

GW – 040

2015 AGWMR

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March 15, 2016

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

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**RE: 2015 Annual Report - former Giant Bloomfield Refinery
OCD Discharge Permit GW-040**

Dear Mr. Von Gonten:

Please find enclosed the 2015 Annual Report for the former Giant Bloomfield Refinery located in the NW quarter of Section 27 and the SW quarter of Section 22, Township 29 N, Range 12W in San Juan County, New Mexico. The Annual Report contains a summary of groundwater recovery operations and routine groundwater monitoring conducted in 2015 pursuant to Discharge Permit GW-040.

The groundwater recovery system has been in operation for approximately 27 years and has significantly improved groundwater conditions over that time. As noted in previous Annual Monitoring reports, the influent to the treatment system has not detected the presence of organic contaminants in recent years. And, although Western implemented more aggressive measures to capture phase-separated hydrocarbon (PSH) at the wells using oil absorbent socks in 2011, the total PSH recovery volume declined to less than eight gallons in 2014 and less than three gallons in the first five months of 2015. Because of these observed conditions, in 2015 Western implemented more intensive monitoring of the groundwater conditions to evaluate the current effectiveness of the recovery system. To facilitate the evaluation, the recovery system was shut off in August 2015. The Annual Report documents the results of the enhanced monitoring activities and the resulting evaluation of the current effectiveness of the recovery system.

Preliminary observations indicate no measureable changes in groundwater conditions after cessation of recovery operations. Based on the favorable observations in 2015, Western intends to continue the enhanced monitoring efforts in 2016 to further evaluate the effects of the cessation of active recovery operations. The results of the enhanced monitoring efforts and any resulting recommendations for future changes to the remedial measures conducted at the site will be presented in the 2016 Annual Report.

If you should have any questions or require additional information, please do not hesitate to contact Randy Schmaltz at 505-632-4171 or myself at your convenience.

Sincerely,



Kelly Robinson
Environmental Manager - Logistics
Western Refining

cc: Brandon Powell, NM OCD Aztec District Office
Allen Hains, Western Refining El Paso

2015 ANNUAL REPORT

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

MARCH 2016



**WESTERN REFINING SOUTHWEST, INC.
Bloomfield, New Mexico**

2015 ANNUAL REPORT

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

MARCH 2016

Prepared for:

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EXECUTIVE SUMMARY

This report summarizes work completed from January 2015 through December 2015 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. Western Refining Southwest, Inc. (Western) utilized a groundwater recovery and remediation system consisting of groundwater recovery wells, a carbon filtration unit, and a treated water infiltration trench. The remediation system is permitted under Discharge Permit GW-040 by the New Mexico Oil Conservation Division (NMOCD).

Operation and maintenance activities were conducted on the remediation system from January 1, 2015 through August 12, 2015. The total volume of groundwater recovered and treated was approximately 735,176 gallons. Annual compliance monitoring and sampling included measuring depth to groundwater in all monitoring wells and recovery wells quarterly and recovering phase-separated hydrocarbons (PSH) in monitoring wells weekly with oil-absorbent socks when PSH was detected.

The remediation system influent and effluent was sampled in January, April, and July of 2015. Annual groundwater monitoring was conducted in August of 2015. Groundwater samples were analyzed for the same parameters in wells specified by Discharge Permit GW-040. Laboratory analytical results indicated volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAHs) were not detected in exceedance of the New Mexico Water Quality Control Commission (NMWQCC) standards in influent, effluent, or groundwater samples collected from monitoring and recovery wells.

The groundwater recovery system has been in operation for approximately 27 years and has significantly improved groundwater conditions over that time. As noted in previous annual reports, the influent to the treatment system has not detected the presence of VOCs in 13 years. Although Western implemented more aggressive measures to capture PSH at the wells using manual recovery and oil absorbent socks, the total PSH recovery volume has declined to less than 8 gallons in 2014 and less than 3 gallons in the first 5 months of 2015. Because of these observed conditions, in 2015 Western implemented more intensive monitoring of the groundwater conditions to evaluate background water quality and the current effectiveness of the recovery system. To facilitate the evaluation, compliance samples were analyzed for additional parameters and additional groundwater samples were collected. The recovery system was shut off in August of 2015 and Western monitored groundwater elevations and PSH accumulation for the 5-month period. Preliminary observations indicate no measureable change in groundwater conditions after cessation of recovery operations. Based on the favorable observations in 2015, Western intends to continue the enhanced groundwater monitoring in 2016 to further evaluate the effects of the cessation of active recovery operations. The results of the enhanced monitoring efforts and any resulting recommendations for future changes to the remedial measures conducted at the site will be presented under separate cover.

1.0 INTRODUCTION

The 2015 Annual Report summarizes groundwater monitoring and remediation activities completed between January and December 2015 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, 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 was identified and investigated as part of the site closure requirements prescribed by the New Mexico Oil Conservation Division (NMOCD) in 1986. 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 firefighting drill area east and upgradient of the Site that 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 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 (BLM) and the United States Geological Survey (USGS), 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 (PCE), 1,1,1-trichloroethane, and trichloroethene.

Beginning in 1988, Giant installed a groundwater recovery, treatment, and disposal system in stages to restrict migration of contaminants and to remediate groundwater impacts caused by Giant's former 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 installed 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. Western Refining Southwest, Inc. (Western) Western acquired the Site from Giant in June 2007.

As groundwater quality improved over time, the remediation system was gradually simplified including eliminating the air stripper and storage of recovered water in aboveground storage tanks. Following initial contaminant reduction, the groundwater remediation system operated in an operation and maintenance mode. Concentrations of contaminants within the remediation influent and effluent systems were below laboratory detection limits for 13 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 2014. In 2015, the system operated under NMOCD Discharge Permit GW-040 and consisted of 9 active groundwater recovery wells that pump groundwater directly into the carbon filtration tanks. The water then passed through the treated water infiltration trench.

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-Tertiary 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 of the Site. 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 potential 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. In 2015 additional monitoring was conducted to further evaluate the current effectiveness of the remediation system. A summary of field activities, results, conclusions, and recommendations as related to annual compliance sampling are presented in the subsequent sections of this report.

2.0 METHODOLOGY

2.1 ANNUAL COMPLIANCE

Annual compliance consists of operating the remediation system and monitoring and sampling groundwater according to the requirements of the existing discharge permit.

2.1.1 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 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 representing the groundwater recovery, treatment, and disposal system at the Site.

2.1.2 OPERATIONS AND MAINTENANCE

Weekly inspections were conducted from January 1, 2015 through August 12, 2015, to ensure normal operation of the remediation system. Weekly observations were recorded in a bound field logbook 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 2015.

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

2.1.3 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 June and replaced when they were greater than 50 percent full. Volumes of recovered PSH were estimated based on the percent saturation observed in the socks and were recorded in a field logbook.

2.1.4 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 AlconoxTM 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 with the exception of the October 2015 quarterly event during which the remediation system was shut down for site assessment.

Annual groundwater samples were collected in August 2015 from groundwater monitoring wells and recovery wells within and south of the Site as specified in the Discharge Permit GW-040 (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, electrical conductivity (EC), and temperature were monitored. Monitoring wells were purged until these properties stabilized or the well was bailed dry, indicating the purge water was representative of aquifer conditions. Stabilization was defined as three consecutive stable readings for each water property (plus or minus ($\pm$) 0.4 units for pH, ± 10 percent for EC, and ± 2 degrees Celsius for temperature). Once each monitoring well was properly purged, groundwater samples were collected in bottles or vials and shipped to Hall Environmental Analysis Laboratory (HEAL) of Albuquerque, New Mexico. Groundwater sampling from recovery wells followed the same procedures as monitoring wells, except pumps installed in the recovery wells were used to purge the appropriate volume of groundwater from each recovery well. All groundwater samples were analyzed for VOCs according to EPA Method 8260B. The groundwater sample collected from GBR-24D was also analyzed for polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270C.

The influent and effluent water samples were collected quarterly and analyzed for VOCs. 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 under strict chain-of-custody protocol to Hall Environmental Analysis Laboratory (HEAL) of Albuquerque, New Mexico, within designated holding times.

2.2 ENHANCED MONITORING

An expanded analysis of water quality was implemented for influent, effluent, and annual compliance monitoring well samples in an effort to further understand background or naturally occurring conditions as well as influence from the historical upgradient landfill release.

As specified in Table 1, groundwater samples collected from the influent, effluent, and monitoring wells GRW-3, GRW-6, GBR-17, GBR-24D, GBR-30, GBR-31, GBR-32, GBR-48, GBR-49, GBR-50, GBR-51, and GBR-52. Samples were analyzed for general water chemistry (GWC) parameters including pH by EPA Standard Method 4500, EC by EPA Method 2510B, TDS by EPA Standard Method 2540C, alkalinity by EPA Standard Method 2320B, hardness by EPA Standard Method 2340B, anions (bromide, chloride, sulfate, fluoride, nitrite, nitrate, and phosphorus) by EPA Method 300.0, cations (calcium, iron, magnesium, potassium, and sodium) by EPA Method 200.7, and PAHs by EPA Method 8070 (for influent and effluent samples only).

Additional analysis included groundwater samples collected from the system effluent and monitoring wells GBR-32, GBR-48, GBR-49 and, GBR-50 were analyzed for total metals according to EPA Method 200.7 and 200.8, and mercury according to EPA Method 245.1. PAHs by EPA Method 8270C were analyzed in the system effluent, GRW-3, GRW-6, GBR-17, GBR-30, and GBR-31.

2.3 REMEDIATION SYSTEM ASSESSMENT

The groundwater recovery system has been in operation for approximately 27 years and has significantly improved groundwater conditions over that time. As noted in previous annual reports, the influent to the treatment system has not detected the presence of VOCs in 13 years. Because Western implemented more aggressive measures to capture PSH using manual recovery and oil absorbent socks, the total PSH recovery volume has declined to less than eight gallons in 2014 and less than three gallons in the first five months of 2015. Based on these conditions, in 2015 Western implemented more intensive monitoring of the groundwater conditions to evaluate the current effectiveness of the recovery system. To facilitate the evaluation, groundwater samples were collected from additional monitoring wells within the facility boundary and south of Highway 64 and the remediation system was shut off in August 2015. PSH levels were collected weekly for 3 months and monthly for 2 months during the 5-month shutdown period in 2015. This section documents the results of the enhanced monitoring activities and the resulting evaluation of the remediation system.

2.3.1 REMOVAL OF OIL-ABSORBENT SOCKS

All oil-absorbent socks were removed on June 5, 2015, at which time active product recovery ceased in order to evaluate product accumulation in monitoring and recovery wells. PSH data continued to be collected between August and December 2015 weekly for 10 weeks, and monthly thereafter in selected wells.

2.3.2 GROUNDWATER SAMPLING

In August 2015, additional groundwater samples were collected from select wells in an attempt to establish a reference for groundwater conditions when the remediation system is operational. Historical documentation was reviewed to determine which wells had the most potential to contain impacted groundwater or to exhibit a change in water quality should the remediation system be inactivated. Monitoring wells GBR-7, GBR-8, GBR-11, GBR-20, GBR-21D, GBR-22, GBR-25, GBR-26, GBR-34, GBR-41, SHS-2, SHS-8, and SHS-9 (Figure 7) were selected due to radius of influence of actively pumping recovery wells and/or historical documentation of PSH measured in the wells. Samples from these wells were collected and analyzed for chloride by EPA Method 300.0, BTEX by EPA Method 8260B, TPH-GRO by EPA Method 8015D, and TPH-DRO by EPA Method 8015M/D (Table 1). Ultimately, monitoring well GBR-7 was not sampled due the presence of PSH and monitoring well GBR-41 was not sampled due to the presence of PSH and insufficient water volume. Results of this sampling will be used as a starting point for future site assessment.

The collection of groundwater samples included measurements of depth to groundwater with a Keck oil-water interface probe. The interface probe was decontaminated with AlconoxTM soap and rinsed with de-ionized water before each measurement. 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 was bailed dry, indicating the purge water was representative of aquifer conditions. Groundwater samples were collected in appropriate pre-cleaned and pre-preserved (when applicable) sample bottles or glass vials and immediately placed on ice.

The samples were shipped on ice under strict chain-of-custody protocol to HEAL within designated holding times. Samples were labeled with the date and time of collection, sample designation, project name, collector's name, and parameters to be analyzed. During the site assessment sampling event, dissolved oxygen (DO), oxygen reduction potential (ORP), EC, and visual observations such as water hue, sheen, odor, and VOC headspace were recorded prior to purging groundwater.

2.3.3 OBSERVATION AND MONITORING

On August 12, 2015, the remediation system was shut down following the remediation system assessment sampling event to allow for groundwater to equilibrate. The groundwater pumps were removed from active recovery wells for cleaning and proper storage, and the system pipelines were blown down. Monitoring activities conducted for selected wells included measuring depth to water, depth to product, DO, ORP, EC, headspace, and visual observations in monitoring wells and recovery wells within the facility boundary and within the easement located south of Highway 64 weekly for 10 weeks. This did not include upgradient monitoring wells, cross-gradient monitoring and recovery wells, and monitoring and recovery wells located south of monitoring well SHS-19. Once weekly monitoring indicated no significant change in groundwater conditions, monitoring was conducted monthly for 2 additional months.

3.0 RESULTS

3.1 ANNUAL COMPLIANCE

Maintenance conducted on the remediation system, volume of water treated by the remediation system, and results of compliance groundwater monitoring are presented in the following sections.

3.1.1 OPERATIONS AND MAINTENANCE

General system maintenance was performed on the recovery system in 2015. Repairs and observations included:

- GRW-4: replaced the pump and conducted maintenance on the pump;
- GRW-5: conducted maintenance on the pump;
- GRW-6: replaced flow meter twice, conducted maintenance on the pump twice, and replaced impellers;
- GRW-10: conducted maintenance on the pump twice and repaired surface piping; and
- GRW-11: replaced the filter gasket.

A total of 735,176 gallons of groundwater were recovered and treated by carbon filtration in 2015 as recorded by flow meters on the individual recovery wells. All recovery wells pumped smaller volumes of groundwater in 2015 as compared to 2014. These decreases can be attributed to the shutdown of the remediation system in August of 2015. Table 2 presents the total volume of groundwater pumped from each recovery well during 2014 and 2015.

3.1.2 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 8 through 11. Groundwater flow direction was consistently toward the southwest throughout the year. Drawdown around recovery wells was evident during the three quarters the system was operating.

3.1.3 PSH RECOVERY

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, and GBR-34 and in product recovery well GBR-34A (Figure 12) until June 5, 2015, at which time oil-absorbent socks were removed to observe static conditions. Annual volumes of PSH recovered from 2009 through 2015 are presented in Table 4.

PSH removal via oil-absorbent socks and manual bailing recovered the following:

- Approximately 0.90 combined gallons in GBR-23, GBR-25, and GBR-26 in the Northern Area;
- Approximately 0.98 combined gallons in GBR-34, GBR-34A, and GBR-22 in the Central Area; and
- Approximately 0.95 combined gallons in GBR-7, GBR-8, GBR-11, GBR-20, and GBR-41 in the Southern Area.

No PSH was detected in groundwater monitoring wells south of Highway 64.

3.1.4 GROUNDWATER SAMPLING

Laboratory analytical results from groundwater compliance sampling are presented in Table 5 and the complete laboratory analytical reports are presented 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 2015 as compared to New Mexico Water Quality Control Commission (NMWQCC) standards are summarized below:

- No VOCs were detected in influent or effluent samples;
- Detected concentrations of VOCs in the annula groundwater samples were below applicable NMWQCC standards; and
- PAHs were not detected above the respective laboratory detection limit.

3.2 ENHANCED MONITORING

Additional groundwater analyses were conducted in 2015 to further evaluate background groundwater conditions at the Site. Analyses included PAHs, GWC, and metals. A summary of the analytical results are provided in Table 6 and the complete laboratory analytical reports are included in Appendix A.

3.3 REMEDIATION SYSTEM ASSESSMENT

Results of the monitoring and sampling conducted to evaluate equilibrium groundwater conditions include analytical results, water levels, and PSH levels. These data will be used to further evaluate the influence of the remediation system during 2016 and presented with additional recommendations under separate cover.

3.3.1 REMOVAL OF OIL-ABSORBENT SOCKS

Following removal of oil-absorbent socks from all monitoring wells and shut-down of the remediation system, measurable PSH was detected in monitoring wells GBR-22 and GBR-25 at

thicknesses of 0.03 inches and 0.02 inches, respectively, on August 20, 2015, and in monitoring well GBR-7 at a thickness of 0.02 inches on December 30, 2015. Measurable PSH was detected in monitoring well GBR-41 throughout the remediation system assessment period and ranged in thickness between 0.05 inches and 0.24 inches. PSH measured in wells while the remediation system was shut down are summarized in Table 7.

3.3.2 GROUNDWATER SAMPLING

Additional groundwater samples were collected from selective monitoring wells to further assess the effectiveness of the remediation system. A summary of the analytical results are provided in Table 8. A copy of the analytical reports is provided in Appendix A.

3.3.3 OBSERVATION AND MONITORING

Without the hydraulic influence of the recovery wells, natural hydrology was restored in less than a 2-week time period as a paleo channel identified in previous studies became apparent. The paleo channel is evident in the groundwater potentiometric surface map from October 2015 (Figure 11). The groundwater gradient at the Site remained unchanged despite the shutdown of the remediation system as the average gradient from July and October of 2015 was 0.019 and 0.020, respectively. The general groundwater flow direction also remained south-southwest in all monitoring periods. Water quality observations of DO, ORP, EC, headspace and visual observations are presented in Table 7.

4.0 CONCLUSIONS

Western maintained the groundwater remediation system at the Site from January 1, 2015, to August 12, 2015. Nine recovery wells recovered a total of 735,176 gallons of groundwater which was directed through the carbon filtration system and discharged through the infiltration trench. The volume of groundwater recovered decreased from 2014 as a result of the shutdown of the remediation system on August 12, 2015. The influent and effluent samples results contained no VOCs, indicating there was no water exceeding NMWQCC standards for VOC circulating through the remediation system.

Western continued to recover residual PSH from original source areas utilizing oil-absorbent socks until June 5, 2015. Measurable PSH near the previously identified source areas was not detected in any monitoring or recovery wells while oil-absorbent socks were installed, with the exception of GBR-41 which contained PSH in April. Although Western continues to implement aggressive measures to capture PSH at wells using oil absorbent socks, less than three gallons of PSH was recovered in the first five months of 2015 suggesting less PSH is accumulating in the on-site monitoring wells.

The groundwater recovery system has been in operation for approximately 27 years and has significantly improved groundwater conditions over that time. As noted in previous Annual Monitoring Reports, the influent to the treatment system has not detected the presents of organics contaminants in recent years. Because of the field observed conditions, Western implemented more intensive monitoring of groundwater conditions to evaluate the current effectiveness of the recovery system. To facilitate the evaluation, the pump and treat system was shut down in August 2015. Following the shutdown, monitoring of water levels and presence of PSH suggest the remediation system is not actively affecting contaminants of concern at the Site. Conclusions from the preliminary assessment observations of static conditions at the Site include:

- There was no change in PSH accumulation once equilibrium conditions were achieved:
 - Although measurable PSH was observed in monitoring wells GBR-7, GBR-22, and GBR-25, these wells have historically contained PSH. These wells contained oil-absorbent socks with recoverable PSH in them during 2015, which likely limited accumulation of measurable thickness;
 - The PSH thicknesses observed in monitoring well GBR-41 is not unexpected due to the wells location within a previously identified source area (Figure 2). PSH observed in GBR-41 was observed at elevations below the screened interval indicating that PSH thickness was not representative of PSH thickness on the groundwater table but instead represented PSH that had accumulated in the well and remained trapped below the screened interval. PSH was observed in GBR-41 prior to the remediation system shutdown (Table 3); and
 - There was no PSH migration into wells where PSH had not previously been observed.

- Groundwater impacted by hydrocarbons is characterized by presence of PSH and little to no dissolved-phase hydrocarbons regulated by the NMWQCC.
- Field observations and laboratory analytical results indicate impacted areas are consistent with previously identified source areas.

Preliminary observations indicate no measureable changes in groundwater conditions after the cessation of recovery operations. Based on the favorable observations in 2015, Western intends to continue the enhanced monitoring efforts in 2016 to further evaluate the effects of the cessation of active recovery operations.

5.0 FUTURE WORK

Based on the favorable observations in 2015, Western intends to continue the enhanced groundwater monitoring and site assessment efforts in 2016 to further evaluate the effects of the cessation of active recovery operations. Western will continue to collect the annual compliance samples required pursuant to the facility Discharge Permit GW-040, with the exception that influence and effluent system samples will not be collected when the recovery system is not operational. The results of the additional monitoring and any resulting recommendations for future changes to the remedial measurements conducted at the Site will be presented in the 2016 Annual Report.

6.0 REFERENCES

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FIGURES



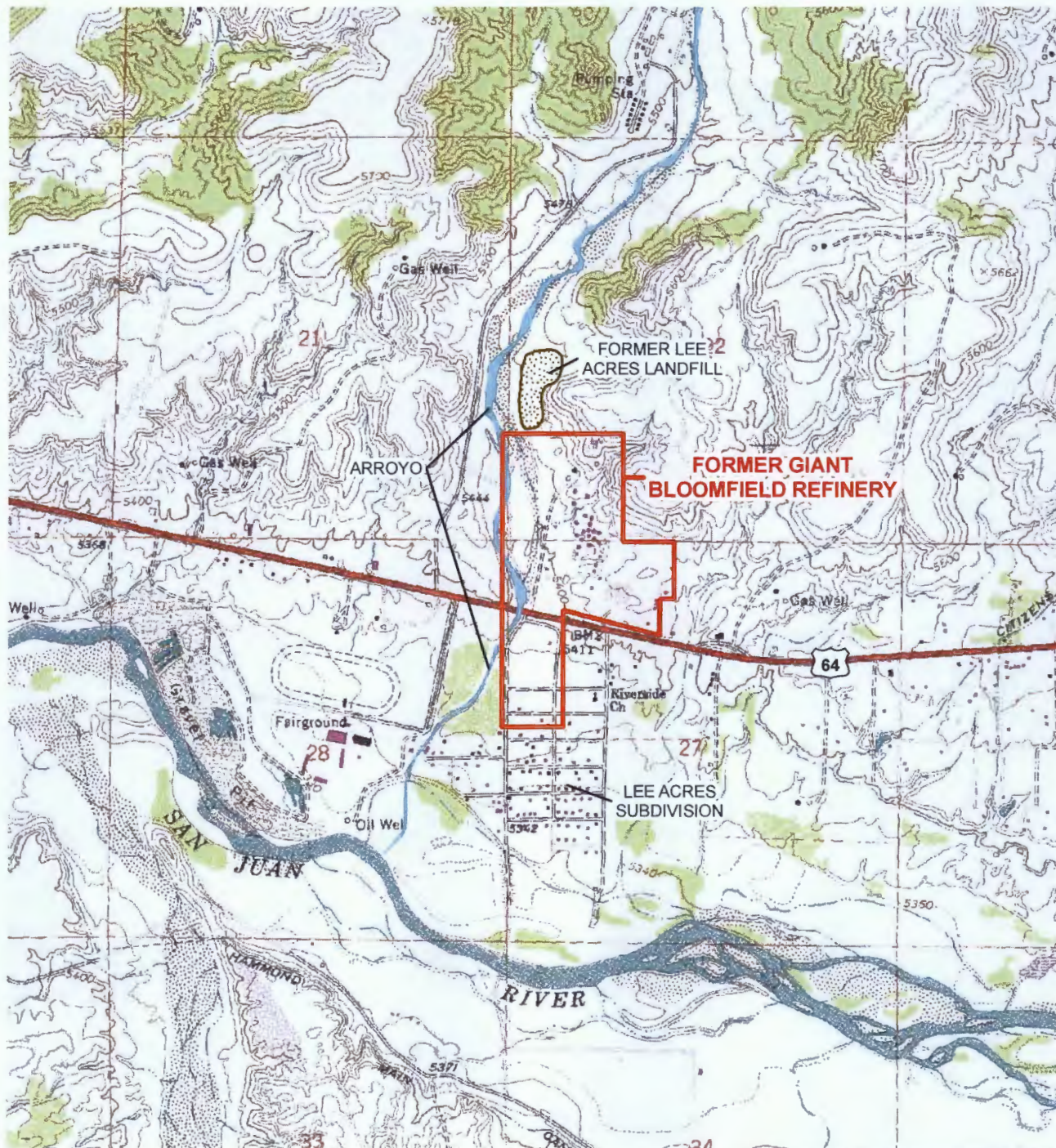


IMAGE COURTESY OF USDA/NRCS, VARIOUS DATES

LEGEND

- SITE LOCATION
- ARROYO
- FORMER LEE ACRES LANDFILL

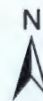
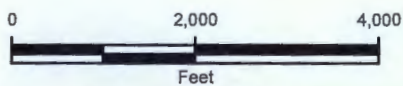
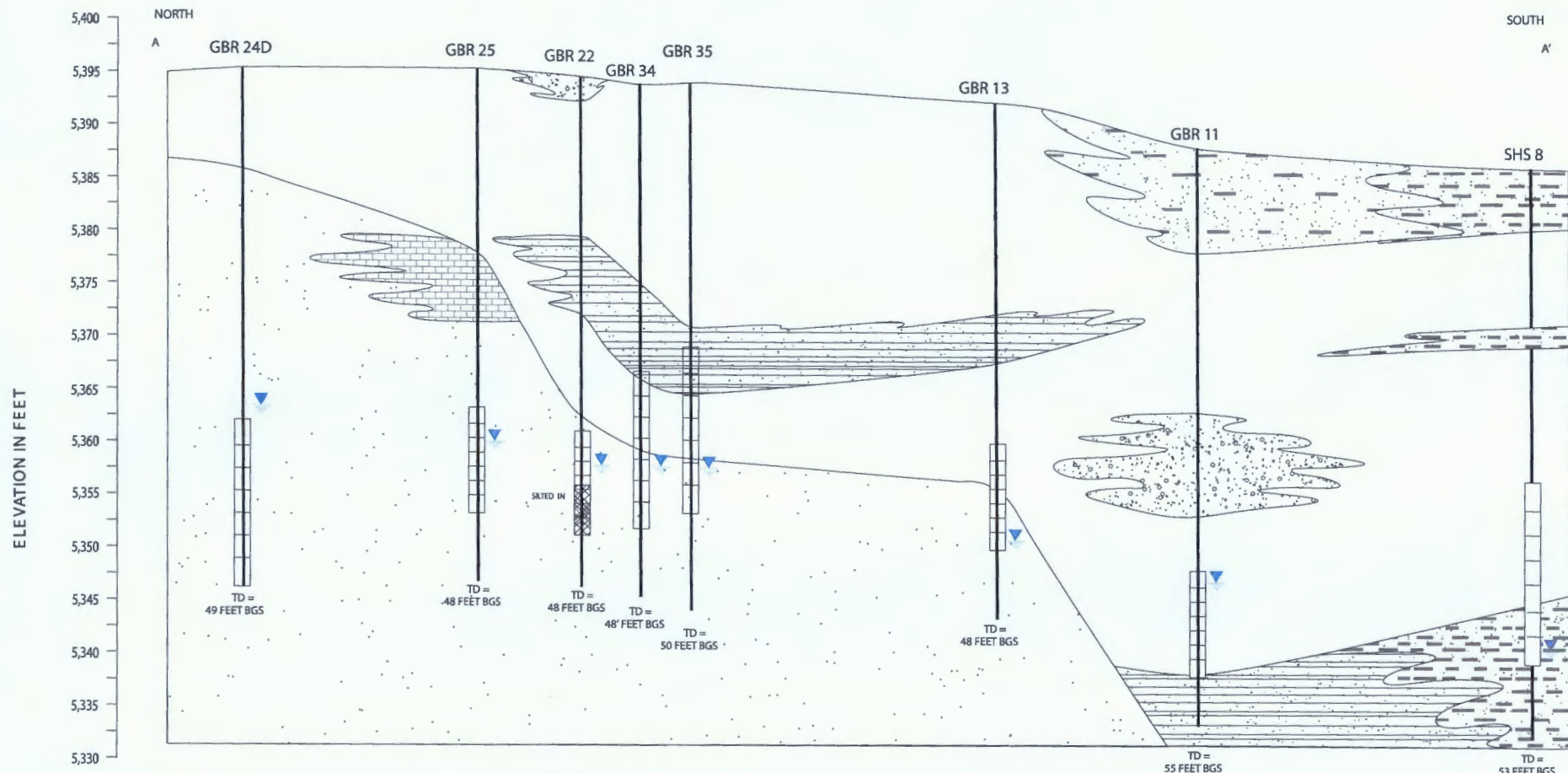


