.50	8.000	0	98.8	90	110			

Sample ID A6	SampType: CCV_6	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R13948	RunNo: 13948							
Prep Date:	Analysis Date: 10/8/2013	SeqNo: 398502	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.7	0.10	2.400	0	111	90	110			S
Chloride	12	0.50	12.00	0	102	90	110			
Bromide	12	0.10	12.00	0	100	90	110			
Phosphorus, Orthophosphate (As P	12	0.50	12.00	0	103	90	110			

Sample ID MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R13948	RunNo: 13948							
Prep Date:	Analysis Date: 10/8/2013	SeqNo: 398512	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: R13948	RunNo: 13948							
Prep Date:	Analysis Date: 10/8/2013	SeqNo: 398513	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1310301**

25-Oct-13

Client: Western Refining Southwest, Inc.
Project: GBR Quarterly Sampling

Sample ID LCS	SampType: LCS	TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R13948	RunNo: 13948							
Prep Date:	Analysis Date: 10/8/2013	SeqNo: 398513	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	107	90	110			
Chloride	4.7	0.50	5.000	0	93.9	90	110			
Bromide	2.4	0.10	2.500	0	94.2	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.1	90	110			

Sample ID A4	SampType: CCV_4	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R13948	RunNo: 13948							
Prep Date:	Analysis Date: 10/8/2013	SeqNo: 398514	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.1	0.10	1.000	0	106	90	110			
Chloride	4.7	0.50	5.000	0	93.8	90	110			
Bromide	4.9	0.10	5.000	0	97.0	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.9	90	110			

Sample ID A5	SampType: CCV_5	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R13948	RunNo: 13948							
Prep Date:	Analysis Date: 10/8/2013	SeqNo: 398526	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.7	0.10	1.600	0	108	90	110			
Chloride	7.8	0.50	8.000	0	97.7	90	110			
Bromide	7.9	0.10	8.000	0	98.6	90	110			
Phosphorus, Orthophosphate (As P	8.0	0.50	8.000	0	101	90	110			

Sample ID A6	SampType: CCV_6	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R13948	RunNo: 13948							
Prep Date:	Analysis Date: 10/9/2013	SeqNo: 398538	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.7	0.10	2.400	0	111	90	110			S
Chloride	12	0.50	12.00	0	104	90	110			
Bromide	12	0.10	12.00	0	101	90	110			
Phosphorus, Orthophosphate (As P	12	0.50	12.00	0	104	90	110			

Sample ID A4	SampType: CCV_4	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R13948	RunNo: 13948							
Prep Date:	Analysis Date: 10/9/2013	SeqNo: 398550	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1310301**

25-Oct-13

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID A4	SampType: CCV_4	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R13948	RunNo: 13948							
Prep Date:	Analysis Date: 10/9/2013	SeqNo: 398550	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.1	0.10	1.000	0	106	90	110			
Chloride	4.8	0.50	5.000	0	95.2	90	110			
Bromide	4.8	0.10	5.000	0	95.8	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	95.0	90	110			

Sample ID A5	SampType: CCV_5	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R13948	RunNo: 13948							
Prep Date:	Analysis Date: 10/9/2013	SeqNo: 398560	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.8	0.10	1.600	0	110	90	110			
Chloride	7.8	0.50	8.000	0	97.7	90	110			
Bromide	7.9	0.10	8.000	0	98.5	90	110			
Phosphorus, Orthophosphate (As P	8.0	0.50	8.000	0	99.9	90	110			

Sample ID A5	SampType: CCV_5	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R13985	RunNo: 13985							
Prep Date:	Analysis Date: 10/9/2013	SeqNo: 399708	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	8.0	0.20	8.000	0	99.4	90	110			

Sample ID MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R13985	RunNo: 13985							
Prep Date:	Analysis Date: 10/9/2013	SeqNo: 399710	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: R13985	RunNo: 13985							
Prep Date:	Analysis Date: 10/9/2013	SeqNo: 399711	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	95.1	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1310301

25-Oct-13

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID A6	SampType: CCV_6	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R13985	RunNo: 13985							
Prep Date:	Analysis Date: 10/9/2013	SeqNo: 399723	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	12	0.20	12.00	0	104	90	110			

Sample ID A4	SampType: CCV_4	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R13985	RunNo: 13985							
Prep Date:	Analysis Date: 10/9/2013	SeqNo: 399735	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	4.8	0.20	5.000	0	95.5	90	110			

Sample ID A5	SampType: CCV_5	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R13985	RunNo: 13985							
Prep Date:	Analysis Date: 10/9/2013	SeqNo: 399747	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	8.0	0.20	8.000	0	99.6	90	110			