FIGURE 1
SITE LOCATION MAP
 FORMER GIANT BLOOMFIELD REFINERY
 SWSW SEC 22 & WNW SEC 27 T29N R12W
 SAN JUAN COUNTY, NEW MEXICO
 WESTERN REFINING SOUTHWEST, INC.







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
- GROUNDWATER ELEVATION FROM JANUARY 2015

HORIZONTAL SCALE
1" = 10 FEET

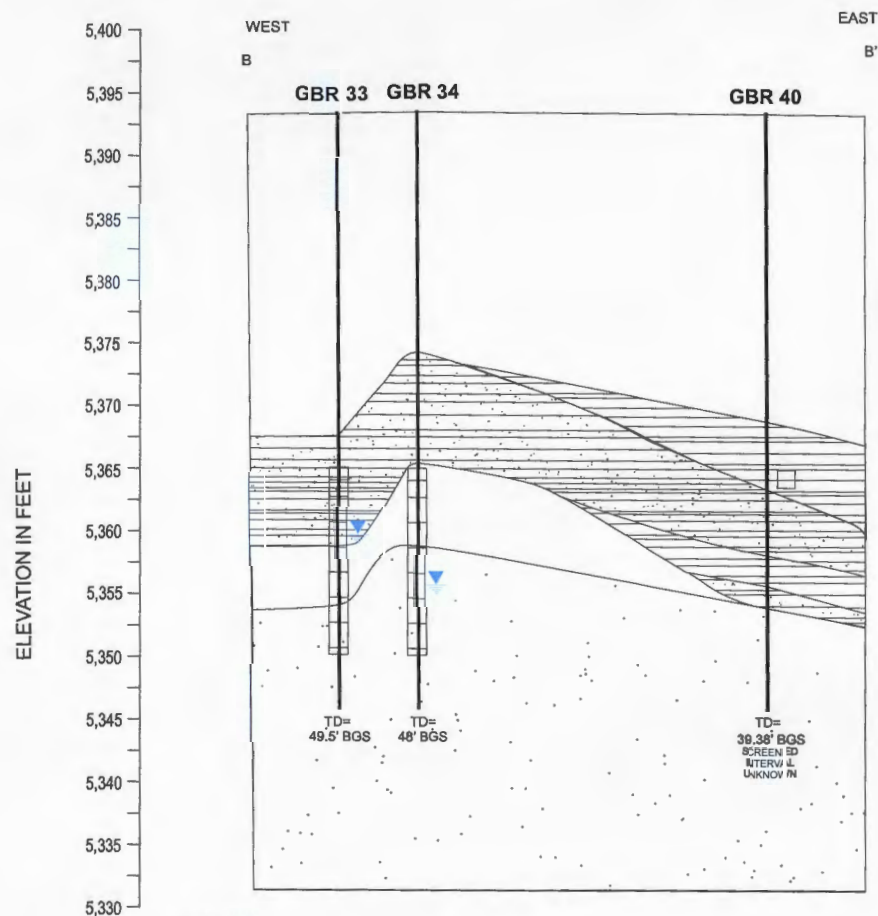
VERTICAL SCALE
1" = 90 FEET

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



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LEGEND

- CLAYEY SAND
- CLAY
- SAND
- NACIMIENTO SANDSTONE
- DRY
- BOREHOLE
- SCREENED INTERVAL
- BGS BELOW GROUND SURFACE
- TD TOTAL DEPTH IN FEET

GROUNDWATER ELEVATION JANUARY 2015

HORIZONTAL SCALE
1" = 10 FEET

VERTICAL SCALE
1" = 90 FEET

FIGURE 4
CROSS SECTION B-B'
FORMER GIANT BLOOMFIELD REFINERY
SW 1/4 SEC 22 & WNW 1/4 SEC 21 T29N R12W
WESTERN REFINING SOUTH WEST, INC.



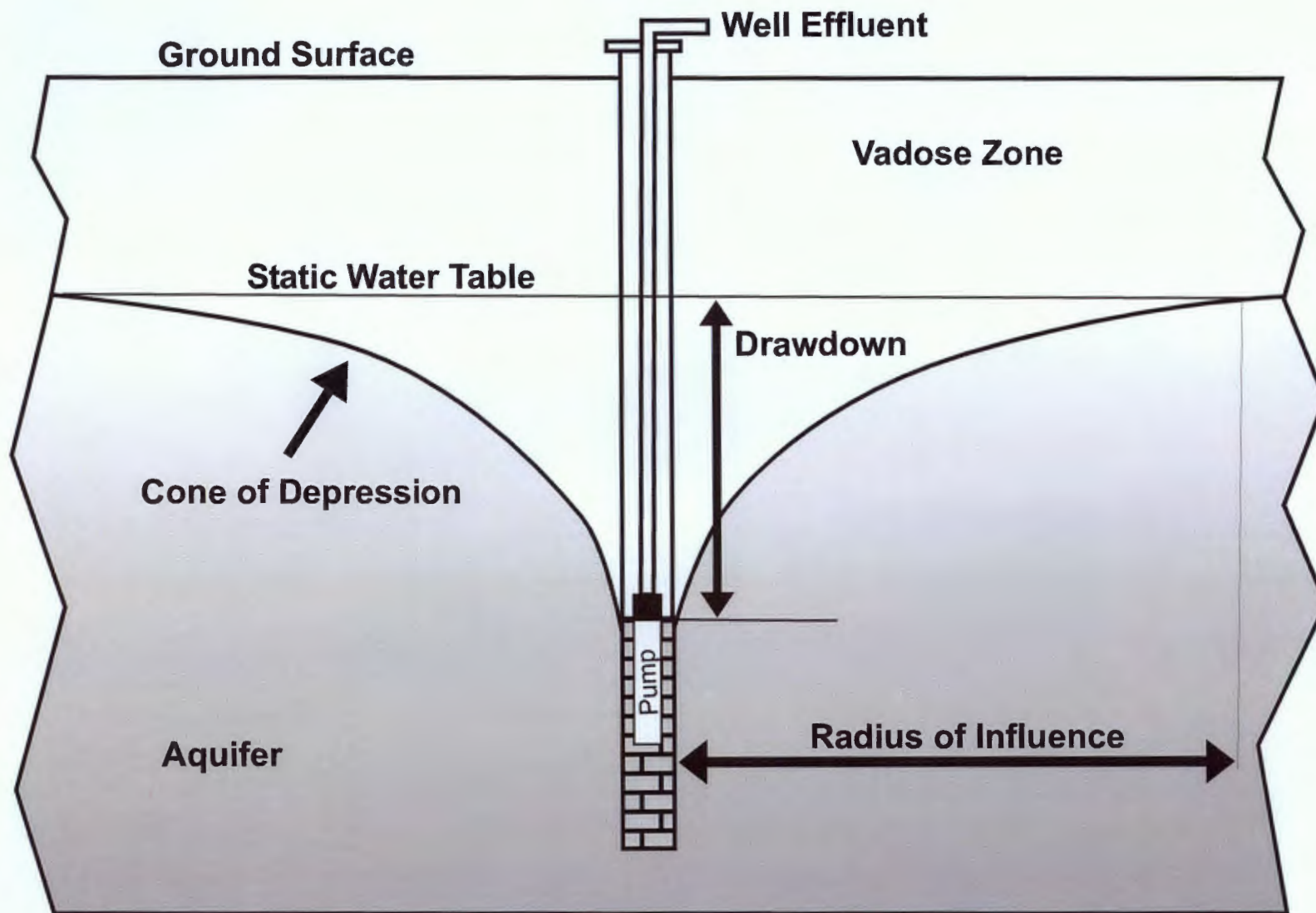


FIGURE 5
HYDRAULIC BARRIER
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
WESTERN REFINING SOUTHWEST, INC.



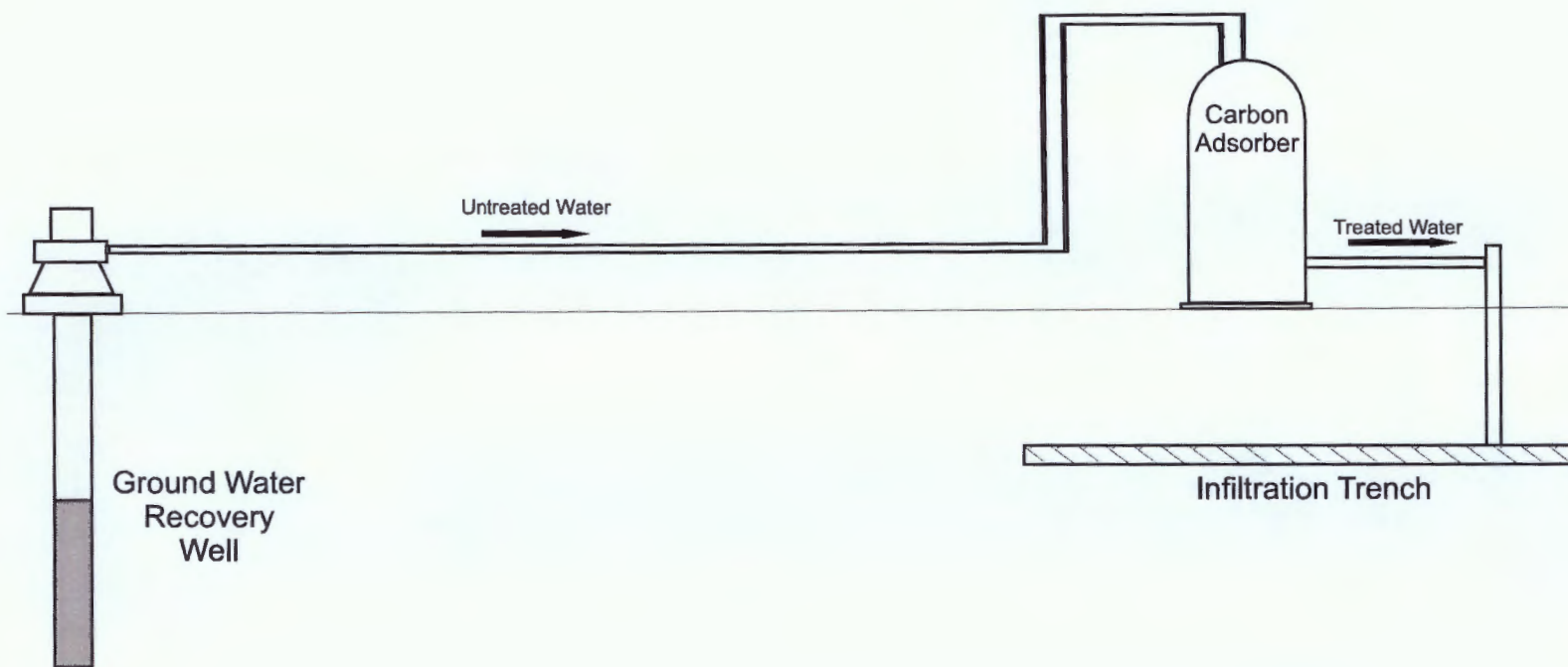
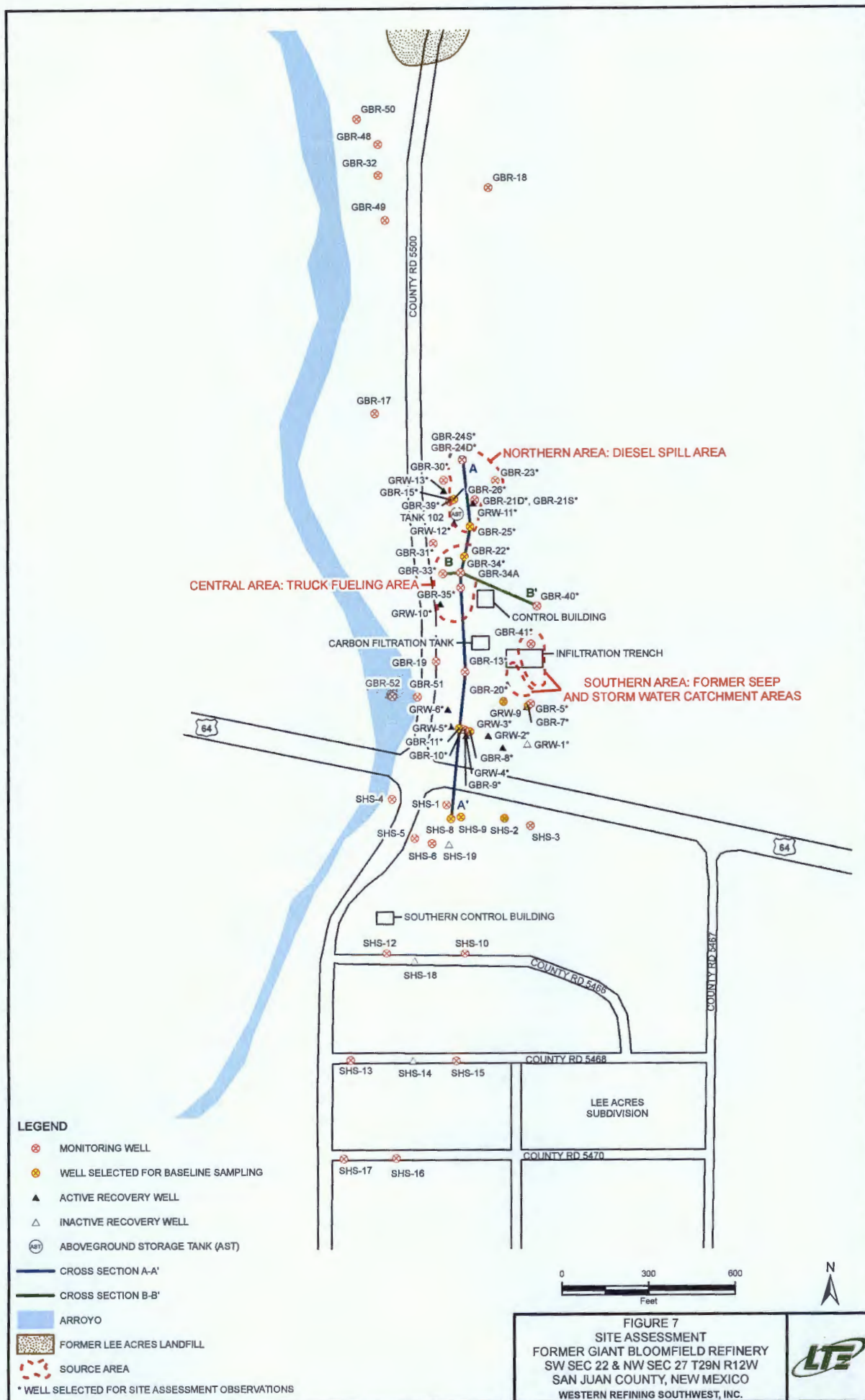
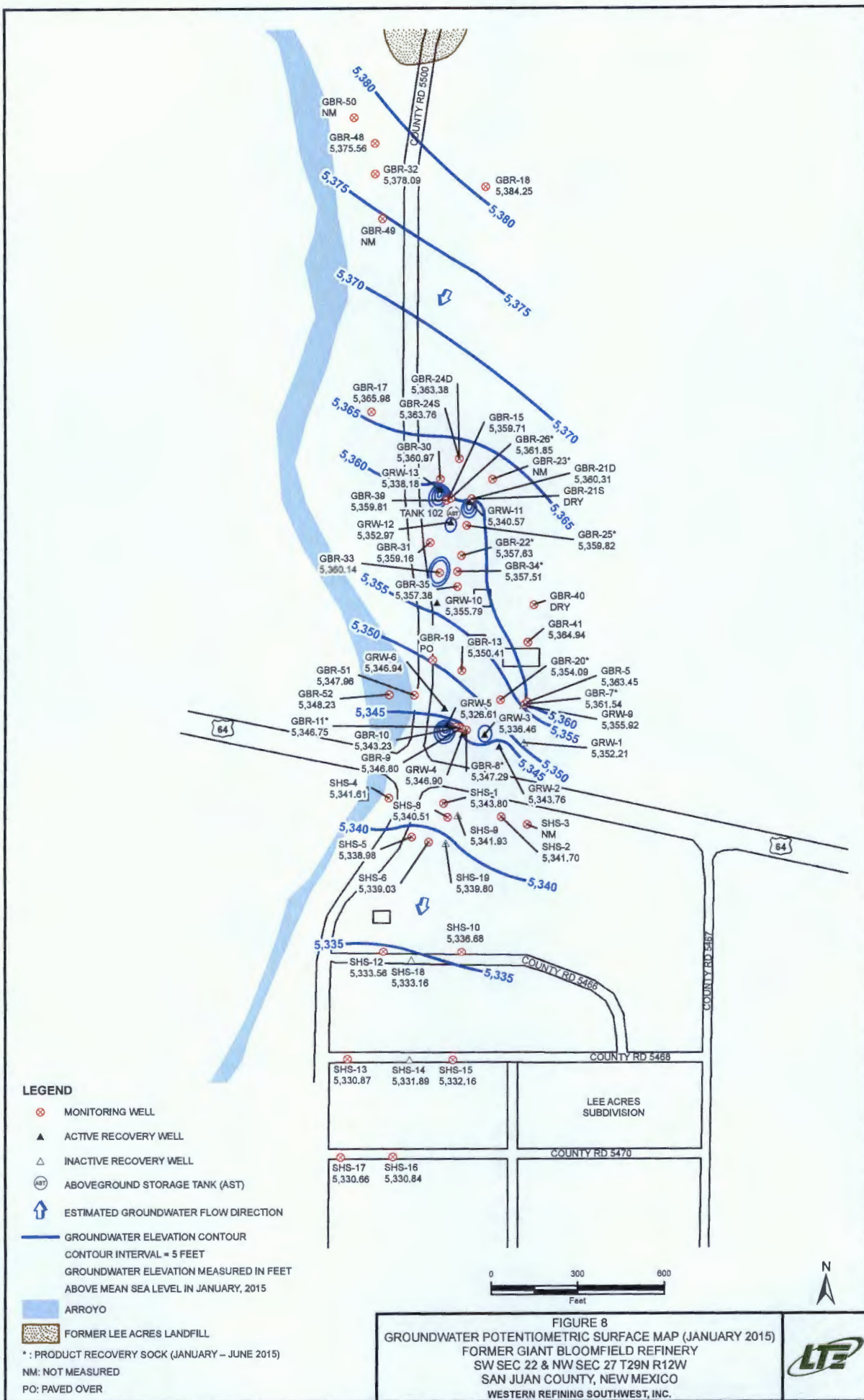
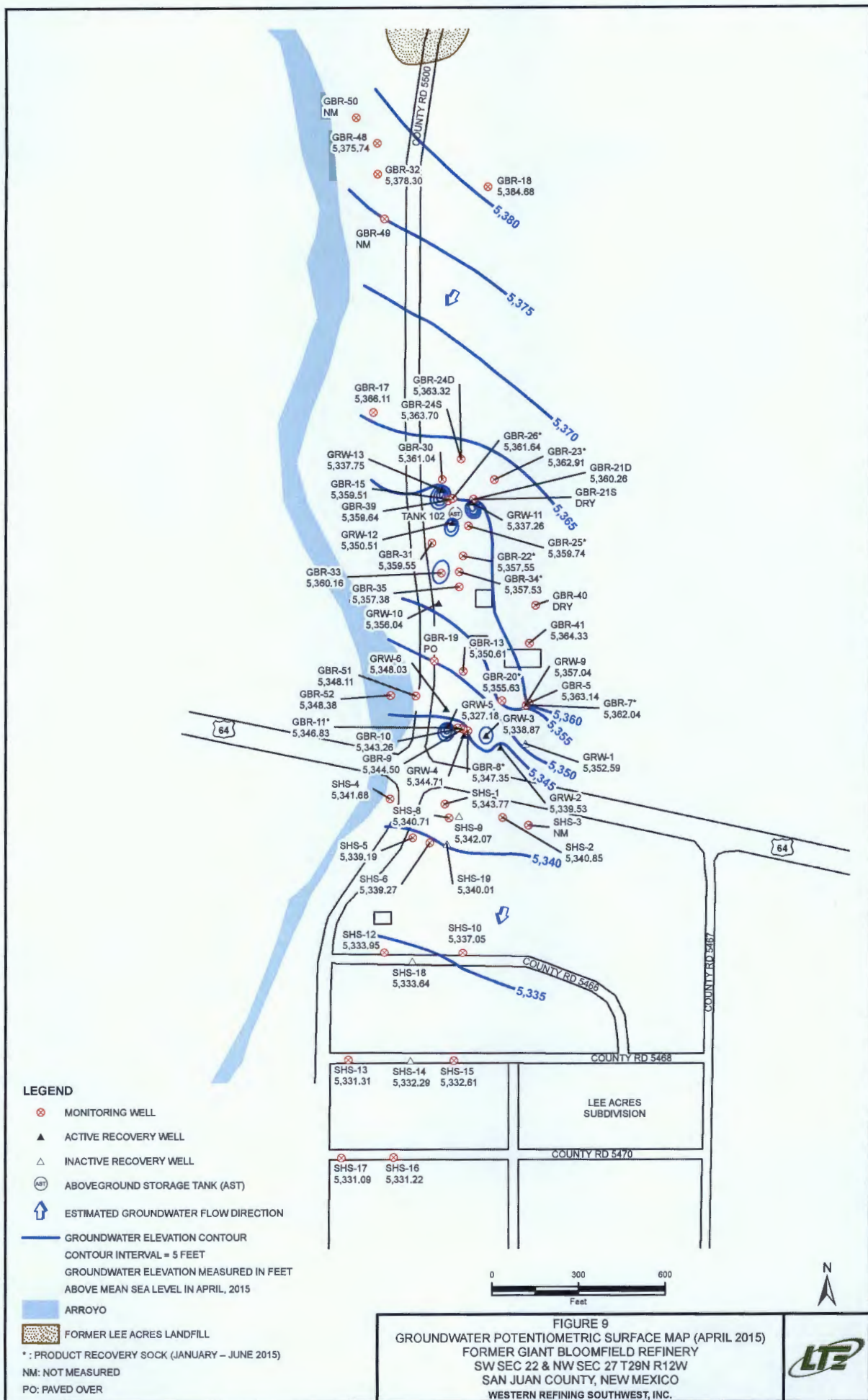


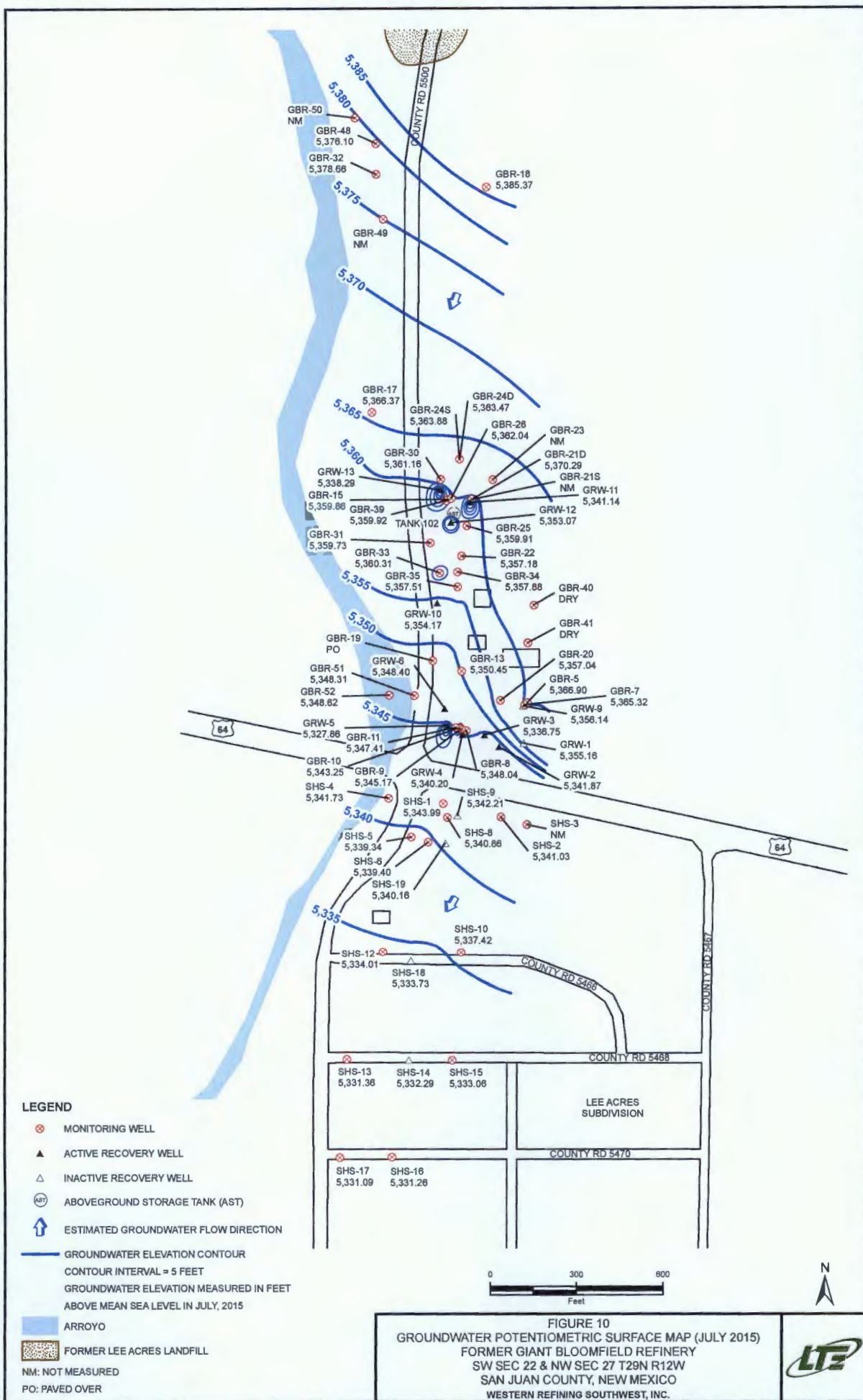
FIGURE 6
SIMPLIFIED REPRESENTATION OF THE GROUNDWATER RECOVERY,
TREATMENT, AND DISPOSAL SYSTEM
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
WESTERN REFINING SOUTHWEST, INC.

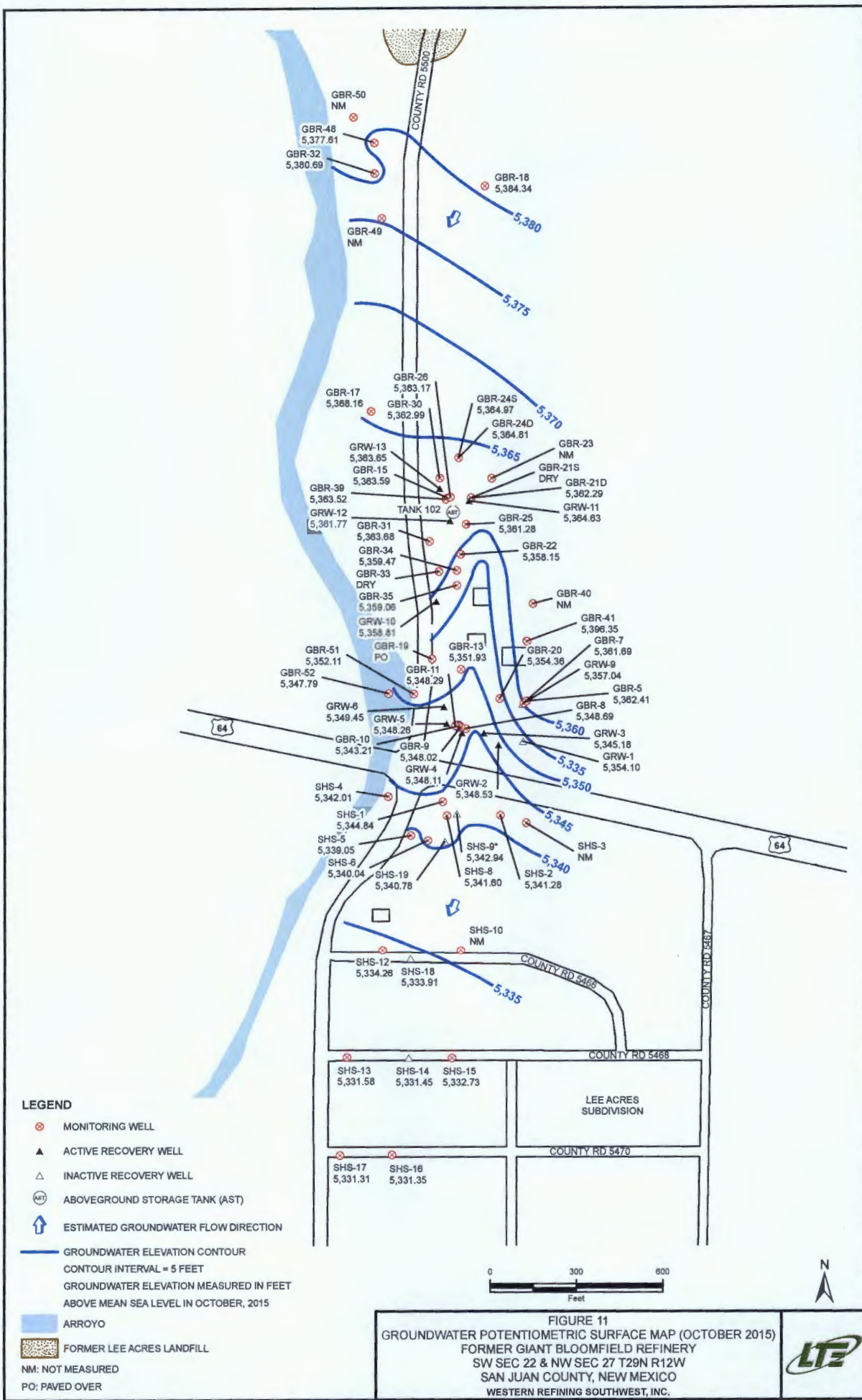


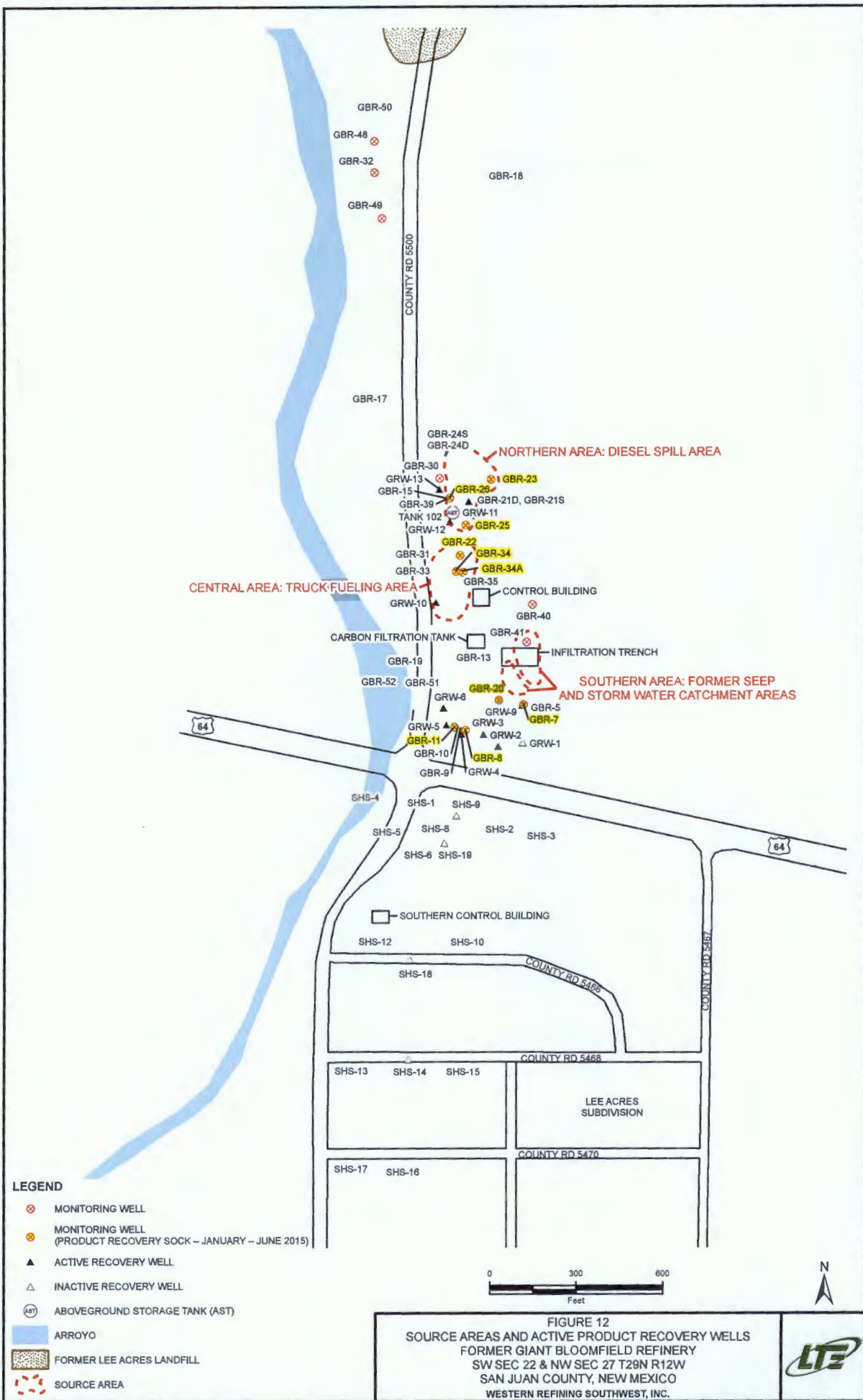












TABLES

TABLE 1
2015 SAMPLING SCHEDULE

FORMER GIANT BLOOMFIELD REFINERY
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.

	Jan-15	Apr-15	Jul-15	Aug-15
ENHANCED MONITORING				
System Influent	GWC	GWC	GWC	GWC
System Effluent	GWC	GWC	GWC	GWC, Metals, PAHs
GRW-3				GWC, PAHs
GRW-6				GWC, PAHs
GBR-17				GWC, PAHs
GBR-24D				GWC
GBR-30				GWC, PAHs
GBR-31				GWC, PAHs
GBR-32				GWC, Metals
GBR-48				GWC, Metals
GBR-49				GWC, Metals
GBR-50				GWC, Metals
GBR-51				GWC
GBR-52				GWC
REMEDATION SYSTEM ASSESMENT				
SHS-2				BTEX, TPH, Chloride
SHS-8				BTEX, TPH, Chloride
SHS-9				BTEX, TPH, Chloride
GBR-34				BTEX, TPH, Chloride
GBR-41				BTEX, TPH, Chloride
GBR-25				BTEX, TPH, Chloride
GBR-26				BTEX, TPH, Chloride
GBR-20				BTEX, TPH, Chloride
GBR-21D				BTEX, TPH, Chloride
GBR-22				BTEX, TPH, Chloride
GBR-7				BTEX, TPH, Chloride
GBR-8				BTEX, TPH, Chloride
GBR-11				BTEX, TPH, Chloride

Notes:

BTEX - benzene, toluene, ethylbenzene, toluene, xylenes

GWC - Ground Water Chemistry, pH, EC, TDS, alkalinity, hardness, anions (bromide, chloride, sulfate, fluoride, 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

TPH - total petroleum hydrocarbons

VOCs - volatile organic compounds



TABLE 2
GROUNDWATER RECOVERY WELL VOLUME TABULATION

FORMER GIANT BLOOMFIELD REFINERY
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.

Well Number	Total Volume Pumped in 2014 (Gallons)	Total Volume Pumped in 2015 (Gallons)	Difference (Gallons)
GRW-1	0	0	0
GRW-2	55,644	34,521	-21,123
GRW-3	111,759	69,647	-42,112
GRW-4	69,246	45,030	-24,216
GRW-5	47,728	20,286	-27,442
GRW-6	63,757	3,697	-60,060
GRW-10	414,871	445,427	30,556
GRW-11	71,597	41,898	-29,699
GRW-12	83,098	50,859	-32,239
GRW-13	35,412	23,811	-11,601
Total Volume Pumped (Gallons)	953,112	735,176	-217,936

Notes:

Volumes metered at individual recovery wells



TABLE 3
GROUNDWATER ELEVATIONS AND THICKNESS OF PHASE-SEPARATED HYDROCARBONS

FORMER GIANT BLOOMFIELD REFINERY
SAN JUAN COUNTY, NEW MEXICO.
WESTERN REFINING SOUTHWEST, INC.

Well Number	Wellhead Elevation (feet)	Total Depth (feet)	January 2015				April 2015				July 2015				October 2015			
			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	39.74	-	-	5,343.80	39.77	-	-	5,343.77	39.55	-	-	5,343.99	38.70	-	-	5,344.84
SHS-2	5,381.66	44.56	39.96	-	-	5,341.70	40.81	-	-	5,340.85	40.63	-	-	5,341.03	40.38	-	-	5,341.28
SHS-3**	5,383.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SHS-4	5,383.62	52.16	42.01	-	-	5,341.61	41.94	-	-	5,341.68	41.89	-	-	5,341.73	41.61	-	-	5,342.01
SHS-5	5,378.36	47.85	39.38	-	-	5,338.98	39.17	-	-	5,339.19	39.02	-	-	5,339.34	39.31	-	-	5,339.05
SHS-6	5,378.17	52.78	39.14	-	-	5,339.03	38.90	-	-	5,339.27	38.77	-	-	5,339.40	38.13	-	-	5,340.04
SHS-8	5,380.25	50.92	39.74	-	-	5,340.51	39.54	-	-	5,340.71	39.39	-	-	5,340.86	38.65	-	-	5,341.60
SHS-9	5,380.79	46.25	38.86	-	-	5,341.93	38.72	-	-	5,342.07	38.58	-	-	5,342.21	37.85	-	-	5,342.94
SHS-10	5,373.80	45.80	37.12	-	-	5,336.68	36.75	-	-	5,337.05	36.38	-	-	5,337.42	Dry	-	-	Dry
SHS-12	5,373.94	52.41	40.38	-	-	5,333.56	39.99	-	-	5,333.95	39.93	-	-	5,334.01	39.68	-	-	5,334.26
SHS-13	5,367.81	47.51	36.94	-	-	5,330.87	36.50	-	-	5,331.31	36.45	-	-	5,331.36	36.23	-	-	5,331.58
SHS-14	5,367.07	52.71	35.18	-	-	5,331.89	34.78	-	-	5,332.29	34.78	-	-	5,332.29	35.62	-	-	5,331.45
SHS-15	5,366.21	47.78	34.05	-	-	5,332.16	33.60	-	-	5,332.61	33.15	-	-	5,333.06	33.48	-	-	5,332.73
SHS-16	5,362.58	42.20	31.74	-	-	5,330.84	31.36	-	-	5,331.22	31.32	-	-	5,331.26	31.23	-	-	5,331.35
SHS-17	5,364.35	46.21	33.69	-	-	5,330.66	33.26	-	-	5,331.09	33.26	-	-	5,331.09	33.04	-	-	5,331.31
SHS-18	5,373.64	47.36	40.48	-	-	5,333.16	40.00	-	-	5,333.64	39.91	-	-	5,333.73	39.73	-	-	5,333.91
SHS-19	5,378.89	52.40	39.09	-	-	5,339.80	38.88	-	-	5,340.01	38.73	-	-	5,340.16	38.11	-	-	5,340.78

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

**** Well hit by a vehicle May 2014

† Product Recovery socks in well, groundwater and product levels are not static

Obstruction in well unable to gauge water level

- indicates no GWEL or PSH measured



TABLE 4
ESTIMATED VOLUMES OF PHASE-SEPARATED HYDROCARBONS
RECOVERED FROM GROUNDWATER MONITORING WELLS

FORMER GIANT BLOOMFIELD REFINERY
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.

Well Number	2015 Total	Cumulative Total 2009-2015
	(ounces)	(ounces)
GBR-7	23	175.3
GBR-8	21.25	207.4
GBR-11	21	192.6
GBR-20	47.6	437.5
GBR-22	37.4	584.6
GBR-23	37.4	248.1
GBR-25	40.0	629.3
GBR-26	38.3	228.7
GBR-34	45.9	2924.1
GBR-34A	42.5	615.7
GBR-41	8.5	8.5
SHS-2	No Sock	132.8
SHS -9	No Sock	179.5
Annual Total (Ounces)	363.0	6,563.8
Annual Total (Gallons)	2.84	51.28



TABLE 5
ANNUAL COMPLIANCE DATA
2015 GROUNDWATER LABORATORY ANALYTICAL RESULTS

FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.

Analyte	NMWQCC Standard	Unit	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent	GRW-3	GRW-6	GBR-17	GBR-24D	GBR-30	GBR-31	GBR-32	GBR-48	GBR-49	GBR-50	GBR-51	GBR-52	SHS-8	
			27-Jan	27-Jan	8-Apr	8-Apr	24-Jul	24-Jul	3-Aug	3-Aug	3-Aug	10-Aug	7-Aug	3-Aug	3-Aug	3-Aug	6-Aug	6-Aug	6-Aug	6-Aug	6-Aug	5-Aug	5-Aug	3-Aug
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	<4.0	<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	<2.0	<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	<3.0	<1.5	<1.5	<1.5	<1.5	<1.5	
USEPA Method 8270C: Polycyclic Aromatic Hydrocarbons																								
naphthalene	30	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	
1-methylnaphthalene	NE	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	
2-methylnaphthalene	NE	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	
acenaphthylene	NE	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	
acenaphthene	NE	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	
fluorene	NE	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	
phenanthrene	NE	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	
anthracene	NE	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	
fluoranthene	NE	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	
pyrene	NE	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	
benz(a)anthracene	NE	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	
chrysene	NE	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	
benzo(b)fluoranthene	NE	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	
benzo(k)fluoranthene	NE	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	
benzo(a)pyrene	0.7	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	
dibenz(a,h)anthracene	NE	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	
benzo(g,h,i)perylene	NE	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	
indeno(1,2,3-cd)pyrene	NE	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.50	NT	NT	NT	NT	NT	NT	NT	NT	NT	

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



TABLE 7
WEEKLY GROUNDWATER LEVELS AND SHUTDOWN OBSERVATIONS

FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
GBR-5	8/20/2015	5,395.07	5,365.91	29.16	--	--	NM	NM	NM	NM	NM	NM	
GBR-5	8/27/2015	5,395.07	5,364.69	30.38	--	--	0.46	-290.3	3,492.2	No	Yes	0.0	Clear
GBR-5	9/3/2015	5,395.07	5,364.01	31.06	--	--	0.61	-261.7	3,048.1	Yes	Yes	0.0	Sulfur smell
GBR-5	9/10/2015	5,395.07	5,363.50	31.57	--	--	0.95	-298.0	3,495.3	No	Yes	0.2	Clear
GBR-5	9/16/2015	5,395.07	5,363.26	31.81	--	--	0.94	-237.7	3,657.3	Yes	Yes	0.0	
GBR-5	9/23/2015	5,395.07	5,363.32	31.75	--	--	2.12	-290.7	3,585.0	No	Yes	0.2	Clear
GBR-5	10/1/2015	5,395.07	5,362.41	32.66	--	--	0.88	-251.0	3,538.0	No	Yes	0.7	Clear
GBR-5	10/9/2015	5,395.07	5,362.38	32.69	--	--	1.42	-352.5	3,651	No	Yes	1.0	Clear
GBR-5	10/15/2015	5,395.07	5,361.93	33.14	--	--	0.79	-283.0	3,456	No	Yes	2.8	Clear
GBR-5	10/22/2015	5,395.07	5,360.84	34.23	--	--	1.28	-266.8	3,398	No	Yes	4.6	Clear
GBR-5	11/20/2015	5,395.07	5,362.53	32.54	--	--	1.48	-295.5	3,573	No	Yes	0.0	Clear
GBR-5	12/30/2015	5,395.07	5,362.32	32.75	--	--	0.96	-261.1	3,949	Yes	Yes	6.7	Clear/Product Observed
GBR-7	8/6/2015	5,395.85	5,363.47	32.38	--	--	NM	NM	NM	NM	NM	NM	Product showed up in well while purging for sampling
GBR-7	8/20/2015	5,395.85	5,363.53	32.32	--	--	NM	NM	NM	NM	NM	NM	Clear
GBR-7	8/27/2015	5,395.85	5,363.55	32.30	--	--	0.79	-299.5	4,003.3	No	Yes	0.0	Clear
GBR-7	9/3/2015	5,395.85	5,362.78	33.07	--	--	0.89	-279.9	3,855.3	Yes	Yes	0.0	
GBR-7	9/10/2015	5,395.85	5,362.52	33.33	--	--	4.48	-293.1	3,963.9	No	Yes	7.3	Clear
GBR-7	9/16/2015	5,395.85	5,362.26	33.59	--	--	1.35	-273.1	4,094.9	No	Yes	10.1	Clear
GBR-7	9/23/2015	5,395.85	5,362.22	33.63	--	--	5.00	-254.4	3,498.0	Yes	Yes	22.0	Clear
GBR-7	10/1/2015	5,395.85	5,361.69	34.16	--	--	3.52	-282.4	3,406.0	Yes	Yes	3.5	Clear
GBR-7	10/9/2015	5,395.85	5,361.37	34.48	--	--	1.54	-341.3	3,520	Yes	Yes	46.2	Clear
GBR-7	10/15/2015	5,395.85	5,361.10	34.75	--	--	0.82	-321.0	3,499	Yes	Yes	7.6	Clear
GBR-7	10/22/2015	5,395.85	5,361.05	34.80	--	--	0.89	-315.4	3,336	Yes	Yes	29.8	Clear
GBR-7	11/20/2015	5,395.85	5,360.31	35.54	--	--	1.51	-336.2	3,464	No	Yes	40.5	Clear
GBR-7	12/30/2015	5,395.85	5,359.90	35.95	35.93	0.02	NM	NM	NM	Yes	Yes	28.4	Clear/Product Observed
GBR-8	8/6/2015	5,390.50	5,348.07	42.43	--	--	1.13	-57.10	3,170.0	No	Yes	0.0	Yellow