Sample ID A5	SampType: CCV_5	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R14005	RunNo: 14005							
Prep Date:	Analysis Date: 10/10/2013	SeqNo: 400478	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	20	0.50	20.00	0	99.0	90	110			

Sample ID MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R14005	RunNo: 14005							
Prep Date:	Analysis Date: 10/10/2013	SeqNo: 400480	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: R14005	RunNo: 14005							
Prep Date:	Analysis Date: 10/10/2013	SeqNo: 400481	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	10	0.50	10.00	0	105	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1310301

25-Oct-13

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID A6	SampType: CCV_6	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R14005	RunNo: 14005							
Prep Date:	Analysis Date: 10/10/2013	SeqNo: 400490	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	31	0.50	30.00	0	102	90	110			

Sample ID A4	SampType: CCV_4	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R14005	RunNo: 14005							
Prep Date:	Analysis Date: 10/10/2013	SeqNo: 400502	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	12	0.50	12.50	0	94.1	90	110			

Sample ID A5	SampType: CCV_5	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R14005	RunNo: 14005							
Prep Date:	Analysis Date: 10/10/2013	SeqNo: 400514	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	20	0.50	20.00	0	97.6	90	110			

Sample ID A6	SampType: CCV_6	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R14005	RunNo: 14005							
Prep Date:	Analysis Date: 10/10/2013	SeqNo: 400526	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	30	0.50	30.00	0	99.4	90	110			

Sample ID A4	SampType: CCV_4	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R14005	RunNo: 14005							
Prep Date:	Analysis Date: 10/10/2013	SeqNo: 400538	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	12	0.50	12.50	0	94.9	90	110			

Sample ID MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R14005	RunNo: 14005							
Prep Date:	Analysis Date: 10/10/2013	SeqNo: 400546	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	ND	0.50								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1310301

25-Oct-13

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID LCS	SampType: LCS	TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R14005	RunNo: 14005							
Prep Date:	Analysis Date: 10/10/2013	SeqNo: 400547	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.6	0.50	10.00	0	96.4	90	110			

Sample ID A5	SampType: CCV_5	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R14005	RunNo: 14005							
Prep Date:	Analysis Date: 10/10/2013	SeqNo: 400550	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	19	0.50	20.00	0	97.2	90	110			

Sample ID A6	SampType: CCV_6	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R14005	RunNo: 14005							
Prep Date:	Analysis Date: 10/11/2013	SeqNo: 400562	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	30	0.50	30.00	0	101	90	110			

Sample ID A4	SampType: CCV_4	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R14005	RunNo: 14005							
Prep Date:	Analysis Date: 10/11/2013	SeqNo: 400574	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	12	0.50	12.50	0	93.9	90	110			

Sample ID A5	SampType: CCV_5	TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R14005	RunNo: 14005							
Prep Date:	Analysis Date: 10/11/2013	SeqNo: 400586	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	20	0.50	20.00	0	98.1	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1310301

25-Oct-13

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID 5mL rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R13891	RunNo: 13891
Prep Date:	Analysis Date: 10/7/2013	SeqNo: 396844 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								

Qualifiers:

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- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1310301

25-Oct-13

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID 5mL rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R13891	RunNo: 13891						
Prep Date:	Analysis Date: 10/7/2013	SeqNo: 396844	Units: µg/L					

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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	9.7		10.00		97.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: R13891	RunNo: 13891						
Prep Date:	Analysis Date: 10/7/2013	SeqNo: 396846	Units: µg/L					

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	21	1.0	20.00	0	107	82.2	124			
Chlorobenzene	19	1.0	20.00	0	94.7	70	130			

Qualifiers:

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- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1310301

25-Oct-13

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R13891	RunNo: 13891							
Prep Date:	Analysis Date: 10/7/2013	SeqNo: 396846	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	24	1.0	20.00	0	119	83.5	155			
Trichloroethene (TCE)	19	1.0	20.00	0	96.3	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.6	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID 1310301-001a ms	SampType: MS	TestCode: EPA Method 8260B: VOLATILES							
Client ID: Influent	Batch ID: R13891	RunNo: 13891							
Prep Date:	Analysis Date: 10/7/2013	SeqNo: 396865	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	67.9	137			
Toluene	21	1.0	20.00	0	107	77	127			
Chlorobenzene	20	1.0	20.00	0	100	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	114	66.5	131			
Trichloroethene (TCE)	19	1.0	20.00	0	94.4	66.3	134			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.4	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.9	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID 1310301-001a msd	SampType: MSD	TestCode: EPA Method 8260B: VOLATILES							
Client ID: Influent	Batch ID: R13891	RunNo: 13891							
Prep Date:	Analysis Date: 10/8/2013	SeqNo: 396866	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	67.9	137	0.381	20	
Toluene	20	1.0	20.00	0	101	77	127	5.79	20	
Chlorobenzene	18	1.0	20.00	0	92.4	70	130	8.35	20	
1,1-Dichloroethene	23	1.0	20.00	0	114	66.5	131	0.245	20	
Trichloroethene (TCE)	19	1.0	20.00	0	94.1	66.3	134	0.317	20	
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130	0	0	
Surr: Dibromofluoromethane	9.9		10.00		99.4	70	130	0	0	
Surr: Toluene-d8	9.7		10.00		97.1	70	130	0	0	