**TABLE 7
WEEKLY GROUNDWATER LEVELS AND SHUTDOWN OBSERVATIONS**

**FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.**

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
GBR-8	8/20/2015	5,390.50	5,348.31	42.19	--	--	NM	NM	NM	NM	NM	NM	
GBR-8	8/27/2015	5,390.50	5,348.29	42.21	--	--	0.86	-87.24	2,659.1	No	Yes	0.0	Yellow
GBR-8	9/3/2015	5,390.50	5,348.36	42.14	--	--	NM	NM	NM	Yes	Yes	0.0	
GBR-8	9/10/2015	5,390.50	5,348.49	42.01	--	--	NM	NM	NM	Yes	Yes	0.0	Clear
GBR-8	9/16/2015	5,390.50	5,348.58	41.92	--	--	0.21	-180.60	2,734.2	Yes	Yes	0.0	gray hue
GBR-8	9/23/2015	5,390.50	5,348.65	41.85	--	--	4.07	-108.80	2,942.0	Yes	Yes	0.0	Brown
GBR-8	10/1/2015	5,390.50	5,348.69	41.81	--	--	0.74	-151.9	3,051.0	Yes	Yes	0.6	Light Yellow
GBR-8	10/9/2015	5,390.50	5,348.66	41.84	--	--	1.82	-230.4	3,120	No	No	22.7	Cloudy, Golden
GBR-8	10/15/2015	5,390.50	5,348.74	41.76	--	--	0.98	-199.1	2,877	Yes	Yes	0.8	Light Yellow
GBR-8	10/22/2015	5,390.50	5,348.75	41.75	--	--	1.24	-203.6	2,775	Yes	Yes	0.0	Light Yellow
GBR-8	11/20/2015	5,390.50	5,348.77	41.73	--	--	1.28	-157.2	3,202	No	Yes	1.9	Light Yellow
GBR-8	12/30/2015	5,390.50	5,348.78	41.72	--	--	0.68	-256.3	3,223	No	Yes	0.1	Light Yellow
GBR-9	8/20/2015	5,389.92	5,347.45	42.47	--	--	NM	NM	NM	NM	NM	NM	
GBR-9	8/27/2015	5,389.92	5,347.52	42.40	--	--	0.59	64.6	2,598.0	No	No	0.0	
GBR-9	9/3/2015	5,389.92	5,347.65	42.27	--	--	0.32	-120.0	2,662.6	Yes	No	0.0	
GBR-9	9/10/2015	5,389.92	5,347.67	42.25	--	--	0.35	-125.0	2,752.6	Yes	No	0.0	Clear
GBR-9	9/16/2015	5,389.92	5,347.90	42.02	--	--	1.05	-128.5	2,620.1	No	No	0.0	Clear
GBR-9	9/23/2015	5,389.92	5,347.94	41.98	--	--	5.31	-170.0	2,415.0	No	No	0.0	Clear
GBR-9	10/1/2015	5,389.92	5,348.02	41.90	--	--	0.69	-185.7	2,488.0	No	Yes	0.9	Clear
GBR-9	10/9/2015	5,389.92	5,348.04	41.88	--	--	1.13	-214.7	2,748	No	No	0.0	Clear
GBR-9	10/15/2015	5,389.92	5,348.12	41.80	--	--	1.09	-261.8	2,640	No	No	0.5	Clear
GBR-9	10/22/2015	5,389.92	5,348.14	41.78	--	--	0.79	-174.3	2,898	No	Yes	0.0	Clear
GBR-9	11/20/2015	5,389.92	5,348.18	41.74	--	--	1.09	-130.8	2,673	No	Yes	0.0	Clear
GBR-9	12/30/2015	5,389.92	5,348.21	41.71	--	--	0.64	-195.0	2,764	No	No	0.0	Clear
GBR-10	8/20/2015	5,390.57	5,343.26	47.31	--	--	NM	NM	NM	NM	NM	NM	Not enough water for measurement

**TABLE 7
WEEKLY GROUNDWATER LEVELS AND SHUTDOWN OBSERVATIONS**

**FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.**

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
GBR-10	8/27/2015	5,390.57	5,343.27	47.30	--	--	NM	NM	NM	NM	NM	0.0	Not enough water for measurement
GBR-10	9/3/2015	5,390.57	5,343.23	47.34	--	--	NM	NM	NM	NM	NM	0.0	Not enough water for measurement
GBR-10	9/10/2015	5,390.57	5,342.92	47.65	--	--	NM	NM	NM	NM	NM	0.0	Not enough water for measurement
GBR-10	9/16/2015	5,390.57	5,343.21	47.36	--	--	3.86	-77.10	NM	NM	NM	0.0	Measurement not taken down hole
GBR-10	9/23/2015	5,390.57	5,343.31	47.26	--	--	2.91	-139.10	1,746.0	NM	NM	0.0	Measurement not taken down hole
GBR-10	10/1/2015	5,390.57	5,343.21	47.36	--	--	NM	NM	NM	NM	NM	0.1	Measurement not taken down hole
GBR-10	10/9/2015	5,390.57	5,343.29	47.28	--	--	1.94	-144.0	3,135	NM	NM	4.9	Not enough water for measurement
GBR-10	10/15/2015	5,390.57	5,343.42	47.15	--	--	NM	NM	NM	NM	NM	0.0	Not enough water for measurement
GBR-10	10/22/2015	5,390.57	5,343.67	46.90	--	--	1.79	-182.3	2,759	No	Yes	0.0	Light Brown
GBR-10	11/20/2015	5,390.57	5,345.35	45.22	--	--	3.08	-120.3	2,104	No	Yes	0.0	Light Brown
GBR-10	12/30/2015	5,390.57	5,345.45	45.12	--	--	0.84	-252.2	2,204	No	No	0.0	Clear
GBR-11	8/6/2015	5,389.43	5,347.40	42.03	--	--	0.21	55.3	2,760.0	Yes	Yes	0.0	
GBR-11	8/20/2015	5,389.43	5,347.95	41.48	--	--	NM	NM	NM	NM	NM	NM	
GBR-11	8/27/2015	5,389.43	5,347.61	41.82	--	--	NM	NM	NM	No	No	0.0	Not enough water for measurement
GBR-11	9/3/2015	5,389.43	5,347.79	41.64	--	--	1.23	-130.7	2,850.6	Yes	No	0.0	
GBR-11	9/10/2015	5,389.43	5,348.11	41.32	--	--	2.12	-137.4	2,850.6	Yes	No	0.0	Clear
GBR-11	9/16/2015	5,389.43	5,348.12	41.31	--	--	1.73	-116.4	2,724.3	Yes	No	0.0	Clear
GBR-11	9/23/2015	5,389.43	5,348.18	41.25	--	--	2.73	-137.6	2,642.0	Yes	Yes	0.0	Light brown
GBR-11	10/1/2015	5,389.43	5,348.29	41.14	--	--	NM	NM	NM	No	Yes	0.1	Clear, probe won't reach water
GBR-11	10/9/2015	5,389.43	5,348.30	41.13	--	--	NM	-128.1	2,938	No	No	0.0	Clear
GBR-11	10/15/2015	5,389.43	5,348.29	41.14	--	--	NM	NM	NM	No	Yes	0.1	Clear, probe won't reach water

**TABLE 7
WEEKLY GROUNDWATER LEVELS AND SHUTDOWN OBSERVATIONS**

**FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.**

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
GBR-11	10/22/2015	5,389.43	5,348.41	41.02	--	--	NM	NM	NM	No	Yes	0.0	
GBR-11	11/20/2015	5,389.43	5,348.47	40.96	--	--	2.30	-143.60	2,979.0	No	Yes	0.0	light yellow/brown
GBR-11	12/30/2015	5,389.43	5,349.53	39.90	--	--	NM	NM	NM	No	Yes	0.0	yellow
GBR-13	8/20/2015	5,393.04	5,351.04	42.00	--	--	NM	NM	NM	NM	NM	NM	
GBR-13	8/27/2015	5,393.04	5,351.06	41.98	--	--	0.54	-45.6	3,581.1	No	No	0.0	
GBR-13	9/3/2015	5,393.04	5,351.19	41.85	--	--	0.35	-68.9	3,750.1	No	No	0.0	
GBR-13	9/10/2015	5,393.04	5,351.03	42.01	--	--	0.37	-74.5	3,972.5	No	No	0.0	Clear
GBR-13	9/16/2015	5,393.04	5,351.64	41.40	--	--	0.66	-74.9	3,807.2	No	No	0.0	Clear
GBR-13	9/23/2015	5,393.04	5,351.66	41.38	--	--	3.66	-64.8	3,416.0	No	No	0.0	Clear
GBR-13	10/1/2015	5,393.04	5,351.93	41.11	--	--	1.11	-134.5	3,520.0	No	No	0.1	Clear
GBR-13	10/9/2015	5,393.04	5,352.00	41.04	--	--	1.20	-99.3	3,581	No	No	47.6	Clear
GBR-13	10/15/2015	5,393.04	5,352.09	40.95	--	--	1.83	-181.6	3,013	No	No	0.0	Clear
GBR-13	10/22/2015	5,393.04	5,352.14	40.90	--	--	1.37	-185.6	3,211	No	No	0.0	Clear
GBR-13	11/20/2015	5,393.04	5,352.26	40.78	--	--	1.35	-239.7	3,851	No	No	0.0	Clear
GBR-13	12/30/2015	5,393.04	5,353.15	39.89	--	--	0.56	-184.9	3,841	No	Yes	0.0	Light brown/ Product Observed
GBR-15	8/20/2015	5,397.99	5,362.31	35.68	--	--	NM	NM	NM	NM	NM	NM	
GBR-15	8/27/2015	5,397.99	5,362.44	35.55	--	--	0.28	-241.8	2,913.7	No	No	0.0	
GBR-15	9/3/2015	5,397.99	5,363.12	34.87	--	--	0.22	-104.5	1,742.3	No	No	0.0	
GBR-15	9/10/2015	5,397.99	5,363.30	34.69	--	--	0.24	-69.2	1,922.4	NM	NM	0.0	Clear
GBR-15	9/16/2015	5,397.99	5,363.42	34.57	--	--	0.32	-154.3	2,144.1	NM	NM	0.0	Clear
GBR-15	9/23/2015	5,397.99	5,363.55	34.44	--	--	4.19	-77.7	3,671.0	No	No	0.2	Clear
GBR-15	10/1/2015	5,397.99	5,363.59	34.40	--	--	0.95	-125.2	2,752.0	No	No	0.0	Clear
GBR-15	10/9/2015	5,397.99	5,363.54	34.45	--	--	1.12	-143.7	2,550	No	No	0.0	Clear
GBR-15	10/15/2015	5,397.99	5,363.74	34.25	--	--	0.89	-175.3	3,705	No	No	0.0	Clear
GBR-15	10/22/2015	5,397.99	5,364.84	33.15	--	--	0.72	-163.5	3,627	No	No	0.0	Clear
GBR-15	11/20/2015	5,397.99	5,363.91	34.08	--	--	1.61	-253.3	2,959	No	No	0.0	Clear

TABLE 7
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FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
GBR-15	12/30/2015	5,397.99	5,364.09	33.90	--	--	0.43	-170.5	2,648	No	Yes	0.0	Clear
GBR-20	8/6/2015	5,393.47	5,356.92	36.55	--	--	0.02	-246.6	1,620.0	Yes	Yes	0.0	Black
GBR-20	8/20/2015	5,393.47	5,356.53	36.94	--	--	NM	NM	NM	NM	NM	NM	
GBR-20	8/27/2015	5,393.47	5,355.64	37.83	--	--	0.33	-311.8	3,662.7	Yes	Yes	0.0	Black
GBR-20	9/3/2015	5,393.47	5,355.37	38.10	--	--	0.11	-289.7	3,369.1	Yes	Yes	0.0	
GBR-20	9/10/2015	5,393.47	5,354.93	38.54	--	--	0.08	-337.6	3,106.7	No	Yes	87.3	Gray
GBR-20	9/16/2015	5,393.47	5,354.64	38.83	--	--	0.15	-289.5	2,974.0	No	Yes	65.2	Dark Gray/Black
GBR-20	9/23/2015	5,393.47	5,354.52	38.95	--	--	2.88	-250	3,810.0	Yes	Yes	46.6	Light Gray
GBR-20	10/1/2015	5,393.47	5,354.36	39.11	--	--	2.09	-264.9	2,843.0	Yes	Yes	42.1	Light Gray
GBR-20	10/9/2015	5,393.47	5,354.18	39.29	--	--	2.11	-315.3	2,896	No	Yes	51.7	Cloudy
GBR-20	10/15/2015	5,393.47	5,354.14	39.33	--	--	1.12	-313.3	2,851	Yes	Yes	59.6	Cloudy black/gray
GBR-20	10/22/2015	5,393.47	5,354.16	39.31	--	--	1.79	-308.5	2,759	Yes	Yes	72.6	Cloudy black/gray- Rotten egg odor
GBR-20	11/20/2015	5,393.47	5,353.83	39.64	--	--	1.40	-337.3	2,812	Yes	Yes	177	Cloudy black/gray- strong odor
GBR-20	12/30/2015	5,393.47	5,353.53	39.94	--	--	1.74	-323	2,968	Yes	Yes	119	Cloudy black/gray- strong odor
GBR-21S	8/7/2015	5,400.65	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-21S	8/20/2015	5,400.65	5,365.75	34.90	--	--	NM	NM	NM	NM	NM	0.0	
GBR-21S	8/27/2015	5,400.65	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-21S	9/3/2015	5,400.65	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-21S	9/10/2015	5,400.65	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-21S	9/16/2015	5,400.65	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-21S	9/23/2015	5,400.65	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-21S	10/1/2015	5,400.65	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-21S	10/9/2015	5,400.65	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-21S	10/15/2015	5,400.65	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-21S	10/22/2015	5,400.65	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	

**TABLE 7
WEEKLY GROUNDWATER LEVELS AND SHUTDOWN OBSERVATIONS**

**FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.**

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
GBR-21S	11/20/2015	5,400.65	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-21S	12/30/2015	5,400.65	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-21D	8/7/2015	5,400.19	5,360.35	39.84	--	--	0.36	-249.00	3,240.0	No	Yes	0.0	Clear
GBR-21D	8/20/2015	5,400.19	5,361.25	38.94	--	--	NM	NM	NM	NM	NM	NM	
GBR-21D	8/27/2015	5,400.19	5,362.11	38.08	--	--	0.48	-194.9	2,879.8	No	Yes	0.0	Clear
GBR-21D	9/3/2015	5,400.19	5,362.34	37.85	--	--	0.40	-249.7	3,163.1	No	No	0.0	
GBR-21D	9/10/2015	5,400.19	5,362.51	37.68	--	--	0.17	-208.5	3,230.4	No	Yes	0.0	Clear
GBR-21D	9/16/2015	5,400.19	5,362.73	37.46	--	--	0.34	-276.7	2,987.1	Yes	Yes	0.0	Clear/lt. gray
GBR-21D	9/23/2015	5,400.19	5,362.76	37.43	--	--	1.88	-287.2	2,887.0	No	Yes	1.1	Clear
GBR-21D	10/1/2015	5,400.19	5,362.29	37.90	--	--	0.77	-322.8	2,960.0	No	Yes	0.0	Light Gray
GBR-21D	10/9/2015	5,400.19	5,363.26	36.93	--	--	0.76	-286.4	2,995	No	No	18.8	Clear
GBR-21D	10/15/2015	5,400.19	5,363.79	36.40	--	--	2.10	-317.6	2,995	No	Yes	0.0	Light Gray
GBR-21D	10/22/2015	5,400.19	5,363.46	36.73	--	--	1.86	-263.7	2,596	No	Yes	0.0	Light Gray
GBR-21D	11/20/2015	5,400.19	5,363.78	36.41	--	--	1.84	-327.5	2,946	No	Yes	0.0	Light Gray
GBR-21D	12/30/2015	5,400.19	5,364.07	36.12	--	--	0.59	-332.9	3,086	No	Yes	0.0	clear
GBR-22	8/7/2015	5395.91	5,357.70	38.21	--	--	0.19	-319.00	4,872.7	Yes	Yes	0.0	Gray
GBR-22	8/20/2015	5395.91	5,358.44	37.47	34.44	0.03	NM	NM	NM	Yes	Yes	0.0	Product
GBR-22	8/27/2015	5395.91	5,356.92	38.99	--	-	0.45	-238.5	4,898.3	Yes	Yes	0.0	Gray to black
GBR-22	9/3/2015	5395.91	5,358.88	37.03	--	-	0.12	-282.4	4,927.3	No	Yes	0.0	
GBR-22	9/10/2015	5395.91	5,359.32	36.59	--	-	0.10	-338.5	5,237.4	Yes	Yes	0.4	
GBR-22	9/16/2015	5395.91	5,359.50	36.41	--	-	0.32	-212.0	5,119.2	Yes	Yes	0.9	Dark Gray
GBR-22	9/23/2015	5395.91	5,359.53	36.38	--	-	2.03	-228.1	4,787.0	Yes	Yes	1.2	Black/ Cloudy
GBR-22	10/1/2015	5395.91	5,358.15	37.76	--	-	0.72	-280.9	4,976.0	Yes	Yes	1.2	Black/ Cloudy
GBR-22	10/9/2015	5395.91	5,359.68	36.23	--	-	1.42	-249.5	5,106	Yes	Yes	0.0	Black/ Cloudy
GBR-22	10/15/2015	5395.91	5,359.86	36.05	--	-	2.21	-262.6	4,988	Yes	Yes	0.0	Black/ Cloudy
GBR-22	10/22/2015	5395.91	5,359.92	35.99	--	-	1.29	-203.4	4,897	Yes	Yes	0.0	Black/ Cloudy

**TABLE 7
WEEKLY GROUNDWATER LEVELS AND SHUTDOWN OBSERVATIONS**

**FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.**

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
GBR-22	11/20/2015	5395.91	5,360.10	35.81	--	-	NM	NM	NM	Yes	Yes	0.0	Product Droplets
GBR-22	12/30/2015	5395.91	5,361.23	34.68	--	-	0.93	-307.4	3,160	Yes	Yes	0.0	Dark brown
GBR-23	8/7/2015	5,403.72	NM	NM	--	--	NM	NM	NM	NM	NM	0.0	Bent casing
GBR-23	8/20/2015	5,403.72	NM	NM	--	--	NM	NM	NM	NM	NM	0.0	Bent casing
GBR-23	8/27/2015	5,403.72	NM	NM	--	--	NM	NM	NM	NM	NM	0.0	Bent casing
GBR-23	9/3/2015	5,403.72	NM	NM	--	--	NM	NM	NM	NM	NM	0.0	Bent casing
GBR-23	9/10/2015	5,403.72	NM	NM	--	--	NM	NM	NM	NM	NM	0.0	Bent casing
GBR-23	9/16/2015	5,403.72	NM	NM	--	--	NM	NM	NM	NM	NM	0.0	Bent casing
GBR-23	9/23/2015	5,403.72	NM	NM	--	--	NM	NM	NM	NM	NM	0.0	Bent casing
GBR-23	9/23/2015	5,403.72	NM	NM	--	--	NM	NM	NM	NM	NM	0.0	Bent casing
GBR-23	10/1/2015	5,403.72	NM	NM	--	--	NM	NM	NM	NM	NM	0.0	Bent casing
GBR-23	10/9/2015	5,403.72	NM	NM	--	--	NM	NM	NM	NM	NM	0.0	Bent casing
GBR-23	10/15/2015	5,403.72	NM	NM	--	--	NM	NM	NM	NM	NM	0.0	Bent casing
GBR-23	10/22/2015	5,403.72	NM	NM	--	--	NM	NM	NM	NM	NM	0.0	Bent casing
GBR-23	11/20/2015	5,403.72	NM	NM	--	--	NM	NM	NM	NM	NM	0.0	Bent casing
GBR-23	12/30/2015	5,403.72	NM	NM	--	--	NM	NM	NM	NM	NM	0.0	Bent casing
GBR-24S	8/20/2015	5,396.08	5,364.16	31.92	--	--	NM	NM	NM	NM	NM	0.0	
GBR-24S	8/27/2015	5,396.08	5,364.05	32.03	--	--	0.85	-126.0	4,542.9	No	Yes	0.0	
GBR-24S	9/3/2015	5,396.08	5,364.61	31.47	--	--	0.10	-144.6	4,573.1	No	Yes	0.0	
GBR-24S	9/10/2015	5,396.08	5,364.66	31.42	--	--	0.07	-140.1	4,565.3	Yes	Yes	0.0	Gray/black
GBR-24S	9/16/2015	5,396.08	5,364.63	31.45	--	--	0.75	-153.1	4,522.9	Yes	Yes	0.0	Lt. Gray
GBR-24S	9/23/2015	5,396.08	5,364.68	31.40	--	--	2.00	-188.6	4,228.0	No	Yes	0.0	Light Gray
GBR-24S	10/1/2015	5,396.08	5,364.97	31.11	--	--	0.97	-174.30	4,342.1	No	Yes	0.0	Clear
GBR-24S	10/9/2015	5,396.08	5,364.93	31.15	--	--	1.02	-196.1	4,419	No	No	0.0	Clear
GBR-24S	10/15/2015	5,396.08	5,365.12	30.96	--	--	1.60	-218.9	4,370	No	Yes	0.0	Clear
GBR-24S	10/22/2015	5,396.08	5,365.20	30.88	--	--	1.08	-179.1	4,278	No	Yes	0.0	Clear

**TABLE 7
WEEKLY GROUNDWATER LEVELS AND SHUTDOWN OBSERVATIONS**

**FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.**

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
GBR-24S	11/20/2015	5,396.08	5,365.30	30.78	--	--	1.26	-228.2	4,288	No	Yes	0.0	Clear
GBR-24S	12/30/2015	5,396.08	5,364.57	31.51	--	--	0.49	-278.1	4,168	No	Yes	0.0	Gray
GBR-24D	8/3/2015	5,396.08	5,362.70	33.38	--	--	0.54	-246.00	1,590.0	No	Yes	0.0	
GBR-24D	8/20/2015	5,396.08	5,363.16	32.92	--	--	NM	NM	NM	NM	NM	NM	
GBR-24D	8/27/2015	5,396.77	5,364.02	32.75	--	--	0.50	-180.1	4,256.1	No	Yes	0.0	
GBR-24D	9/3/2015	5,396.77	5,364.32	32.45	--	--	1.06	-172.1	4,453.9	No	Yes	0.0	
GBR-24D	9/10/2015	5,397.46	5,365.20	32.26	--	--	0.41	-133.5	4,081.2	Yes	Yes	0.0	Gray/black
GBR-24D	9/16/2015	5,397.46	5,365.29	32.17	--	--	0.86	-157.2	4,176.7	No	Yes	0.0	Lt. Gray
GBR-24D	9/23/2015	5,397.46	5,365.38	32.08	--	--	6.90	-208.0	3,986.0	No	Yes	0.0	Light Gray
GBR-24D	10/1/2015	5,397.46	5,365.50	31.96	--	--	1.23	-272.4	4,193.0	No	Yes	0.0	Clear
GBR-24D	10/9/2015	5,397.46	5,365.27	32.19	--	--	1.13	-237.1	4,209	No	No	0.0	Clear
GBR-24D	10/15/2015	5,397.46	5,365.67	31.79	--	--	1.87	-265.9	4,250	No	Yes	0.0	Clear
GBR-24D	10/22/2015	5,397.46	5,365.73	31.73	--	--	1.76	-281.5	4,025	No	Yes	0.0	Clear
GBR-24D	11/20/2015	5,397.46	5,365.75	31.71	--	--	1.35	-307.0	4,148	No	Yes	0.0	Clear
GBR-24D	12/30/2015	5,397.46	5,366.90	30.56	--	--	0.52	-297.6	4,254	No	Yes	0.0	Clear
GBR-25	8/7/2015	5,397.03	5,359.89	37.14	--	--	1.46	-119.6	3,656.1	Yes	Yes	0.0	Gray/black
GBR-25	8/20/2015	5,397.03	5,360.16	36.87	36.85	0.02	NM	NM	NM	Yes	Yes	0.0	Gray/black
GBR-25	8/27/2015	5,397.03	5,359.29	37.74	--	--	0.51	-94.4	3,904.2	Yes	Yes	0.0	Gray/black
GBR-25	9/3/2015	5,397.03	5,360.60	36.43	--	--	0.16	-215.5	3,967.6	Yes	Yes	0.0	
GBR-25	9/10/2015	5,397.03	5,360.82	36.21	--	--	2.64	-127.4	4,118.0	Yes	Yes	23.3	Gray/yellow
GBR-25	9/16/2015	5,397.03	5,359.69	37.34	--	--	1.94	-110.0	3,784.5	Yes	Yes	19.9	Gray
GBR-25	9/23/2015	5,397.03	5,359.98	37.05	--	--	4.29	-184.8	3,781.0	Yes	Yes	8.3	Light Gray
GBR-25	10/1/2015	5,397.03	5,361.28	35.75	--	--	NM	NM	NM	Yes	Yes	0.2	Light Yellow-PSH was observed on water surface
GBR-25	10/9/2015	5,397.03	5,361.32	35.71	--	--	1.51	-179.7	4,876	Yes	No	9.9	Cloudy, PSH was observed on water surface
GBR-25	10/15/2015	5,397.03	5,360.83	36.20	--	--	NM	NM	NM	Yes	Yes	0.8	Light Yellow-PSH was observed on water surface