Qualifiers:

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- J Analyte detected below quantitation limits
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- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1310301

25-Oct-13

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID mb-1	SampType: mblk	TestCode: SM2320B: Alkalinity							
Client ID: PBW	Batch ID: R13890	RunNo: 13890							
Prep Date:	Analysis Date: 10/7/2013	SeqNo: 396772	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: R13890	RunNo: 13890							
Prep Date:	Analysis Date: 10/7/2013	SeqNo: 396773	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	90	110			

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- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1310301**

25-Oct-13

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID	MB-9728	SampType:	MBLK		TestCode:	SM2540C MOD: Total Dissolved Solids				
Client ID:	PBW	Batch ID:	9728		RunNo:	13982				
Prep Date:	10/9/2013	Analysis Date:	10/10/2013		SeqNo:	399517	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-9728	SampType:	LCS		TestCode:	SM2540C MOD: Total Dissolved Solids				
Client ID:	LCSW	Batch ID:	9728		RunNo:	13982				
Prep Date:	10/9/2013	Analysis Date:	10/10/2013		SeqNo:	399518	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1050	20.0	1000	0	105	80	120			

Sample ID	1310301-002BMS	SampType:	MS		TestCode:	SM2540C MOD: Total Dissolved Solids				
Client ID:	Effluent	Batch ID:	9728		RunNo:	13982				
Prep Date:	10/9/2013	Analysis Date:	10/10/2013		SeqNo:	399525	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	3790	20.0	1000	2731	105	80	120			

Sample ID	1310301-002BMSD	SampType:	MSD		TestCode:	SM2540C MOD: Total Dissolved Solids				
Client ID:	Effluent	Batch ID:	9728		RunNo:	13982				
Prep Date:	10/9/2013	Analysis Date:	10/10/2013		SeqNo:	399526	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	3780	20.0	1000	2731	105	80	120	0.185	5	

Qualifiers:

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- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
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- 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 Southw** Work Order Number: **1310301** RcptNo: **1**

Received by/date: AF 10/05/13

Logged By: **Michelle Garcia** 10/5/2013 10:00:00 AM Michelle Garcia

Completed By: **Michelle Garcia** 10/7/2013 9:05:46 AM Michelle Garcia

Reviewed By: 10/07/13

Chain of Custody

1. Custody seals intact on sample bottles?	Yes	No	Not Present ✔
2. Is Chain of Custody complete?	Yes ✔	No	Not Present
3. How was the sample delivered?			

Log In

4. Was an attempt made to cool the samples?	Yes ✔	No	NA
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ✔	No	NA
6. Sample(s) in proper container(s)?	Yes ✔	No	
7. Sufficient sample volume for indicated test(s)?	Yes ✔	No	
8. Are samples (except VOA and ONG) properly preserved?	Yes ✔	No	
9. Was preservative added to bottles?	Yes	No ✔	NA
10. VOA vials have zero headspace?	Yes ✔	No	No VOA Vials
11. Were any sample containers received broken?	Yes	No ✔	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ✔	No	# of preserved bottles checked for pH: 2 (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ✔	No	Adjusted? NO
14. Is it clear what analyses were requested?	Yes ✔	No	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ✔	No	Checked by:

Special Handling (if applicable)

16. 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:

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.0	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#: Kelly.robinson@wnr.com
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: GBR Quarterly Sampling
Project #:
Project Manager: Ashley Ager
Sampler:
On Ice: Yes
Sample Temperature:

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.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	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				Air Bubbles (Y or N)
10-4-13	1140	AQ	Influent	6	Various	-001										X		X				
10-4-13	1134	AQ	Effluent	6	Various	-002										X		X				
10-4-13	—	AQ	Trip Blank	2/VOA	HCl	-003										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
10/4/13	1455	Morgan Wagoner	Christine Walters	10/4/13	1455
10/4/13	1625	Christine Walters		10/5/13	10:00

Remarks:
Please Copy 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.

— VOCs 8260

General Chemistry:

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