**TABLE 7
WEEKLY GROUNDWATER LEVELS AND SHUTDOWN OBSERVATIONS**

**FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.**

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
GBR-25	10/22/2015	5,397.03	5,361.66	35.37	--	--	NM	NM	NM	Yes	Yes	0.0	Black water-PSH was observed on water surface
GBR-25	11/20/2015	5,397.03	5,361.89	35.14	--	--	NM	NM	NM	Yes	Yes	13.1	Black water-PSH was observed on water surface
GBR-25	12/30/2015	5,397.03	5,362.37	34.66	--	--	NM	NM	NM	Yes	Yes	11.8	Black water-PSH was observed on water surface
GBR-26	8/7/2015	5,396.72	5,362.04	34.68	--	--	NM	NM	NM	No	Yes	0.0	Casing narrows, meter stopped
GBR-26	8/20/2015	5,396.72	5,361.13	35.59	--	--	NM	NM	NM	NM	NM	0.0	
GBR-26	8/27/2015	5,396.72	5,361.97	34.75	--	--	NM	NM	NM	No	Yes	0.0	Casing narrows, meter stopped
GBR-26	9/3/2015	5,396.72	5,362.76	33.96	--	--	NM	NM	NM	No	Yes	0.0	Casing narrows, meter stopped
GBR-26	9/10/2015	5,396.72	5,363.43	33.29	--	--	1.59	-101.5	3,798.0	No	Yes	0.0	Clear
GBR-26	9/16/2015	5,396.72	5,363.09	33.63	--	--	2.02	-94.3	3,566.1	No	Yes	0.0	Clear
GBR-26	9/23/2015	5,396.72	5,363.19	33.53	--	--	NM	NM	NM	No	No	0.0	Casing narrows, meter stopped
GBR-26	10/1/2015	5,396.72	5,363.17	33.55	--	--	NM	NM	NM	No	No	0.1	Casing narrows, meter stopped
GBR-26	10/9/2015	5,396.72	5,364.55	32.17	--	--	1.07	-190.1	2749.0	No	No	0.0	Clear
GBR-26	10/15/2015	5,396.72	5,364.51	32.21	--	--	NM	NM	NM	No	No	0.0	Casing narrows, meter stopped
GBR-26	10/22/2015	5,396.72	5,364.59	32.13	--	--	NM	NM	NM	No	No	0.0	Casing narrows, meter stopped
GBR-26	11/20/2015	5,396.72	5,364.64	32.08	--	--	NM	NM	NM	No	No	0.0	Casing narrows, meter stopped
GBR-26	12/30/2015	5,396.72	5,364.87	31.85	--	--	NM	NM	NM	No	No	0.0	Casing narrows, meter stopped
GBR-30	8/3/2015	5,395.59	5,361.21	34.38	--	--	NM	NM	NM	No	Slight	0.0	Not enough water for measurement
GBR-30	8/20/2015	5,395.59	5,361.31	34.28	--	--	NM	NM	NM	NM	NM	NM	
GBR-30	8/27/2015	5,395.59	5,361.24	34.35	--	--	NM	NM	NM	No	Slight	0.0	Not enough water for measurement
GBR-30	9/3/2015	5,395.59	5,362.83	32.76	--	--	0.80	-110.2	3,816.2	No	No	0.0	
GBR-30	9/10/2015	5,395.59	5,362.70	32.89	--	--	0.69	-100.2	3,947.1	No	No	0.0	Clear
GBR-30	9/16/2015	5,395.59	5,362.69	32.90	--	--	0.85	-99.7	3,879.3	No	No	0.0	Clear
GBR-30	9/23/2015	5,395.59	5,362.71	32.88	--	--	2.00	-154.1	3,492	No	No	0.0	Clear
GBR-30	10/1/2015	5,395.59	5,362.99	32.60	--	--	1.54	-92.4	3,688	No	No	0.0	Clear

**TABLE 7
WEEKLY GROUNDWATER LEVELS AND SHUTDOWN OBSERVATIONS**

**FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.**

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
GBR-30	10/9/2015	5,395.59	5,362.89	32.70	--	--	3.04	-62.3	2,251	No	No	0.0	Clear
GBR-30	10/15/2015	5,395.59	5,363.29	32.30	--	--	1.08	-111.5	3,408	No	No	0.0	Clear
GBR-30	10/22/2015	5,395.59	5,362.94	32.65	--	--	0.92	-97.9	3,206	No	No	0.0	Clear
GBR-30	11/20/2015	5,395.59	5,362.99	32.60	--	--	1.93	-162.0	3,606	No	No	0.0	Clear
GBR-30	12/30/2015	5,395.59	5,363.03	32.56	--	--	0.64	-197.9	3,863	No	Yes	0.0	brown
GBR-31	8/3/2015	5,396.58	5,360.58	36.00	--	--	NM	NM	NM	NM	NM	0.0	Not enough water for measurement
GBR-31	8/20/2015	5,396.58	5,360.79	35.79	--	--	NM	NM	NM	NM	NM	NM	
GBR-31	8/27/2015	5,396.58	5,361.66	34.92	--	--	NM	NM	NM	NM	NM	0.0	Not enough water for measurement
GBR-31	9/3/2015	5,396.58	5,362.77	33.81	--	--	NM	NM	NM	No	No	0.0	Not enough water for measurement
GBR-31	9/10/2015	5,396.58	5,363.27	33.31	--	--	5.54	76.1	3,182.1	No	No	0.0	Clear
GBR-31	9/16/2015	5,396.58	5,362.81	33.77	--	--	4.97	102.0	2,996.6	No	No	0.0	Clear
GBR-31	9/23/2015	5,396.58	5,360.98	35.60	--	--	10.52	-71.4	2,894.0	No	No	0.0	Clear
GBR-31	10/1/2015	5,396.58	5,363.68	32.90	--	--	1.54	-92.4	3,688.0	No	No	0.0	Clear
GBR-31	10/9/2015	5,396.58	5,363.74	32.84	--	--	7.42	-43.0	2,640	No	No	0.0	Clear
GBR-31	10/15/2015	5,396.58	5,363.77	32.81	--	--	2.89	-89.1	3,626	No	No	0.0	Clear
GBR-31	10/22/2015	5,396.58	5,364.43	32.15	--	--	1.56	-89.4	3,524	No	No	0.0	Clear
GBR-31	11/20/2015	5,396.58	5,363.94	32.64	--	--	1.68	-110.4	3,239	No	No	0.0	Clear
GBR-31	12/30/2015	5,396.58	5,363.98	32.60	--	--	0.58	-92.6	3,353	No	Yes	0.0	Clear
GBR-33	8/20/2015	5,396.28	5,361.88	34.40	--	--	NM	NM	NM	NM	NM	0.0	
GBR-33	8/27/2015	5,396.28	5,361.92	34.36	--	--	NM	NM	NM	NM	NM	0.0	
GBR-33	9/3/2015	5,396.28	Dry	Dry	--	--	NM	NM	NM	No	No	0.0	
GBR-33	9/10/2015	5,396.28	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-33	9/16/2015	5,396.28	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-33	9/23/2015	5,396.28	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-33	10/1/2015	5,396.28	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-33	10/9/2015	5,396.28	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	

TABLE 7
WEEKLY GROUNDWATER LEVELS AND SHUTDOWN OBSERVATIONS

FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
GBR-33	10/15/2015	5,396.28	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-33	10/22/2015	5,396.28	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-33	11/20/2015	5,396.28	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-33	12/30/2015	5,396.28	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-34	8/7/2015	5,394.00	5,357.82	36.18	--	--	4.02	-64.4	1,190.0	Yes	Yes	0.0	
GBR-34	8/20/2015	5,394.00	5,358.10	35.90	--	--	NM	NM	NM	NM	NM	NM	
GBR-34	8/27/2015	5,394.00	5,358.10	35.90	--	--	2.65	-97.2	3,234.5	Yes	Yes	0.0	
GBR-34	9/3/2015	5,394.00	5,358.52	35.48	--	--	NM	NM	NM	Yes	Yes	0.0	
GBR-34	9/10/2015	5,394.00	5,358.98	35.02	--	--	1.81	-202.5	2,935.0	No	Yes	5.2	Black
GBR-34	9/16/2015	5,394.00	5,359.21	34.79	--	--	2.54	-136.4	2,789.9	Yes	Yes	12.3	Clear Black hue
GBR-34	9/23/2015	5,394.00	5,359.45	34.55	--	--	2.91	-209.3	2,577.0	Yes	Yes	21.6	Black
GBR-34	10/1/2015	5,394.00	5,359.47	34.53	--	--	NM	NM	NM	Yes	Yes	21.6	Black-PSH was observed on water
GBR-34	10/9/2015	5,394.00	5,359.46	34.54	--	--	1.76	-141	2,712	No	Yes	28.2	Brown, Cloudy
GBR-34	10/15/2015	5,394.00	5,359.63	34.37	--	--	1.29	-217	3,306	Yes	Yes	28.2	Black, Cloudy
GBR-34	10/22/2015	5,394.00	5,359.69	34.31	--	--	NM	NM	NM	Yes	Yes	20.0	Black-PSH was observed on water
GBR-34	11/20/2015	5,394.00	5,359.80	34.20	--	--	1.40	-201.10	2,721.0	Yes	Yes	17.8	Dark cloudy
GBR-34	12/30/2015	5,394.00	5,359.80	34.20	--	--	0.79	-228.00	2,753.0	Yes	Yes	0.2	Black
GBR-34A	8/20/2015	NM	NM	37.04	--	--	NM	NM	NM	NM	NM	NM	
GBR-34A	8/27/2015	NM	NM	36.94	--	--	0.08	-204.0	3,088.3	Yes	Yes	0.0	
GBR-34A	9/3/2015	NM	NM	36.54	--	--	0.08	-131.5	3,049.6	No	Yes	0.0	
GBR-34A	9/10/2015	NM	NM	36.24	--	--	0.28	-259.5	3,204.5	No	Yes	0.7	Black
GBR-34A	9/16/2015	NM	NM	36.01	--	--	0.28	-198.1	3,169.8	No	Yes	0.0	Silty/ dark
GBR-34A	9/23/2015	NM	NM	35.92	--	--	3.02	-133.2	3,044.0	Yes	Yes	6.3	Clear
GBR-34A	10/1/2015	NM	NM	35.73	--	--	0.82	-134.2	3,289.0	No	Yes	0.0	Clear
GBR-34A	10/9/2015	NM	NM	35.72	--	--	0.84	-203.1	3,358	No	No	0.0	Clear
GBR-34A	10/15/2015	NM	NM	35.50	--	--	0.88	-156.4	3,052	No	Yes	0.0	Clear
GBR-34A	10/22/2015	NM	NM	35.45	--	--	0.81	-155.6	2,958	No	Yes	0.0	Clear

TABLE 7
WEEKLY GROUNDWATER LEVELS AND SHUTDOWN OBSERVATIONS

FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
GBR-34A	11/20/2015	NM	NM	35.38	--	--	1.72	-203.4	3,282	No	Yes	0.0	Clear
GBR-34A	12/30/2015	NM	NM	34.45	--	--	NM	NM	NM	Yes	Yes	0.7	Black/ Product Droplets Observed
GBR-35	8/20/2015	5,393.66	5,357.72	35.94	--	--	NM	NM	NM	No	Yes	0.0	Not enough water for measurement
GBR-35	8/27/2015	5,393.66	5,357.74	35.92	--	--	NM	NM	NM	No	Yes	0.0	Not enough water for measurement
GBR-35	9/3/2015	5,393.66	5,356.59	37.07	--	--	NM	NM	NM	No	Yes	0.0	Not enough water for measurement
GBR-35	9/10/2015	5,393.66	5,358.62	35.04	--	--	2.17	-285.9	3,394.0	Yes	Yes	1.0	Black/brown
GBR-35	9/16/2015	5,393.66	5,358.80	34.86	--	--	2.17	-250.5	3,554.0	Yes	Yes	0.0	Black/brown
GBR-35	9/23/2015	5,393.66	5,358.93	34.73	--	--	3.01	-254.6	3,300.0	Yes	Yes	0.0	Black/Cloudy
GBR-35	10/1/2015	5,393.66	5,359.06	34.60	--	--	0.92	-166.9	3,049.0	Yes	Yes	0.0	Black/Cloudy
GBR-35	10/9/2015	5,393.66	5,359.07	34.59	--	--	0.98	-163.0	3,094	Yes	Yes	0.0	Brown/Cloudy
GBR-35	10/15/2015	5,393.66	5,359.27	34.39	--	--	1.01	-178.2	2,896	Yes	Yes	0.0	Black/Cloudy
GBR-35	10/22/2015	5,393.66	5,359.26	34.40	--	--	0.87	-166.5	2,922	Yes	Yes	0.0	Black/Cloudy
GBR-35	11/20/2015	5,393.66	5,359.38	34.28	--	--	1.81	-194.4	2,972	Yes	Yes	0.0	dark hue
GBR-35	12/30/2015	5,393.66	5,359.41	34.25	--	--	1.28	-198.8	2,975	Yes	Yes	0.0	light brown, some product
GBR-39	8/20/2015	5,397.55	5,361.62	35.93	--	--	NM	NM	NM	NM	NM	NM	Not enough water for measurement
GBR-39	8/27/2015	5,397.55	5,362.25	35.30	--	--	NM	NM	NM	No	No	0.0	Not enough water for measurement
GBR-39	9/3/2015	5,397.55	5,362.83	34.72	--	--	0.34	-122.3	1,926.4	No	No	0.0	
GBR-39	9/10/2015	5,397.55	5,363.14	34.41	--	--	1.58	-159.5	3,288	NM	NM	0.0	Clear
GBR-39	9/16/2015	5,397.55	5,363.28	34.27	--	--	0.59	-133.7	3,197.2	No	No	0.0	Clear
GBR-39	9/23/2015	5,397.55	5,363.52	34.03	--	--	2.89	-85.8	3,766	No	No	0.0	Clear
GBR-39	10/1/2015	5,397.55	5,363.52	34.03	--	--	1.11	-188.2	3,581	No	No	0.0	Clear
GBR-39	10/9/2015	5,397.55	5,363.55	34.00	--	--	1.10	-140.1	3,588	No	No	0.0	Clear
GBR-39	10/15/2015	5,397.55	5,363.72	33.83	--	--	1.42	-183.0	3,620	No	No	0.0	Clear
GBR-39	10/22/2015	5,397.55	5,363.70	33.85	--	--	1.22	-176.8	3,417	No	No	0.0	Clear
GBR-39	11/20/2015	5,397.55	5,363.76	33.79	--	--	1.53	-220.0	3,516	No	No	0.0	Clear
GBR-39	12/30/2015	5,397.55	5,363.87	33.68	--	--	0.46	-198.6	3,551	No	Yes	0.0	Brown/clear
GBR-40	8/7/2015	5,400.76	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-40	8/20/2015	5,400.76	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-40	8/27/2015	5,400.76	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-40	9/3/2015	5,400.76	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	

**TABLE 7
WEEKLY GROUNDWATER LEVELS AND SHUTDOWN OBSERVATIONS**

**FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.**

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
GBR-40	9/10/2015	5,400.76	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-40	9/16/2015	5,400.76	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-40	9/23/2015	5,400.76	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-40	10/1/2015	5,400.76	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-40	10/9/2015	5,400.76	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-40	10/15/2015	5,400.76	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-40	10/22/2015	5,400.76	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-40	11/20/2015	5,400.76	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-40	12/30/2015	5,400.76	Dry	Dry	--	--	NM	NM	NM	NM	NM	0.0	
GBR-41	8/7/2015	5,396.35	5,362.02	34.33	34.24	0.09	NM	NM	NM	Product	Yes	498	Product
GBR-41	8/20/2015	5,396.35	5,361.97	34.38	34.23	0.15	NM	NM	NM	NM	NM	NM	Product
GBR-41	8/27/2015	5,396.35	5,362.03	34.32	34.27	0.05	NM	NM	NM	Product	Yes	584	Product
GBR-41	9/3/2015	5,396.35	5,362.03	34.32	34.22	0.10	NM	NM	NM	Product	Yes	310	Product
GBR-41	9/10/2015	5,396.35	5,362.06	34.29	34.05	0.24	NM	NM	NM	Product	Yes	552	Product
GBR-41	9/16/2015	5,396.35	5,362.06	34.29	34.14	0.15	NM	NM	NM	Product	Yes	417	Product
GBR-41	9/23/2015	5,396.35	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
GBR-41	10/1/2015	5,396.35	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
GBR-41	10/9/2015	5,396.35	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
GBR-41	10/15/2015	5,396.35	5,364.69	31.66	31.52	0.14	NM	NM	NM	Product	Yes	346	Product
GBR-41	10/22/2015	5,396.35	5,362.33	34.02	33.90	0.12	NM	NM	NM	Product	Yes	217	Product
GBR-41	11/20/2015	5,396.35	5,362.28	34.07	33.85	0.22	NM	NM	NM	Product	Yes	427	Product
GBR-41	12/30/2015	5,396.35	5,362.17	34.18	34.01	0.17	NM	NM	NM	Product	Yes	18.5	Product
GRW-1	8/20/2015	5,394.30	5,355.36	38.94	--	--	NM	NM	NM	NM	NM	NM	
GRW-1	8/27/2015	5,394.30	5,355.30	39.00	--	--	0.48	-98.5	4,141.5	No	No	0.0	
GRW-1	9/3/2015	5,394.30	5,355.15	39.15	--	--	0.82	-199.2	4,294.1	No	Yes	0.0	
GRW-1	9/10/2015	5,394.30	5,356.18	38.12	--	--	0.85	-212.3	4,595.2	No	No	0.0	Clear

**TABLE 7
WEEKLY GROUNDWATER LEVELS AND SHUTDOWN OBSERVATIONS**

**FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.**

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
GRW-1	9/16/2015	5,394.30	5,354.69	39.61	--	--	0.96	-115.1	4,269.7	No	No	0.0	Clear
GRW-1	9/23/2015	5,394.30	5,354.89	39.41	--	--	4.10	-77.7	3,894.0	No	No	0.0	Clear
GRW-1	10/1/2015	5,394.30	5,354.10	40.20	--	--	4.10	-77.7	3,894.0	No	No	0.0	Clear
GRW-1	10/9/2015	5,394.30	5,353.88	40.42	--	--	1.56	-193.3	3,999	No	No	0.0	Clear
GRW-1	10/15/2015	5,394.30	5,353.75	40.55	--	--	2.20	-68.5	4,072	No	No	0.0	Clear
GRW-1	10/22/2015	5,394.30	5,353.65	40.65	--	--	1.98	-78.6	3,760	No	No	0.0	Clear
GRW-1	11/20/2015	5,394.30	5,353.13	41.17	--	--	1.55	-205.1	3,943	No	No	0.0	Clear
GRW-1	12/30/2015	5,394.30	5,352.75	41.55	--	--	1.70	-185.8	3,946	No	No	0.0	Clear
GRW-2	8/20/2015	5,391.28	5,348.56	42.72	--	--	NM	NM	NM	NM	NM	NM	
GRW-2	8/27/2015	5,391.28	5,348.64	42.64	--	--	0.75	-166.4	5,020.5	No	Slight	0.0	
GRW-2	9/3/2015	5,391.28	5,348.61	42.67	--	--	0.23	-171.4	4,901.0	No	No	0.0	
GRW-2	9/10/2015	5,391.28	5,348.68	42.60	--	--	0.15	-198.3	4,862.5	No	Yes	0.0	Clear
GRW-2	9/16/2015	5,391.28	5,348.59	42.69	--	--	0.63	-82.8	4,924.3	No	No	0.0	Clear
GRW-2	9/23/2015	5,391.28	5,348.73	42.55	--	--	3.36	-28.8	4,314.0	No	No	0.0	Clear
GRW-2	10/1/2015	5,391.28	5,348.53	42.75	--	--	0.68	-65.8	4,200.0	No	No	0.0	Clear
GRW-2	10/9/2015	5,391.28	5,348.49	42.79	--	--	1.48	-168.9	4,421	No	No	0.0	Clear
GRW-2	10/15/2015	5,391.28	5,348.23	43.05	--	--	0.99	-215.7	3,782	No	No	0.0	Clear
GRW-2	10/22/2015	5,391.28	5,348.49	42.79	--	--	0.82	-176.5	3,929	No	No	0.0	Clear
GRW-2	11/20/2015	5,391.28	5,348.40	42.88	--	--	0.84	-145.9	4,216	No	No	0.0	Clear
GRW-2	12/30/2015	5,391.28	5,348.30	42.98	--	--	0.99	-187.5	4,169	No	Yes	0.0	Clear
GRW-3	8/20/2015	5,388.77	5,344.54	44.23	--	--	NM	NM	NM	NM	NM	NM	
GRW-3	8/27/2015	5,388.77	5,344.74	44.03	--	--	0.41	-241.2	3,410.6	No	Yes	0.0	
GRW-3	9/3/2015	5,388.77	5,344.89	43.88	--	--	0.09	-285.5	3,390.0	Yes	Yes	0.0	Sulfur odor
GRW-3	9/10/2015	5,388.77	5,344.85	43.92	--	--	0.13	-302.5	3,589.0	Yes	Yes	0.0	Clear
GRW-3	9/16/2015	5,388.77	5,345.06	43.71	--	--	0.18	-271.9	3,555.2	Yes	Yes	0.0	Clear
GRW-3	9/23/2015	5,388.77	5,345.09	43.68	--	--	2.92	-230.8	3,745.0	Yes	Yes	0.0	Clear

**TABLE 7
WEEKLY GROUNDWATER LEVELS AND SHUTDOWN OBSERVATIONS**

**FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.**

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
GRW-3	10/1/2015	5,388.77	5,345.18	43.59	--	--	1.13	-316.9	3,254.0	Yes	Yes	0.0	Clear
GRW-3	10/9/2015	5,388.77	5,345.21	43.56	--	--	1.22	-326.8	3,426	No	No	0.0	Clear
GRW-3	10/15/2015	5,388.77	5,344.88	43.89	--	--	1.09	-295.8	4,060	No	No	0.0	Clear
GRW-3	10/22/2015	5,388.77	5,345.32	43.45	--	--	1.28	-312.7	3,082	No	Yes	0.0	Clear
GRW-3	11/20/2015	5,388.77	5,345.49	43.28	--	--	2.34	-319.7	3,307	No	Yes	0.0	Clear
GRW-3	12/30/2015	5,388.77	5,346.84	41.93	--	--	0.72	-349.9	3,291	No	Yes	0.0	Sulfur odor/ white debris
GRW-4	8/20/2015	5,390.02	5,347.55	42.47	--	--	NM	NM	NM	NM	NM	NM	
GRW-4	8/27/2015	5,390.02	5,347.62	42.40	--	--	0.11	-259.0	3,097.7	Yes	Yes	0.0	Gray to black
GRW-4	9/3/2015	5,390.02	5,347.74	42.28	--	--	0.16	-296.7	3,098.4	Yes	Yes	0.0	
GRW-4	9/10/2015	5,390.02	5,346.20	43.82	--	--	0.21	-310.9	2,987.6	Yes	Yes	0.0	Gray
GRW-4	9/16/2015	5,390.02	5,348.00	42.02	--	--	0.22	-284.6	4,076.2	Yes	Yes	0.0	Gray/black
GRW-4	9/23/2015	5,390.02	5,347.67	42.35	--	--	2.54	-280.0	2,844.0	Yes	Yes	0.0	Black-Black and white material came out with bailer
GRW-4	10/1/2015	5,390.02	5,348.11	41.91	--	--	0.80	-316.5	2,945.0	Yes	Yes	0.0	Black
GRW-4	10/9/2015	5,390.02	5,348.13	41.89	--	--	1.10	-341.9	3,116	No	No	0.0	Grey, Cloudy
GRW-4	10/15/2015	5,390.02	5,348.17	41.85	--	--	1.31	-325.7	3,292	No	No	0.0	Grey, Cloudy
GRW-4	10/22/2015	5,390.02	5,348.20	41.82	--	--	1.15	-278.3	3,565	Yes	Yes	0.0	Grey, Cloudy
GRW-4	11/20/2015	5,390.02	5,348.26	41.76	--	--	2.08	-277.4	3,319	Yes	Yes	0.0	Dark Grey, Cloudy
GRW-4	12/30/2015	5,390.02	5,348.27	41.75	--	--	0.71	-244.2	3,325	no	Yes	0.0	gray
GRW-5	8/20/2015	5,391.56	5,348.52	43.04	--	--	NM	NM	NM	NM	NM	NM	
GRW-5	8/27/2015	5,391.56	5,348.57	42.99	--	--	0.44	-214.7	4,253.2	No	No	0.0	
GRW-5	9/3/2015	5,391.56	5,348.80	42.76	--	--	0.11	-190.0	4,162.8	No	No	0.0	
GRW-5	9/10/2015	5,391.56	5,349.71	41.85	--	--	0.15	-212.5	4,365.2	No	No	0.0	
GRW-5	9/16/2015	5,391.56	5,349.12	42.44	--	--	0.32	-48.7	4,206.3	No	No	0.0	

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**FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.**

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
GRW-5	9/23/2015	5,391.56	5,349.51	42.05	--	--	2.85	-40.1	3,848.0	No	No	0.0	Clear
GRW-5	10/1/2015	5,391.56	5,349.26	42.30	--	--	1.14	-126.1	3,961.0	No	No	0.4	Clear
GRW-5	10/9/2015	5,391.56	5,349.34	42.22	--	--	1.54	-82.5	4,052	No	No	0.0	Clear
GRW-5	10/15/2015	5,391.56	5,349.43	42.13	--	--	1.25	-156.7	3,562	No	Yes	0.0	Clear
GRW-5	10/22/2015	5,391.56	5,349.46	42.10	--	--	1.18	-132.6	3,756	No	Yes	0.0	Clear
GRW-5	11/20/2015	5,391.56	5,349.53	42.03	--	--	1.11	-78.7	4,063	No	Yes	0.0	Clear
GRW-5	12/30/2015	5,391.56	5,349.56	42.00	--	--	0.76	-204.0	4,265	No	Yes	0.0	Clear
GRW-6	8/20/2015	5,391.81	5,349.57	42.24	--	--	NM	NM	NM	NM	NM	NM	
GRW-6	8/27/2015	5,391.81	5,349.58	42.23	--	--	0.37	-100.4	3,962.4	No	Slight	0.0	
GRW-6	9/3/2015	5,391.81	5,349.90	41.91	--	--	0.21	-144.1	4,081.4	No	No	0.0	
GRW-6	9/10/2015	5,391.81	5,349.80	42.01	--	--	0.16	-160.2	4,015.4	No	No	0.0	Clear
GRW-6	9/16/2015	5,391.81	5,350.35	41.46	--	--	0.18	-127.0	4,254.2	No	No	0.0	Clear
GRW-6	9/23/2015	5,391.81	5,349.76	42.05	--	--	2.85	-40.1	3,848.0	No	No	0.0	Clear
GRW-6	10/1/2015	5,391.81	5,350.45	41.36	--	--	0.85	105.1	3,891.0	No	Yes	0.0	Clear
GRW-6	10/9/2015	5,391.81	5,350.45	41.36	--	--	1.22	-89.2	3,525	No	No	0.0	Clear
GRW-6	10/15/2015	5,391.81	5,350.51	41.30	--	--	0.73	-137.3	3,335	No	Yes	0.0	Clear
GRW-6	10/22/2015	5,391.81	5,350.52	41.29	--	--	1.09	-92.3	3,259	No	Yes	0.0	Clear
GRW-6	11/20/2015	5,391.81	5,350.63	41.18	--	--	1.64	-62.0	3,895	No	Yes	0.0	Clear
GRW-6	12/30/2015	5,391.81	5,350.62	41.19	--	--	0.60	-155.4	3,942	No	Yes	0.0	Red brown
GRW-9	8/20/2015	5,395.70	5,363.24	32.46	--	--	NM	NM	NM	NM	NM	NM	
GRW-9	8/27/2015	5,395.70	5,361.80	33.90	--	--	0.15	-294.5	4,389.3	No	Yes	0.0	
GRW-9	9/3/2015	5,395.70	5,359.81	35.89	--	--	0.10	-297.2	4,200.2	No	No	0.0	
GRW-9	9/10/2015	5,395.70	5,357.77	37.93	--	--	0.12	-315.8	4,183.0	No	No	0.0	
GRW-9	9/16/2015	5,395.70	5,358.13	37.57	--	--	0.28	-251.8	4,078.6	No	No	0.0	

TABLE 7
WEEKLY GROUNDWATER LEVELS AND SHUTDOWN OBSERVATIONS

FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
GRW-9	9/23/2015	5,395.70	5,358.25	37.45	--	--	1.77	-259.1	3,658.0	No	Yes	0.0	Clear
GRW-9	10/1/2015	5,395.70	5,357.04	38.66	--	--	1.54	-284.7	3,609.0	No	Yes	0.4	Clear
GRW-9	10/9/2015	5,395.70	5,356.73	38.97	--	--	1.57	-295.1	3,729	No	No	0.0	Clear
GRW-9	10/15/2015	5,395.70	5,356.74	38.96	--	--	0.78	-195.4	3,005	No	No	0.0	Clear
GRW-9	10/15/2015	5,395.70	5,356.74	38.96	--	--	0.78	-195.4	3,005	No	No	0.0	Clear
GRW-9	10/22/2015	5,395.70	5,356.58	39.12	--	--	1.28	-232.7	3,159	No	No	0.7	Clear
GRW-9	11/20/2015	5,395.70	5,356.06	39.64	--	--	1.53	-303.6	3,637	No	No	1.9	Clear
GRW-9	12/30/2015	5,395.70	5,356.02	39.68	--	--	1.13	-303.2	3,554	Yes	Yes	1.9	Clear
GRW-10	8/20/2015	5,395.02	5,357.38	37.64	--	--	NM	NM	NM	NM	NM	NM	
GRW-10	8/27/2015	5,395.02	5,357.51	37.51	--	--	0.55	-159.9	4,428.3	No	No	0.0	
GRW-10	9/3/2015	5,395.02	5,358.18	36.84	--	--	0.30	-210.0	3,933.6	No	No	0.0	
GRW-10	9/10/2015	5,395.02	5,358.46	36.56	--	--	1.93	55.0	3,934.0	No	No	0.0	Clear
GRW-10	9/16/2015	5,395.02	5,358.61	36.41	--	--	1.77	42.0	4,024.1	No	No	0.0	Clear
GRW-10	9/23/2015	5,395.02	5,358.64	36.38	--	--	4.20	-22.4	3,363.0	No	No	0.0	Clear
GRW-10	10/1/2015	5,395.02	5,358.81	36.21	--	--	0.97	-60.0	3,435.0	No	No	0.0	Clear
GRW-10	10/9/2015	5,395.02	5,358.82	36.20	--	--	1.26	-92.5	3,488	No	No	0.0	Clear
GRW-10	10/15/2015	5,395.02	5,358.51	36.51	--	--	0.98	-75.5	3,598	No	No	0.0	Clear
GRW-10	10/22/2015	5,395.02	5,358.70	36.32	--	--	0.89	-82.7	3,642	No	No	0.0	Clear
GRW-10	11/20/2015	5,395.02	5,359.00	36.02	--	--	1.15	-166.5	2,963	No	No	0.0	Clear
GRW-10	12/30/2015	5,395.02	5,360.09	34.93	--	--	0.89	-126.5	3,983	No	Yes	0.0	Clear
GRW-11	8/20/2015	5,397.85	5,363.56	34.29	--	--	NM	NM	NM	NM	NM	NM	

**TABLE 7
WEEKLY GROUNDWATER LEVELS AND SHUTDOWN OBSERVATIONS**

**FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.**

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
GRW-11	8/27/2015	5,397.85	5,363.77	34.08	--	--	0.67	-201.4	4,917.6	No	Yes	0.0	
GRW-11	9/3/2015	5,397.85	5,364.17	33.68	--	--	0.09	-175.0	4,768.7	No	No	0.0	
GRW-11	9/10/2015	5,397.85	5,364.51	33.34	--	--	0.20	-139.8	4,564.1	No	No	0.0	Clear
GRW-11	9/16/2015	5,397.85	5,364.46	33.39	--	--	0.41	151.5	5,675.0	No	Yes	0.0	Clear
GRW-11	9/23/2015	5,397.85	5,364.49	33.36	--	--	2.95	-196.4	4,289.0	No	No	0.0	Clear
GRW-11	10/1/2015	5,397.85	5,364.63	33.22	--	--	0.82	-154.1	4,406.0	No	No	0.0	Light Gray
GRW-11	10/9/2015	5,397.85	5,364.64	33.21	--	--	1.02	-182.2	4,455	No	No	0.0	Clear
GRW-11	10/15/2015	5,397.85	5,364.07	33.78	--	--	1.02	-188.7	4,067	No	No	0.0	Clear
GRW-11	10/22/2015	5,397.85	5,364.84	33.01	--	--	0.95	-179.8	3,826	No	No	0.0	Clear
GRW-11	11/20/2015	5,397.85	5,364.92	32.93	--	--	1.88	-250.1	4,262	No	No	0.0	Clear
GRW-11	12/30/2015	5,397.85	5,365.17	32.68	--	--	0.60	-187.6	4,464	No	No	0.0	Clear
GRW-12	8/20/2015	5,397.24	5,359.91	37.33	--	--	NM	NM	NM	NM	NM	NM	
GRW-12	8/27/2015	5,397.24	5,360.54	36.70	--	--	0.10	-146.6	1,552.9	No	Yes	0.0	
GRW-12	9/3/2015	5,397.24	5,360.96	36.28	--	--	0.20	-174.5	3,387.5	No	No	0.0	
GRW-12	9/10/2015	5,397.24	5,361.21	36.03	--	--	0.10	-19.9	3,855.8	No	No	0.0	Clear
GRW-12	9/16/2015	5,397.24	5,361.41	35.83	--	--	0.13	-27.2	3,814.9	No	No	0.0	Clear
GRW-12	9/23/2015	5,397.24	5,361.49	35.75	--	--	7.24	-182.8	3,390.0	No	No	0.0	Clear
GRW-12	10/1/2015	5,397.24	5,361.77	35.47	--	--	1.37	-76.8	3,427.0	No	No	0.0	Light Yellow
GRW-12	10/9/2015	5,397.24	5,361.81	35.43	--	--	1.36	-118.4	2,921	No	No	0.0	Clear
GRW-12	10/15/2015	5,397.24	5,361.93	35.31	--	--	1.67	-105.4	3,765	No	No	0.0	Clear
GRW-12	10/22/2015	5,397.24	5,362.00	35.24	--	--	1.14	-102.8	3,465	No	No	0.0	Clear
GRW-12	11/20/2015	5,397.24	5,362.14	35.10	--	--	1.79	-143.3	2,838	No	No	0.0	Clear

**TABLE 7
WEEKLY GROUNDWATER LEVELS AND SHUTDOWN OBSERVATIONS**

**FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.**

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
GRW-12	12/30/2015	5,397.24	5,362.61	34.63	--	--	0.73	-177.9	2,664	No	Yes	0.0	Light brown/ Product Observed
GRW-13	8/20/2015	5,396.90	5,362.10	34.80	--	--	NM	NM	NM	NM	NM	NM	
GRW-13	8/27/2015	5,396.90	5,362.14	34.76	--	--	3.86	-29.3	3,800.3	No	No	0.0	
GRW-13	9/3/2015	5,396.90	5,363.05	33.85	--	--	1.65	-77.1	4,054.0	No	No	0.0	
GRW-13	9/10/2015	5,396.90	5,363.31	33.59	--	--	3.64	42.2	4,127.7	No	No	0.0	Clear
GRW-13	9/16/2015	5,396.90	5,363.41	33.49	--	--	2.88	23.1	3,996.0	No	No	0.0	Clear
GRW-13	9/23/2015	5,396.90	5,363.57	33.33	--	--	3.52	-66.5	3,488.0	No	No	0.0	Clear
GRW-13	10/1/2015	5,396.90	5,363.65	33.25	--	--	1.17	-113.0	3,855.0	No	No	0.0	Clear
GRW-13	10/9/2015	5,396.90	5,363.66	33.24	--	--	1.71	-51.4	2,549	No	No	0.0	Clear
GRW-13	10/15/2015	5,396.90	5,363.67	33.23	--	--	1.32	-105.4	3,765	No	No	0.0	Clear
GRW-13	10/22/2015	5,396.90	5,363.70	33.20	--	--	1.52	-89.6	3,568	No	No	0.0	Clear
GRW-13	11/20/2015	5,396.90	5,363.78	33.12	--	--	1.36	-195.1	3,348	No	No	0.0	Clear
GRW-13	12/30/2015	5,396.90	5,363.80	33.10	--	--	0.54	-168.6	1,072	No	Yes	0.0	Clear
SHS-1	8/20/2015	5,383.54	5,344.24	39.30	--	--	NM	NM	NM	NM	NM	NM	
SHS-1	8/27/2015	5,383.54	5,344.09	39.45	--	--	1.26	7.3	292.6	No	Yes	0.0	
SHS-1	9/3/2015	5,383.54	5,345.29	38.25	--	--	0.51	-61.3	1,868.0	No	No	0.0	
SHS-1	9/10/2015	5,383.54	5,344.73	38.81	--	--	0.33	-5.6	2,388.8	No	Yes	0.0	
SHS-1	9/16/2015	5,383.54	5,344.78	38.76	--	--	0.38	-49.3	2,635.1	No	Yes	0.0	
SHS-1	9/23/2015	5,383.54	5,344.82	38.72	--	--	5.60	-35.2	2,523.0	No	Yes	0.0	Light brown
SHS-1	10/1/2015	5,383.54	5,344.84	38.70	--	--	1.09	-58.6	2,719.0	No	Yes	0.0	Light brown
SHS-1	10/9/2015	5,383.54	5,344.76	38.78	--	--	0.83	-31.6	2,970	No	No	0.0	Clear

**TABLE 7
WEEKLY GROUNDWATER LEVELS AND SHUTDOWN OBSERVATIONS**

**FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.**

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
SHS-1	10/15/2015	5,383.54	5,344.96	38.58	--	--	1.72	-67.8	3,025	No	Yes	0.0	Clear
SHS-1	10/22/2015	5,383.54	5,344.93	38.61	--	--	1.28	-55.5	3,148	No	Yes	0.0	Clear
SHS-1	11/20/2015	5,383.54	5,345.03	38.51	--	--	1.04	-79.2	3,294	No	Yes	0.0	Clear
SHS-1	12/30/2015	5,383.54	5,345.31	38.23	--	--	2.72	-53.6	3,698	Yes	Yes	0.0	Clear
SHS-2	8/7/2015	5,381.66	5,340.81	40.85	--	--	0.94	-240.00	4,655.7	No	Yes	0.0	
SHS-2	8/20/2015	5,381.66	5,341.08	40.58	--	--	NM	NM	NM	NM	NM	NM	
SHS-2	8/27/2015	5,381.66	5,341.10	40.56	--	--	0.83	-19.4	4,655.7	No	Yes	0.0	
SHS-2	9/3/2015	5,381.66	5,341.15	40.51	--	--	0.40	-94.8	4,276.4	No	Yes	0.0	
SHS-2	9/10/2015	5,381.66	5,341.15	40.51	--	--	0.12	-8.4	4,764.1	No	No	0.0	
SHS-2	9/16/2015	5,381.66	5,341.19	40.47	--	--	1.64	-102.2	4,875.1	No	Yes	0.0	
SHS-2	9/23/2015	5,381.66	5,341.21	40.45	--	--	5.56	-59.4	4,217.0	No	Yes	0.0	Clear
SHS-2	10/1/2015	5,381.66	5,341.28	40.38	--	--	1.72	-82.4	4,517.0	No	Yes	0.0	Clear
SHS-2	10/9/2015	5,381.66	5,341.32	40.34	--	--	1.12	-128.8	4,480	No	No	0.0	Clear
SHS-2	10/15/2015	5,381.66	5,341.38	40.28	--	--	0.98	-79.4	4,059	No	Yes	0.0	Clear
SHS-2	10/22/2015	5,381.66	5,341.37	40.29	--	--	1.02	-115.9	4,317	No	Yes	0.0	Clear
SHS-2	11/20/2015	5,381.66	5,341.45	40.21	--	--	1.53	-142.0	4,352	No	Yes	0.0	Clear
SHS-2	12/30/2015	5,381.66	5,341.55	40.11	--	--	1.56	-45.4	4,225	Yes	Yes	0.0	yellow
SHS-5	8/20/2015	5,378.36	5,339.32	39.04	--	--	NM	NM	NM	NM	NM	NM	
SHS-5	8/27/2015	5,378.36	5,339.34	39.02	--	--	0.43	-7.8	3,124.7	No	Yes	0.0	
SHS-5	9/3/2015	5,378.36	5,339.67	38.69	--	--	0.57	-38.5	3,039.9	No	No	0.0	
SHS-5	9/10/2015	5,378.36	5,339.86	38.50	--	--	0.85	74.1	3,117.8	No	No	0.0	

**TABLE 7
WEEKLY GROUNDWATER LEVELS AND SHUTDOWN OBSERVATIONS**

**FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.**

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
SHS-5	9/16/2015	5,378.36	5,339.94	38.42	--	--	0.52	-59.4	3,128.4	No	Yes	0.0	
SHS-5	9/23/2015	5,378.36	5,340.01	38.35	--	--	7.31	27.5	2,767.0	No	No	0.0	Light brown
SHS-5	10/1/2015	5,378.36	5,340.05	38.31	--	--	0.82	45.7	3,009.0	No	No	0.0	Light brown
SHS-5	10/9/2015	5,378.36	5,340.09	38.27	--	--	2.21	-11.3	2,886	No	No	0.0	Clear
SHS-5	10/15/2015	5,378.36	5,340.14	38.22	--	--	2.01	58.5	2,955	No	No	0.0	Light brown
SHS-5	10/22/2015	5,378.36	5,340.14	38.22	--	--	1.80	35.5	2,632	No	No	0.0	Clear
SHS-5	11/20/2015	5,378.36	5,340.24	38.12	--	--	1.34	-110.1	2,848	No	No	0.0	Clear
SHS-5	12/30/2015	5,378.36	5,340.36	38.00	--	--	2.66	-35.5	2,466	No	No	0.0	Clear
SHS-6	8/20/2015	5,378.36	5,339.58	38.78	--	--	NM	NM	NM	NM	NM	NM	
SHS-6	8/27/2015	5,378.36	5,339.59	38.77	--	--	0.83	-9.8	3,291.8	No	Yes	0.0	
SHS-6	9/3/2015	5,378.36	5,339.92	38.44	--	--	0.13	5.5	3,211.9	No	Yes	0.0	
SHS-6	9/10/2015	5,378.36	5,339.97	38.39	--	--	0.21	16.2	3,058.2	No	Yes	0.0	
SHS-6	9/16/2015	5,378.36	5,340.13	38.23	--	--	1.48	-71.2	3,059.2	No	Yes	0.0	
SHS-6	9/23/2015	5,378.36	5,340.17	38.19	--	--	4.80	-38.6	3,892.0	No	No	0.0	Clear
SHS-6	10/1/2015	5,378.36	5,340.23	38.13	--	--	0.66	-48.7	3,560.0	No	No	0.0	Clear
SHS-6	10/9/2015	5,378.36	5,340.25	38.11	--	--	0.91	-20.0	3,036	No	No	0.0	Clear
SHS-6	10/15/2015	5,378.36	5,340.35	38.01	--	--	2.39	-51.5	3,250	No	No	0.0	Clear
SHS-6	10/22/2015	5,378.36	5,340.33	38.03	--	--	1.38	-37.9	3,625	No	No	0.0	Clear
SHS-6	11/20/2015	5,378.36	5,340.42	37.94	--	--	0.84	-72.3	2,926	No	No	0.0	Clear
SHS-6	12/30/2015	5,378.36	5,340.55	37.81	--	--	1.82	-43.1	3,245	No	No	0.0	Clear
SHS-8	8/7/2015	5,380.25	5,340.89	39.36	--	--	0.39	-47.20	1.03	No	Yes	0.0	

**TABLE 7
WEEKLY GROUNDWATER LEVELS AND SHUTDOWN OBSERVATIONS**

**FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.**

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
SHS-8	8/20/2015	5,380.25	5,340.87	39.38	--	--	NM	NM	NM	NM	NM	NM	
SHS-8	8/27/2015	5,380.25	5,341.88	38.37	--	--	0.23	-32.9	2,423.1	No	Yes	0.0	
SHS-8	9/3/2015	5,380.25	5,341.18	39.07	--	--	0.07	-55.5	2,343.1	Yes	Yes	0.0	
SHS-8	9/10/2015	5,380.25	5,341.38	38.87	--	--	0.10	-45.1	2,447.0	No	Yes	0.0	
SHS-8	9/16/2015	5,380.25	5,341.47	38.78	--	--	1.96	-74.4	2,397.4	No	Yes	0.0	
SHS-8	9/23/2015	5,380.25	5,341.55	38.70	--	--	3.52	-19.8	2,478.0	No	Yes	0.0	Light brown
SHS-8	10/1/2015	5,380.25	5,341.60	38.65	--	--	1.26	-25.8	2,407.0	No	Yes	0.0	Light brown
SHS-8	10/9/2015	5,380.25	5,341.65	38.60	--	--	0.86	-64.3	4,749.0	No	No	0.0	Clear
SHS-8	10/15/2015	5,380.25	5,341.73	38.52	--	--	1.75	-24.6	2,506.0	No	Yes	0.0	Clear
SHS-8	10/22/2015	5,380.25	5,341.74	38.51	--	--	0.98	-54.6	2,309.0	No	Yes	0.0	Light brown
SHS-8	11/20/2015	5,380.25	5,341.91	38.34	--	--	1.22	-124.3	4,990.0	No	Yes	0.0	Light brown
SHS-8	12/30/2015	5,380.25	5,342.05	38.20	--	--	2.42	-54.2	3,538.0	No	No	0.0	red/brown
SHS-9	8/7/2015	5,380.79	5,342.29	38.50	--	--	0.13	-140.00	2,398.3	No	Yes	0.0	
SHS-9	8/20/2015	5,380.79	5,342.32	38.47	--	--	NM	NM	NM	NM	NM	0.0	
SHS-9	8/27/2015	5,380.79	5,342.33	38.46	--	--	0.31	-55.6	1,813.5	No	Yes	0.0	
SHS-9	9/3/2015	5,380.79	5,342.53	38.26	--	--	0.83	-110.2	1,773.2	Yes	Yes	0.0	
SHS-9	9/10/2015	5,380.79	5,342.67	38.12	--	--	0.57	-92.7	2,052.3	No	Yes	0.0	Yellow/brown
SHS-9	9/16/2015	5,380.79	5,342.77	38.02	--	--	1.43	-153.9	2,397.4	No	Yes	0.0	Yellow/brown
SHS-9	9/23/2015	5,380.79	5,342.84	37.95	--	--	4.35	-97.3	1,953.0	No	Yes	0.0	Light Gray
SHS-9	10/1/2015	5,380.79	5,342.94	37.85	--	--	0.97	-92.3	2,019.0	No	Yes	0.0	Light Gray
SHS-9	10/9/2015	5,380.79	5,343.00	37.79	--	--	0.85	-149.8	2,149	No	No	0.0	Clear
SHS-9	10/15/2015	5,380.79	5,343.03	37.76	--	--	2.67	-105.8	2,198	No	Yes	0.0	Clear

TABLE 7
WEEKLY GROUNDWATER LEVELS AND SHUTDOWN OBSERVATIONS

FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.

Groundwater Monitoring Wells	Date	Top of Casing Elevation	Adjusted Groundwater Elevation	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Dissolved Oxygen (mg/L)	ORP (mV)	Electrical Conductivity (µS)	Sheen	Odor	Headspace (ppm)	Comments
SHS-9	10/22/2015	5,380.79	5,343.09	37.70	--	--	0.87	-125.5	2,286	No	Yes	0.0	Light Brown
SHS-9	11/20/2015	5,380.79	5,343.23	37.56	--	--	1.18	-161.5	2,286	No	Yes	0.0	Light Brown
SHS-9	12/30/2015	5,380.79	5,342.34	38.45	--	--	3.23	-85.7	2,205	No	Yes	0.0	Light Brown
SHS-19	8/20/2015	5,378.89	5,340.13	38.76	--	--	NM	NM	NM	NM	NM	NM	
SHS-19	8/27/2015	5,378.89	5,340.17	38.72	--	--	0.89	-63.7	3,373.0	No	Yes	0.0	
SHS-19	9/3/2015	5,378.89	5,340.46	38.43	--	--	0.21	-50.6	3,328.0	No	No	0.0	
SHS-19	9/10/2015	5,378.89	5,340.61	38.28	--	--	0.45	-62.4	3,129.0	No	No	0.0	
SHS-19	9/16/2015	5,378.89	5,340.67	38.22	--	--	0.81	-135.3	3,392.8	No	No	0.0	
SHS-19	9/23/2015	5,378.89	5,340.74	38.15	--	--	4.75	-80.3	3,128.0	No	Yes	0.9	Clear
SHS-19	10/1/2015	5,378.89	5,340.78	38.11	--	--	0.88	-105.5	3,260.0	No	Yes	0.9	Clear
SHS-19	10/9/2015	5,378.89	5,340.86	38.03	--	--	1.17	-100.1	3,308	No	No	0.0	Clear
SHS-19	10/15/2015	5,378.89	5,340.89	38.00	--	--	2.95	-98.8	3,345	No	Yes	0.0	Clear
SHS-19	10/22/2015	5,378.89	5,340.89	38.00	--	--	1.22	-111.8	3,214	No	Yes	0.0	Clear
SHS-19	11/20/2015	5,378.89	5,340.97	37.92	--	--	0.97	-145.8	3,214	No	Yes	0.0	Clear
SHS-19	12/30/2015	5,378.89	5,341.11	37.78	--	--	1.37	-88.3	3,689	No	Yes	0.0	Clear

NOTES:

µS - microseimens

-- No Product Detected

BOLD - Measured Product

BTOC - Below top of casing

mg/L - Milligrams per liter

mV - Millivolt

NM - Not Measured

ORP - Oxidation reduction potential

ppm - Parts per million

TABLE 8
REMEDIATION SYSTEM ASSESSMENT LABORATORY ANALYTICAL RESULTS

FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.

Analyte	NMWQCC Standard	Unit	GBR-8	GBR-11	GBR-20	GBR-21D	GBR-22	GBR-25	GBR-26	GBR-34	SHS-2	SHS-8	SHS-9
			6-Aug	6-Aug	6-Aug	7-Aug	7-Aug	7-Aug	7-Aug	7-Aug	7-Aug	10-Aug	7-Aug
USEPA Method 8260B: Volatiles													
Benzene	10	µg/L	<5.0	1.7	<2.0	<2.0	1.7	<5.0	<2.0	5.2	<5.0	<1.0	<5.0
Toluene	750	µg/L	<5.0	<1.0	<2.0	<2.0	<2.0	<5.0	<2.0	<5.0	<5.0	<1.0	<5.0
Ethylbenzene	750	µg/L	<5.0	1.1	<2.0	<2.0	16	15	<2.0	51	<5.0	14	21
Xylenes, Total	620	µg/L	<7.5	<1.5	<3.0	<3.0	6.3	<7.5	<3.0	49	<7.5	<1.5	<7.5
USEPA Method 8015: Total petroleum hydrocarbons													
GRO	NE	mg/L	<0.20	<0.20	0.39	<1.0	0.34	0.98	<0.20	13	<1.0	0.18	<0.20
DRO	NE	mg/L	16	1.9	56	350	110	92	1.8	400	19	23	29
USEPA Method 300.0: Anions													
Chloride	250	mg/L	86	95	96	330	470	520	170	280	280	120	96

Notes:

BOLD - indicates concentration exceeds the NMWQCC standard
DRO - diesel range organics
GRO - gasoline range organics
mg/L - milligrams per liter
NE - not established
NMWQCC - New Mexico Water Quality Control Commission
USEPA - United States Environmental Protection Agency
µg/L - micrograms per liter



APPENDIX A

LABORATORY ANALYTICAL REPORTS



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

February 10, 2015

Ashley Ager

LTE

2243 Main Ave Suite 3

Durango, CO 81301

TEL: (970) 946-1093

FAX

RE: CBR Quarterly Sampling

OrderNo.: 1501952

Dear Ashley Ager:

Hall Environmental Analysis Laboratory received 3 sample(s) on 1/28/2015 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 qualifiers 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,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1501952

Date Reported: 2/10/2015

CLIENT: LTE

Client Sample ID: System Influent

Project: CBR Quarterly Sampling

Collection Date: 1/27/2015 1:30:00 PM

Lab ID: 1501952-001

Matrix: AQUEOUS

Received Date: 1/28/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	0.73	0.10		mg/L	1	1/28/2015 3:58:09 PM	R23965
Chloride	78	10		mg/L	20	1/28/2015 4:35:24 PM	R23965
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	1/28/2015 3:58:09 PM	R23965
Bromide	0.31	0.10		mg/L	1	1/28/2015 3:58:09 PM	R23965
Nitrogen, Nitrate (As N)	2.7	0.10		mg/L	1	1/28/2015 3:58:09 PM	R23965
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	1/28/2015 4:35:24 PM	R23965
Sulfate	1700	50	*	mg/L	100	2/2/2015 12:23:16 PM	R24057
EPA METHOD 200.7: METALS							Analyst: JLF
Calcium	380	10		mg/L	10	1/29/2015 2:47:33 PM	R23981
Iron	ND	0.020		mg/L	1	1/29/2015 2:33:16 PM	R23981
Magnesium	30	1.0		mg/L	1	1/29/2015 2:33:16 PM	R23981
Manganese	0.17	0.0020	*	mg/L	1	1/29/2015 2:33:16 PM	R23981
Potassium	3.0	1.0		mg/L	1	1/29/2015 2:33:16 PM	R23981
Sodium	450	10		mg/L	10	1/29/2015 2:47:33 PM	R23981
SM2340B: HARDNESS							Analyst: JLF
Hardness (As CaCO3)	1100	6.6		mg/L	1	1/29/2015 12:06:00 PM	R23981
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
Toluene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
Ethylbenzene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
Naphthalene	ND	2.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
1-Methylnaphthalene	ND	4.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
2-Methylnaphthalene	ND	4.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
Acetone	ND	10		µg/L	1	2/4/2015 12:50:13 AM	R24078
Bromobenzene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
Bromodichloromethane	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
Bromoform	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
Bromomethane	ND	3.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
2-Butanone	ND	10		µg/L	1	2/4/2015 12:50:13 AM	R24078
Carbon disulfide	ND	10		µg/L	1	2/4/2015 12:50:13 AM	R24078
Carbon Tetrachloride	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
Chlorobenzene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
Chloroethane	ND	2.0		µg/L	1	2/4/2015 12:50:13 AM	R24078

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 12.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1501952

Date Reported: 2/10/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE

Client Sample ID: System Influent

Project: CBR Quarterly Sampling

Collection Date: 1/27/2015 1:30:00 PM

Lab ID: 1501952-001

Matrix: AQUEOUS

Received Date: 1/28/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Chloroform	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
Chloromethane	ND	3.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
2-Chlorotoluene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
4-Chlorotoluene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
cis-1,2-DCE	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
Dibromochloromethane	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
Dibromomethane	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
1,1-Dichloroethane	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
1,1-Dichloroethene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
1,2-Dichloropropane	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
1,3-Dichloropropane	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
2,2-Dichloropropane	ND	2.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
1,1-Dichloropropene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
Hexachlorobutadiene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
2-Hexanone	ND	10		µg/L	1	2/4/2015 12:50:13 AM	R24078
Isopropylbenzene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
4-Isopropyltoluene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
4-Methyl-2-pentanone	ND	10		µg/L	1	2/4/2015 12:50:13 AM	R24078
Methylene Chloride	ND	3.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
n-Butylbenzene	ND	3.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
n-Propylbenzene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
sec-Butylbenzene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
Styrene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
tert-Butylbenzene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
trans-1,2-DCE	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078

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	Page 2 of 18
	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.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1501952

Date Reported: 2/10/2015

CLIENT: LTE**Client Sample ID:** System: Influent**Project:** CBR Quarterly Sampling**Collection Date:** 1/27/2015 1:30:00 PM**Lab ID:** 1501952-001**Matrix:** AQUEOUS**Received Date:** 1/28/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
Trichlorofluoromethane	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
Vinyl chloride	ND	1.0		µg/L	1	2/4/2015 12:50:13 AM	R24078
Xylenes, Total	ND	1.5		µg/L	1	2/4/2015 12:50:13 AM	R24078
Surr: 1,2-Dichloroethane-d4	95.2	70-130		%REC	1	2/4/2015 12:50:13 AM	R24078
Surr: 4-Bromofluorobenzene	91.7	70-130		%REC	1	2/4/2015 12:50:13 AM	R24078
Surr: Dibromofluoromethane	96.4	70-130		%REC	1	2/4/2015 12:50:13 AM	R24078
Surr: Toluene-d8	99.9	70-130		%REC	1	2/4/2015 12:50:13 AM	R24078
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	3000	0.010		µmhos/cm	1	1/29/2015 1:33:48 PM	R24009
SM4500-H+B: PH							Analyst: JRR
pH	7.26	1.68	H	pH units	1	1/29/2015 1:33:48 PM	R24009
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO3)	240	20		mg/L CaCO3	1	1/29/2015 1:33:48 PM	R24009
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/29/2015 1:33:48 PM	R24009
Total Alkalinity (as CaCO3)	240	20		mg/L CaCO3	1	1/29/2015 1:33:48 PM	R24009
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	2910	20.0	*	mg/L	1	1/30/2015 5:10:00 PM	17454

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.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1501952

Date Reported: 2/10/2015

CLIENT: LTE

Client Sample ID: System Effluent

Project: CBR Quarterly Sampling

Collection Date: 1/27/2015 1:50:00 PM

Lab ID: 1501952-002

Matrix: AQUEOUS

Received Date: 1/28/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	0.80	0.10		mg/L	1	1/28/2015 4:47:49 PM	R23965
Chloride	82	10		mg/L	20	1/28/2015 5:00:13 PM	R23965
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	1/28/2015 4:47:49 PM	R23965
Bromide	0.33	0.10		mg/L	1	1/28/2015 4:47:49 PM	R23965
Nitrogen, Nitrate (As N)	1.1	0.10		mg/L	1	1/28/2015 4:47:49 PM	R23965
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	1/28/2015 5:00:13 PM	R23965
Sulfate	1700	50	*	mg/L	100	2/2/2015 12:35:41 PM	R24057
EPA METHOD 200.7: METALS							Analyst: JLF
Calcium	400	10		mg/L	10	1/29/2015 2:49:27 PM	R23981
Iron	ND	0.020		mg/L	1	1/29/2015 2:35:25 PM	R23981
Magnesium	30	1.0		mg/L	1	1/29/2015 2:35:25 PM	R23981
Manganese	0.21	0.0020	*	mg/L	1	1/29/2015 2:35:25 PM	R23981
Potassium	3.2	1.0		mg/L	1	1/29/2015 2:35:25 PM	R23981
Sodium	450	10		mg/L	10	1/29/2015 2:49:27 PM	R23981
SM2340B: HARDNESS							Analyst: JLF
Hardness (As CaCO3)	1100	6.6		mg/L	1	1/29/2015 12:06:00 PM	R23981
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
Toluene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
Ethylbenzene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
Naphthalene	ND	2.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
1-Methylnaphthalene	ND	4.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
2-Methylnaphthalene	ND	4.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
Acetone	ND	10		µg/L	1	2/4/2015 1:18:43 AM	R24078
Bromobenzene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
Bromodichloromethane	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
Bromoform	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
Bromomethane	ND	3.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
2-Butanone	ND	10		µg/L	1	2/4/2015 1:18:43 AM	R24078
Carbon disulfide	ND	10		µg/L	1	2/4/2015 1:18:43 AM	R24078
Carbon Tetrachloride	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
Chlorobenzene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
Chloroethane	ND	2.0		µg/L	1	2/4/2015 1:18:43 AM	R24078

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.
RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1501952

Date Reported: 2/10/2015

CLIENT: LTE

Client Sample ID: System Effluent

Project: CBR Quarterly Sampling

Collection Date: 1/27/2015 1:50:00 PM

Lab ID: 1501952-002

Matrix: AQUEOUS

Received Date: 1/28/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Chloroform	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
Chloromethane	ND	3.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
2-Chlorotoluene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
4-Chlorotoluene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
cis-1,2-DCE	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
Dibromochloromethane	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
Dibromomethane	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
1,1-Dichloroethane	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
1,1-Dichloroethene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
1,2-Dichloropropane	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
1,3-Dichloropropane	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
2,2-Dichloropropane	ND	2.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
1,1-Dichloropropene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
Hexachlorobutadiene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
2-Hexanone	ND	10		µg/L	1	2/4/2015 1:18:43 AM	R24078
Isopropylbenzene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
4-Isopropyltoluene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
4-Methyl-2-pentanone	ND	10		µg/L	1	2/4/2015 1:18:43 AM	R24078
Methylene Chloride	ND	3.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
n-Butylbenzene	ND	3.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
n-Propylbenzene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
sec-Butylbenzene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
Styrene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
tert-Butylbenzene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
trans-1,2-DCE	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078

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.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1501952

Date Reported: 2/10/2015

CLIENT: LTE

Client Sample ID: System Effluent

Project: CBR Quarterly Sampling

Collection Date: 1/27/2015 1:50:00 PM

Lab ID: 1501952-002

Matrix: AQUEOUS

Received Date: 1/28/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
Trichlorofluoromethane	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
Vinyl chloride	ND	1.0		µg/L	1	2/4/2015 1:18:43 AM	R24078
Xylenes, Total	ND	1.5		µg/L	1	2/4/2015 1:18:43 AM	R24078
Surr: 1,2-Dichloroethane-d4	84.5	70-130		%REC	1	2/4/2015 1:18:43 AM	R24078
Surr: 4-Bromofluorobenzene	100	70-130		%REC	1	2/4/2015 1:18:43 AM	R24078
Surr: Dibromofluoromethane	85.3	70-130		%REC	1	2/4/2015 1:18:43 AM	R24078
Surr: Toluene-d8	82.8	70-130		%REC	1	2/4/2015 1:18:43 AM	R24078
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	3100	0.010		µmhos/cm	1	1/29/2015 1:50:24 PM	R24009
SM4500-H+B: PH							Analyst: JRR
pH	7.34	1.68	H	pH units	1	1/29/2015 1:50:24 PM	R24009
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO3)	240	20		mg/L CaCO3	1	1/29/2015 1:50:24 PM	R24009
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/29/2015 1:50:24 PM	R24009
Total Alkalinity (as CaCO3)	240	20		mg/L CaCO3	1	1/29/2015 1:50:24 PM	R24009
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	2940	20.0	*	mg/L	1	1/30/2015 5:10:00 PM	17454

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	Page 6 of 18
	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.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1501952

Date Reported: 2/10/2015

CLIENT: LTE

Client Sample ID: Trip Blank

Project: CBR Quarterly Sampling

Collection Date:

Lab ID: 1501952-003

Matrix: TRIP BLANK

Received Date: 1/28/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Toluene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Ethylbenzene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Naphthalene	ND	2.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
1-Methylnaphthalene	ND	4.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
2-Methylnaphthalene	ND	4.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Acetone	ND	10		µg/L	1	2/4/2015 1:47:22 AM	R24078
Bromobenzene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Bromodichloromethane	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Bromoform	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Bromomethane	ND	3.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
2-Butanone	ND	10		µg/L	1	2/4/2015 1:47:22 AM	R24078
Carbon disulfide	ND	10		µg/L	1	2/4/2015 1:47:22 AM	R24078
Carbon Tetrachloride	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Chlorobenzene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Chloroethane	ND	2.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Chloroform	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Chloromethane	ND	3.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
2-Chlorotoluene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
4-Chlorotoluene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
cis-1,2-DCE	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Dibromochloromethane	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Dibromomethane	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
1,1-Dichloroethane	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
1,1-Dichloroethene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
1,2-Dichloropropane	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
1,3-Dichloropropane	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
2,2-Dichloropropane	ND	2.0		µg/L	1	2/4/2015 1:47:22 AM	R24078

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 ?.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE Client Sample ID: Trip Blank
 Project: CBR Quarterly Sampling Collection Date:
 Lab ID: 1501952-003 Matrix: TRIP BLANK Received Date: 1/28/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
1,1-Dichloropropene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Hexachlorobutadiene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
2-Hexanone	ND	10		µg/L	1	2/4/2015 1:47:22 AM	R24078
Isopropylbenzene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
4-Isopropyltoluene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
4-Methyl-2-pentanone	ND	10		µg/L	1	2/4/2015 1:47:22 AM	R24078
Methylene Chloride	ND	3.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
n-Butylbenzene	ND	3.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
n-Propylbenzene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
sec-Butylbenzene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Styrene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
tert-Butylbenzene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
trans-1,2-DCE	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Trichlorofluoromethane	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Vinyl chloride	ND	1.0		µg/L	1	2/4/2015 1:47:22 AM	R24078
Xylenes, Total	ND	1.5		µg/L	1	2/4/2015 1:47:22 AM	R24078
Surr: 1,2-Dichloroethane-d4	84.4	70-130		%REC	1	2/4/2015 1:47:22 AM	R24078
Surr: 4-Bromofluorobenzene	96.9	70-130		%REC	1	2/4/2015 1:47:22 AM	R24078
Surr: Dibromofluoromethane	89.9	70-130		%REC	1	2/4/2015 1:47:22 AM	R24078
Surr: Toluene-d8	91.1	70-130		%REC	1	2/4/2015 1:47:22 AM	R24078

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.
	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#: 1501952

10-Feb-15

Client: LTE
Project: CBR Quarterly Sampling

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Metals					
Client ID:	PBW	Batch ID:	R23981	RunNo:	23981					
Prep Date:		Analysis Date:	1/29/2015	SeqNo:	707228	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:	R23981	RunNo:	23981					
Prep Date:		Analysis Date:	1/29/2015	SeqNo:	707229	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	48	1.0	50.00	0	96.7	85	115			
Iron	0.46	0.020	0.5000	0	92.6	85	115			
Magnesium	49	1.0	50.00	0	98.8	85	115			
Manganese	0.44	0.0020	0.5000	0	87.9	85	115			
Potassium	48	1.0	50.00	0	95.8	85	115			
Sodium	49	1.0	50.00	0	97.7	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.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1501952

10-Feb-15

Client: LTE
Project: CBR Quarterly Sampling

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R23965	RunNo:	23965					
Prep Date:		Analysis Date:	1/28/2015	SeqNo:	706790	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:	R23965	RunNo:	23965					
Prep Date:		Analysis Date:	1/28/2015	SeqNo:	706791	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	103	90	110			
Chloride	4.7	0.50	5.000	0	94.8	90	110			
Nitrogen, Nitrite (As N)	0.92	0.10	1.000	0	92.0	90	110			
Bromide	2.5	0.10	2.500	0	98.8	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.9	90	110			
Phosphorus, Orthophosphate (As P)	4.8	0.50	5.000	0	95.6	90	110			

Sample ID	1501952-001CMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	System Influent	Batch ID:	R23965	RunNo:	23965					
Prep Date:		Analysis Date:	1/28/2015	SeqNo:	706795	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Fluoride	1.2	0.10	0.5000	0.7290	104	66.1	113			
Nitrogen, Nitrite (As N)	0.83	0.10	1.000	0	82.9	66.4	111			
Bromide	2.7	0.10	2.500	0.3070	96.9	82.5	103			
Nitrogen, Nitrate (As N)	5.3	0.10	2.500	2.667	105	84	109			

Sample ID	1501952-001CMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	System Influent	Batch ID:	R23965	RunNo:	23965					
Prep Date:		Analysis Date:	1/28/2015	SeqNo:	706796	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Fluoride	1.3	0.10	0.5000	0.7290	106	66.1	113	1.04	20	
Nitrogen, Nitrite (As N)	0.82	0.10	1.000	0	82.4	66.4	111	0.605	20	
Bromide	2.7	0.10	2.500	0.3070	96.3	82.5	103	0.551	20	
Nitrogen, Nitrate (As N)	5.2	0.10	2.500	2.667	103	84	109	0.894	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 |
| O RSD is greater than RSDlimit | 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#: 1501952

10-Feb-15

Client: LTE
Project: CBR Quarterly Sampling

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R24057	RunNo:	24057					
Prep Date:		Analysis Date:	2/2/2015	SeqNo:	708996	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:	R24057	RunNo:	24057					
Prep Date:		Analysis Date:	2/2/2015	SeqNo:	708998	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	10	0.50	10.00	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
- 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.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1501952

10-Feb-15

Client: LTE

Project: CBR Quarterly Sampling

Sample ID	5mL-rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R24078	RunNo:	24078					
Prep Date:		Analysis Date:	2/3/2015	SeqNo:	709591	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:

* 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.

RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1501952

10-Feb-15

Client: LTE
Project: CBR Quarterly Sampling

Sample ID	5mL-rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R24078	RunNo:	24078					
Prep Date:		Analysis Date:	2/3/2015	SeqNo:	709591	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	9.4		10.00		93.9	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.0	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.5	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R24078	RunNo:	24078					
Prep Date:		Analysis Date:	2/3/2015	SeqNo:	709594	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	21	1.0	20.00	0	104	70	130			
Chlorobenzene	20	1.0	20.00	0	99.6	70	130			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | 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#: 1501952

10-Feb-15

Client: LTE

Project: CBR Quarterly Sampling

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: R24078			RunNo: 24078					
Prep Date:		Analysis Date: 2/3/2015			SeqNo: 709594		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20	1.0	20.00	0	102	75.6	144			
Trichloroethene (TCE)	20	1.0	20.00	0	98.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.1	70	130			
Surr: 4-Bromofluorobenzene	8.9		10.00		89.3	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.0	70	130			
Surr: Toluene-d8	9.5		10.00		95.2	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
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.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1501952

10-Feb-15

Client: LTE

Project: CBR Quarterly Sampling

Sample ID	1501952-001c dup			SampType:	DUP		TestCode:	SM2510B: Specific Conductance			
Client ID:	System Influent			Batch ID:	R24009		RunNo:	24009			
Prep Date:				Analysis Date:	1/29/2015		SeqNo:	707925		Units:	µmhos/cm
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Conductivity	3000	0.010						0.165	20		

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.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1501952

10-Feb-15

Client: LTE

Project: CBR Quarterly Sampling

Sample ID	1501952-001c dup			SampType:	DUP		TestCode:	SM4500-H+B: pH			
Client ID:	System Influent			Batch ID:	R24009		RunNo:	24009			
Prep Date:				Analysis Date:	1/29/2015		SeqNo:	707947		Units:	pH units
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
pH	7.25	1.68								H	

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.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1501952

10-Feb-15

Client: LTE
Project: CBR Quarterly Sampling

Sample ID	mb-1	SampType:	MBLK		TestCode:	SM2320B: Alkalinity				
Client ID:	PBW	Batch ID:	R24009		RunNo:	24009				
Prep Date:		Analysis Date:	1/29/2015		SeqNo:	707893	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:	R24009		RunNo:	24009				
Prep Date:			Analysis Date:	1/29/2015		SeqNo:	707894		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
- 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.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1501952

10-Feb-15

Client: LTE
Project: CBR Quarterly Sampling

Sample ID	MB-17454	SampType:	MBLK	TestCode:	SM2540C MOD: Total Dissolved Solids
Client ID:	PBW	Batch ID:	17454	RunNo:	24012
Prep Date:	1/29/2015	Analysis Date:	1/30/2015	SeqNo:	708015 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-17454	SampType:	LCS	TestCode:	SM2540C MOD: Total Dissolved Solids
Client ID:	LCSW	Batch ID:	17454	RunNo:	24012
Prep Date:	1/29/2015	Analysis Date:	1/30/2015	SeqNo:	708016 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. | 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. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87105
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: LTE

Work Order Number: 1501952

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

1/28/2015 7:30:00 AM

Completed By: Lindsay Mangin

1/28/2015 9:32:08 AM

Reviewed By:

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?

~~FedEx~~ COURIER
*01/28/15

Log In

4. Was an attempt made to cool the samples?

Yes ☒

No ☐

NA ☐

5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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?

Yes ☒

No ☐

(Note discrepancies on chain of custody)

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?

Yes ☒

No ☐

(If no, notify customer for authorization.)

of preserved bottles checked for pH: 4
(<2 or >12 unless noted)
Adjusted? no
Checked by: CS

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	1.3	Good	Not Present			

Chain-of-Custody Record		Turn-Around Time:	
Client: <u>LT Environmental</u>		☒ Standard ☐ Rush	
<u>2</u>		Project Name:	
Vailing Address: <u>2243 MAIN AVE #3</u>		<u>CBR Quarterly Sampling</u>	
<u>Durango Co 81301</u>		Project #:	
Phone #: <u>970-385-1096</u>		<u>WR 1009</u>	
Email or Fax#: <u>ager@ltenv.com</u>		Project Manager:	
QA/QC Package:		<u>Ashley Ager</u>	
☒ Standard ☐ Level 4 (Full Validation)		Sampler: <u>Daniel Newman</u>	
Accreditation		On Ice: ☒ Yes ☐ No	
☐ NELAP ☐ Other		Sample Temperature: <u>1/3</u>	
☐ EDD (Type)			

☒ **Standard** ☐ **Rush**

Project Name:

CBR Quarterly Sampling

Project #:

WR 1009

Project Manager:

Ashley Ager

Sampler: Daniel Newman

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.3

Date:	Time:	Relinquished by:	Received by:	Date	Time
1/27/15	1537		Christopher Waller	1/27/15	1537
Date:	Time:	Relinquished by:	Received by:	Date	Time
1/27/15	2100	Christopher Waller		01/28/15	0530



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

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)	
X	X See Attached	
	Air Bubbles (Y or N)	

Remarks:

1. **Introduction**
 2. **Background**
 3. **Methodology**
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 5. **Conclusion**
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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.

Ashley Gallegos

From: Brooke Herb <bherb@ltenv.com>
Sent: Wednesday, January 28, 2015 12:17 PM
To: Ashley Gallegos
Cc: Devin Hencmann; Daniel Newman
Subject: RE: Attached list

Ashley,

Sorry for the confusion. For both the influent and effluent samples we need:

Volatile Organic Compounds method 8260; and

Groundwater Chemistry:

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

No PAHs or Metals are required for this sampling event.

Thank You,
Brooke Herb

Brooke Herb
Project Geologist



COMPLIANCE / ENGINEERING / REMEDIATION

LT Environmental, Inc.
2243 Main Avenue



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

February 02, 2016

Devin Hencmann

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (970) 403-6023

FAX (505) 632-3911

RE: GBR Quarterly Sampling

OrderNo.: 1504413

Dear Devin Hencmann:

Hall Environmental Analysis Laboratory received 3 sample(s) on 4/9/2015 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued April 17, 2015.

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 1504413

Date Reported: 2/2/2016

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: Influent

Project: GBR Quarterly Sampling

Collection Date: 4/8/2015 10:50:00 AM

Lab ID: 1504413-001

Matrix: AQUEOUS

Received Date: 4/9/2015 8:09:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SM2340B: HARDNESS							Analyst: JLF
Hardness (As CaCO3)	1000	6.6		mg/L	1	4/14/2015 10:16:00 AM	R25499
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	0.62	0.10		mg/L	1	4/9/2015 1:22:47 PM	R25412
Chloride	86	10		mg/L	20	4/9/2015 1:35:11 PM	R25412
Nitrogen, Nitrite (As N)	0.35	0.10		mg/L	1	4/9/2015 1:22:47 PM	R25412
Bromide	0.34	0.10		mg/L	1	4/9/2015 1:22:47 PM	R25412
Nitrogen, Nitrate (As N)	0.18	0.10		mg/L	1	4/9/2015 1:22:47 PM	R25412
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	4/9/2015 1:22:47 PM	R25412
Sulfate	1700	50	*	mg/L	100	4/9/2015 2:39:08 AM	R25525
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	3600	0.010		µmhos/cm	1	4/9/2015 1:21:34 PM	R25455
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO3)	296.7	20.00		mg/L CaCO3	1	4/9/2015 1:21:34 PM	R25455
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	4/9/2015 1:21:34 PM	R25455
Total Alkalinity (as CaCO3)	296.7	20.00		mg/L CaCO3	1	4/9/2015 1:21:34 PM	R25455
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	3080	200	*	mg/L	1	4/9/2015 6:26:00 PM	18614
SM4500-H+B: PH							Analyst: JRR
pH	7.21	1.68	H	pH units	1	4/9/2015 1:21:34 PM	R25455
EPA METHOD 200.7: DISSOLVED METALS							Analyst: JLF
Calcium	370	10		mg/L	10	4/9/2015 5:14:13 PM	R25499
Iron	0.042	0.020		mg/L	1	4/9/2015 4:08:05 PM	R25499
Magnesium	30	1.0		mg/L	1	4/9/2015 4:08:05 PM	R25499
Manganese	0.26	0.0020	*	mg/L	1	4/9/2015 4:08:05 PM	R25499
Potassium	3.9	1.0		mg/L	1	4/14/2015 4:08:05 PM	R25499
Sodium	490	10		mg/L	10	4/14/2015 5:14:13 PM	R25499
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Toluene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Ethylbenzene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Naphthalene	ND	2.0		µg/L	1	4/9/2015 6:07:51 PM	R25408

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1504413

Date Reported: 2/2/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: Influent

Project: GBR Quarterly Sampling

Collection Date: 4/8/2015 10:50:00 AM

Lab ID: 1504413-001

Matrix: AQUEOUS

Received Date: 4/9/2015 8:09:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
1-Methylnaphthalene	ND	4.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
2-Methylnaphthalene	ND	4.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Acetone	ND	10		µg/L	1	4/9/2015 6:07:51 PM	R25408
Bromobenzene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Bromodichloromethane	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Bromoform	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Bromomethane	ND	3.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
2-Butanone	ND	10		µg/L	1	4/9/2015 6:07:51 PM	R25408
Carbon disulfide	ND	10		µg/L	1	4/9/2015 6:07:51 PM	R25408
Carbon Tetrachloride	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Chlorobenzene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Chloroethane	ND	2.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Chloroform	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Chloromethane	ND	3.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
2-Chlorotoluene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
4-Chlorotoluene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
cis-1,2-DCE	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Dibromochloromethane	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Dibromomethane	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
1,1-Dichloroethane	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
1,1-Dichloroethene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
1,2-Dichloropropane	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
1,3-Dichloropropane	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
2,2-Dichloropropane	ND	2.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
1,1-Dichloropropene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Hexachlorobutadiene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
2-Hexanone	ND	10		µg/L	1	4/9/2015 6:07:51 PM	R25408
Isopropylbenzene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
4-Isopropyltoluene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
4-Methyl-2-pentanone	ND	10		µg/L	1	4/9/2015 6:07:51 PM	R25408
Methylene Chloride	ND	3.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
n-Butylbenzene	ND	3.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
n-Propylbenzene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1504413

Date Reported: 2/2/2016

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: Influent

Project: GBR Quarterly Sampling

Collection Date: 4/8/2015 10:50:00 AM

Lab ID: 1504413-001

Matrix: AQUEOUS

Received Date: 4/9/2015 8:09:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
sec-Butylbenzene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Styrene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
tert-Butylbenzene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
trans-1,2-DCE	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Trichlorofluoromethane	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Vinyl chloride	ND	1.0		µg/L	1	4/9/2015 6:07:51 PM	R25408
Xylenes, Total	ND	1.5		µg/L	1	4/9/2015 6:07:51 PM	R25408
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	4/9/2015 6:07:51 PM	R25408
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	4/9/2015 6:07:51 PM	R25408
Surr: Dibromofluoromethane	104	70-130		%Rec	1	4/9/2015 6:07:51 PM	R25408
Surr: Toluene-d8	109	70-130		%Rec	1	4/9/2015 6:07:51 PM	R25408

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1504413

Date Reported: 2/2/2016

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: Effluent

Project: GBR Quarterly Sampling

Collection Date: 4/8/2015 11:05:00 AM

Lab ID: 1504413-002

Matrix: AQUEOUS

Received Date: 4/9/2015 8:09:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SM2340B: HARDNESS							Analyst: JLF
Hardness (As CaCO3)	1000	6.6		mg/L	1	4/14/2015 10:16:00 AM	R25499
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	0.62	0.10		mg/L	1	4/9/2015 2:12:25 PM	R25412
Chloride	79	10		mg/L	20	4/9/2015 2:49:38 PM	R25412
Nitrogen, Nitrite (As N)	0.48	0.10		mg/L	1	4/9/2015 2:12:25 PM	R25412
Bromide	0.32	0.10		mg/L	1	4/9/2015 2:12:25 PM	R25412
Nitrogen, Nitrate (As N)	0.61	0.10		mg/L	1	4/9/2015 2:12:25 PM	R25412
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	4/9/2015 2:12:25 PM	R25412
Sulfate	1700	50	*	mg/L	100	4/15/2015 2:51:33 AM	R25525
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	3600	0.010		µmhos/cm	1	4/10/2015 1:39:48 PM	R25455
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO3)	308.7	20.00		mg/L CaCO3	1	4/10/2015 1:39:48 PM	R25455
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	4/10/2015 1:39:48 PM	R25455
Total Alkalinity (as CaCO3)	308.7	20.00		mg/L CaCO3	1	4/10/2015 1:39:48 PM	R25455
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	3010	20.0	*	mg/L	1	4/11/2015 6:26:00 PM	18614
SM4500-H+B: PH							Analyst: JRR
pH	7.27	1.68	H	pH units	1	4/10/2015 1:39:48 PM	R25455
EPA METHOD 200.7: DISSOLVED METALS							Analyst: JLF
Calcium	360	10		mg/L	10	4/14/2015 5:16:21 PM	R25499
Iron	0.13	0.020		mg/L	1	4/14/2015 4:10:10 PM	R25499
Magnesium	31	1.0		mg/L	1	4/14/2015 4:10:10 PM	R25499
Manganese	0.26	0.0020	*	mg/L	1	4/14/2015 4:10:10 PM	R25499
Potassium	3.8	1.0		mg/L	1	4/14/2015 4:10:10 PM	R25499
Sodium	490	10		mg/L	10	4/14/2015 5:16:21 PM	R25499
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Toluene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Ethylbenzene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Naphthalene	ND	2.0		µg/L	1	4/9/2015 6:36:30 PM	R25408

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
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	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1504413

Date Reported: 2/2/2016

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: Effluent

Project: GBR Quarterly Sampling

Collection Date: 4/8/2015 11:05:00 AM

Lab ID: 1504413-002

Matrix: AQUEOUS

Received Date: 4/9/2015 8:09:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
1-Methylnaphthalene	ND	4.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
2-Methylnaphthalene	ND	4.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Acetone	ND	10		µg/L	1	4/9/2015 6:36:30 PM	R25408
Bromobenzene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Bromodichloromethane	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Bromoform	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Bromomethane	ND	3.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
2-Butanone	ND	10		µg/L	1	4/9/2015 6:36:30 PM	R25408
Carbon disulfide	ND	10		µg/L	1	4/9/2015 6:36:30 PM	R25408
Carbon Tetrachloride	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Chlorobenzene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Chloroethane	ND	2.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Chloroform	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Chloromethane	ND	3.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
2-Chlorotoluene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
4-Chlorotoluene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
cis-1,2-DCE	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Dibromochloromethane	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Dibromomethane	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
1,1-Dichloroethane	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
1,1-Dichloroethene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
1,2-Dichloropropane	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
1,3-Dichloropropane	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
2,2-Dichloropropane	ND	2.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
1,1-Dichloropropene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Hexachlorobutadiene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
2-Hexanone	ND	10		µg/L	1	4/9/2015 6:36:30 PM	R25408
Isopropylbenzene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
4-Isopropyltoluene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
4-Methyl-2-pentanone	ND	10		µg/L	1	4/9/2015 6:36:30 PM	R25408
Methylene Chloride	ND	3.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
n-Butylbenzene	ND	3.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
n-Propylbenzene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical ReportLab Order **1504413**Date Reported: **2/2/2016****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** Effluent**Project:** GBR Quarterly Sampling**Collection Date:** 4/8/2015 11:05:00 AM**Lab ID:** 1504413-002**Matrix:** AQUEOUS**Received Date:** 4/9/2015 8:09:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
sec-Butylbenzene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Styrene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
tert-Butylbenzene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
trans-1,2-DCE	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Trichlorofluoromethane	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Vinyl chloride	ND	1.0		µg/L	1	4/9/2015 6:36:30 PM	R25408
Xylenes, Total	ND	1.5		µg/L	1	4/9/2015 6:36:30 PM	R25408
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	4/9/2015 6:36:30 PM	R25408
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	4/9/2015 6:36:30 PM	R25408
Surr: Dibromofluoromethane	110	70-130		%Rec	1	4/9/2015 6:36:30 PM	R25408
Surr: Toluene-d8	91.8	70-130		%Rec	1	4/9/2015 6:36:30 PM	R25408

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1504413

Date Reported: 2/2/2016

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: Trip Blank

Project: GBR Quarterly Sampling

Collection Date:

Lab ID: 1504413-003

Matrix: TRIP BLANK

Received Date: 4/9/2015 8:09:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Toluene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Ethylbenzene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Naphthalene	ND	2.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
1-Methylnaphthalene	ND	4.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
2-Methylnaphthalene	ND	4.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Acetone	ND	10		µg/L	1	4/9/2015 7:05:20 PM	R25408
Bromobenzene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Bromodichloromethane	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Bromoform	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Bromomethane	ND	3.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
2-Butanone	ND	10		µg/L	1	4/9/2015 7:05:20 PM	R25408
Carbon disulfide	ND	10		µg/L	1	4/9/2015 7:05:20 PM	R25408
Carbon Tetrachloride	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Chlorobenzene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Chloroethane	ND	2.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Chloroform	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Chloromethane	ND	3.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
2-Chlorotoluene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
4-Chlorotoluene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
cis-1,2-DCE	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Dibromochloromethane	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Dibromomethane	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
1,1-Dichloroethane	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
1,1-Dichloroethene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
1,2-Dichloropropane	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
1,3-Dichloropropane	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
2,2-Dichloropropane	ND	2.0		µg/L	1	4/9/2015 7:05:20 PM	R25408

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1504413

Date Reported: 2/2/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: Trip Blank

Project: GBR Quarterly Sampling

Collection Date:

Lab ID: 1504413-003

Matrix: TRIP BLANK

Received Date: 4/9/2015 8:09:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
1,1-Dichloropropene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Hexachlorobutadiene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
2-Hexanone	ND	10		µg/L	1	4/9/2015 7:05:20 PM	R25408
Isopropylbenzene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
4-Isopropyltoluene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
4-Methyl-2-pentanone	ND	10		µg/L	1	4/9/2015 7:05:20 PM	R25408
Methylene Chloride	ND	3.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
n-Butylbenzene	ND	3.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
n-Propylbenzene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
sec-Butylbenzene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Styrene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
tert-Butylbenzene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
trans-1,2-DCE	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Trichlorofluoromethane	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Vinyl chloride	ND	1.0		µg/L	1	4/9/2015 7:05:20 PM	R25408
Xylenes, Total	ND	1.5		µg/L	1	4/9/2015 7:05:20 PM	R25408
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	4/9/2015 7:05:20 PM	R25408
Surr: 4-Bromofluorobenzene	93.7	70-130		%Rec	1	4/9/2015 7:05:20 PM	R25408
Surr: Dibromofluoromethane	109	70-130		%Rec	1	4/9/2015 7:05:20 PM	R25408
Surr: Toluene-d8	94.6	70-130		%Rec	1	4/9/2015 7:05:20 PM	R25408

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504413

02-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID:	R25499	RunNo:	25499					
Prep Date:		Analysis Date:	4/14/2015	SeqNo:	755596	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	LCSW	Batch ID:	R25499	RunNo:	25499					
Prep Date:		Analysis Date:	4/14/2015	SeqNo:	755597	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	47	1.0	50.00	0	93.3	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Magnesium	49	1.0	50.00	0	98.6	85	115			
Manganese	0.47	0.0020	0.5000	0	94.1	85	115			
Potassium	49	1.0	50.00	0	97.2	85	115			
Sodium	50	1.0	50.00	0	99.2	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	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 Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504413

02-Feb-16

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:	R25412	RunNo:	25412					
Prep Date:		Analysis Date:	4/9/2015	SeqNo:	752188	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:	R25412	RunNo:	25412					
Prep Date:		Analysis Date:	4/9/2015	SeqNo:	752189	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	101	90	110			
Chloride	4.8	0.50	5.000	0	96.3	90	110			
Nitrogen, Nitrite (As N)	1.0	0.10	1.000	0	99.8	90	110			
Bromide	2.5	0.10	2.500	0	100	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P)	4.8	0.50	5.000	0	96.7	90	110			

Sample ID	1504413-002BMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	Effluent	Batch ID:	R25412	RunNo:	25412					
Prep Date:		Analysis Date:	4/9/2015	SeqNo:	752201	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.0	0.10	0.5000	0.6152	80.2	66.1	113			
Nitrogen, Nitrite (As N)	1.4	0.10	1.000	0.4756	91.9	66.4	111			
Bromide	2.6	0.10	2.500	0.3155	91.1	82.5	103			
Nitrogen, Nitrate (As N)	3.0	0.10	2.500	0.6081	95.5	84	109			
Phosphorus, Orthophosphate (As P)	3.1	0.50	5.000	0	61.3	69	109			S

Sample ID	1504413-002BMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	Effluent	Batch ID:	R25412	RunNo:	25412					
Prep Date:		Analysis Date:	4/9/2015	SeqNo:	752202	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.0	0.10	0.5000	0.6152	78.3	66.1	113	0.979	20	
Nitrogen, Nitrite (As N)	1.4	0.10	1.000	0.4756	92.0	66.4	111	0.0932	20	
Bromide	2.6	0.10	2.500	0.3155	91.8	82.5	103	0.715	20	
Nitrogen, Nitrate (As N)	3.0	0.10	2.500	0.6081	96.0	84	109	0.390	20	
Phosphorus, Orthophosphate (As P)	3.0	0.50	5.000	0	60.2	69	109	1.84	20	S

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	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 Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504413

02-Feb-16

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:	R25412		RunNo:	25412				
Prep Date:		Analysis Date:	4/9/2015		SeqNo:	752244	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: R25412			RunNo: 25412					
Prep Date:		Analysis Date: 4/9/2015			SeqNo: 752245		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	4.6	0.50	5.000	0	91.8	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	95.8	90	110			
Bromide	2.4	0.10	2.500	0	94.9	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	95.6	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	92.2	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R25525	RunNo:	25525					
Prep Date:		Analysis Date:	4/14/2015	SeqNo:	756011	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ² D	RPDLimit	Qual
Sulfate	ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R25525	RunNo:	25525					
Prep Date:		Analysis Date:	4/14/2015	SeqNo:	756012	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	95.6	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | 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 Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504413

02-Feb-16

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: R25408			RunNo: 25408					
Prep Date:		Analysis Date: 4/9/2015			SeqNo: 752021		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	18	1.0	20.00	0	88.4	70	130			
Chlorobenzene	19	1.0	20.00	0	96.3	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	121	75.6	144			
Trichloroethene (TCE)	20	1.0	20.00	0	98.4	70	130			
Surr: 1,2-Dichloroethane-d4	12		10.00		124	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	11		10.00		115	70	130			
Surr: Toluene-d8	9.8		10.00		97.5	70	130			

Sample ID	5mL-rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R25408		RunNo: 25408						
Prep Date:		Analysis Date: 4/9/2015		SeqNo: 752040		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								

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	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 Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504413

02-Feb-16

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:	R25408	RunNo:	25408					
Prep Date:		Analysis Date:	4/9/2015	SeqNo:	752040	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504413

02-Feb-16

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:	R25408	RunNo:	25408					
Prep Date:		Analysis Date:	4/9/2015	SeqNo:	752040	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	11		10.00		113	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.0	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	9.2		10.00		92.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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 Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504413

02-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID	1504413-001b dup			SampType:	DUP		TestCode:	SM2510B: Specific Conductance			
Client ID:	Influent			Batch ID:	R25455		RunNo:	25455			
Prep Date:				Analysis Date:	4/10/2015		SeqNo:	753749		Units:	µmhos/cm
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Conductivity	3600	0.010						0.110	20		

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504413

02-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID	1504413-001b dup			SampType:	DUP		TestCode:	SM4500-H+B: pH			
Client ID:	Influent			Batch ID:	R25455		RunNo:	25455			
Prep Date:				Analysis Date:	4/10/2015		SeqNo:	753689		Units:	pH units
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
pH	7.22	1.68								H	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	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 Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504413

02-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID	mb-1	SampType:	MBLK	TestCode:	SM2320B: Alkalinity					
Client ID:	PBW	Batch ID:	R25455	RunNo:	25455					
Prep Date:		Analysis Date:	4/10/2015	SeqNo:	753612	Units:	mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID	lcs-1	SampType:	LCS	TestCode:	SM2320B: Alkalinity					
Client ID:	LCSW	Batch ID:	R25455	RunNo:	25455					
Prep Date:		Analysis Date:	4/10/2015	SeqNo:	753613	Units:	mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	78.68	20.00	80.00	0	98.4	90	110			

Sample ID	mb-2	SampType:	MBLK	TestCode:	SM2320B: Alkalinity					
Client ID:	PBW	Batch ID:	R25455	RunNo:	25455					
Prep Date:		Analysis Date:	4/10/2015	SeqNo:	753636	Units:	mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID	lcs-2	SampType:	LCS	TestCode:	SM2320B: Alkalinity					
Client ID:	LCSW	Batch ID:	R25455	RunNo:	25455					
Prep Date:		Analysis Date:	4/10/2015	SeqNo:	753637	Units:	mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79.80	20.00	80.00	0	99.7	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | 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 Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504413

02-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID	MB-18614	SampType:	MBLK	TestCode:	SM2540C MOD: Total Dissolved Solids
Client ID:	PBW	Batch ID:	18614	RunNo:	25438
Prep Date:	4/10/2015	Analysis Date:	4/11/2015	SeqNo:	752934 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-18614	SampType:	LCS	TestCode:	SM2540C MOD: Total Dissolved Solids
Client ID:	LCSW	Batch ID:	18614	RunNo:	25438
Prep Date:	4/10/2015	Analysis Date:	4/11/2015	SeqNo:	752935 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. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | 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 Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |



Hall Environmental Analysis Laboratory
4901 Hickms 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: 1504413

RcptNo: 1

Received by/date:

AG 04/09/15

Logged By: Lindsay Mangin

4/9/2015 8:09:00 AM

Completed By: Lindsay Mangin

4/9/2015 10:24:39 AM

Reviewed By:

JA 04/09/15

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? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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: 4
Adjusted? (2 or >12 unless noted) NO
Checked by: AG

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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record		Turn-Around Time:	
Client: Kelly Robinson		☒ Standard ☐ Rush	
Western Refining		Project Name:	
Mailing Address: 111 CK 4990		GBR Quarterly Sampling	
Bloomfield, NM 87413		Project #:	
Phone #: (505) 632-4166		WR1009	
Email or Fax#: Kelly.Robinson@WR.com		Project Manager:	
QA/QC Package:		Darin Henemann	
☒ Standard ☐ Level 4 (Full Validation)		Sampler: M. Wicker	
Accreditation		On Ice: ☒ Yes ☐ No	
☐ NELAP ☐ Other		Sample Temperature: 1.0	
☐ EDD (Type)			

☒ Standard ☐ Rush

GBR Quarterly Sampling

Project #:

WR1009

Project Manager:

Devin Henschmann

Sampler: M. Wicker

On Ice: ☒ Yes ☐ No

Sample Temperature: 10

[illegible]

Date:	Time:	Relinquished by:	Received by:	Date	Time
-8-15	1210	<i>[Signature]</i>	<i>Christ Wale</i>	4/8/15	1210
Date:	Time:	Relinquished by:	Received by:	Date	Time
4/8/15	1815	<i>Christ Wale</i>	<i>[Signature]</i>	09/09/15	0809

Remarks:	
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HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

[illegible]

If necessary, samples submitted to Hail 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

BC

TDS

alkalinity

hardness

anions

bromide

chloride

sulfate

fluoride

nitrate/nitrite

phosphorus

cations

calcium

iron

magnesium

manganese

potassium

sodium



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

August 03, 2015

Ashley Ager

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (970) 946-1093

FAX

RE: GBR Quarterly Sampling

OrderNo.: 1507B84

Dear Ashley Ager:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/25/2015 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 qualifiers 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 1507B84

Date Reported: 8/3/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: System Influent

Project: GBR Quarterly Sampling

Collection Date: 7/24/2015 12:05:00 PM

Lab ID: 1507B84-001

Matrix: AQUEOUS

Received Date: 7/25/2015 9:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2340B: HARDNESS							Analyst: ELS
Hardness (As CaCO ₃)	1100	6.6		mg/L	1	7/31/2015 8:22:00 AM	R27875
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	0.69	0.10		mg/L	1	7/29/2015 12:16:09 AM	R27827
Chloride	85	10		mg/L	20	7/29/2015 12:28:34 AM	R27827
Bromide	0.29	0.10		mg/L	1	7/29/2015 12:16:09 AM	R27827
Phosphorus, Orthophosphate (As P)	ND	10	H	mg/L	20	7/29/2015 12:28:34 AM	R27827
Sulfate	1900	25	*	mg/L	50	7/30/2015 3:35:56 AM	R27852
Nitrate+Nitrite as N	1.6	1.0		mg/L	5	7/29/2015 1:05:47 AM	R27827
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	3500	0.010		µmhos/cm	1	7/28/2015 7:39:48 PM	R27844
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	286.6	20.00		mg/L CaCO ₃	1	7/28/2015 7:39:48 PM	R27844
Carbonate (As CaCO ₃)	ND	2.000		mg/L CaCO ₃	1	7/28/2015 7:39:48 PM	R27844
Total Alkalinity (as CaCO ₃)	286.6	20.00		mg/L CaCO ₃	1	7/28/2015 7:39:48 PM	R27844
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	2970	20.0	*	mg/L	1	7/30/2015 1:27:00 PM	20506
SM4500-H+B: PH							Analyst: JRR
pH	7.54	1.68	H	pH units	1	7/28/2015 7:39:48 PM	R27844
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	400	10		mg/L	10	7/31/2015 1:49:23 PM	R27875
Iron	0.057	0.020		mg/L	1	7/31/2015 9:47:23 AM	R27875
Magnesium	34	1.0		mg/L	1	7/31/2015 9:47:23 AM	R27875
Manganese	0.36	0.0020	*	mg/L	1	7/31/2015 9:47:23 AM	R27875
Potassium	3.1	1.0		mg/L	1	7/31/2015 9:47:23 AM	R27875
Sodium	490	10		mg/L	10	7/31/2015 1:49:23 PM	R27875
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
Toluene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
Ethylbenzene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
Naphthalene	ND	2.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
1-Methylnaphthalene	ND	4.0		µg/L	1	7/28/2015 1:09:14 AM	R27785

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order 1507B84

Date Reported: 8/3/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: System Influent

Project: GBR Quarterly Sampling

Collection Date: 7/24/2015 12:05:00 PM

Lab ID: 1507B84-001

Matrix: AQUEOUS

Received Date: 7/25/2015 9:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
2-Methylnaphthalene	ND	4.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
Acetone	ND	10		µg/L	1	7/28/2015 1:09:14 AM	R27785
Bromobenzene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
Bromodichloromethane	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
Bromoform	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
Bromomethane	ND	3.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
2-Butanone	ND	10		µg/L	1	7/28/2015 1:09:14 AM	R27785
Carbon disulfide	ND	10		µg/L	1	7/28/2015 1:09:14 AM	R27785
Carbon Tetrachloride	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
Chlorobenzene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
Chloroethane	ND	2.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
Chloroform	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
Chloromethane	ND	3.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
2-Chlorotoluene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
4-Chlorotoluene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
cis-1,2-DCE	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
Dibromochloromethane	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
Dibromomethane	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
1,1-Dichloroethane	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
1,1-Dichloroethene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
1,2-Dichloropropane	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
1,3-Dichloropropane	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
2,2-Dichloropropane	ND	2.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
1,1-Dichloropropene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
Hexachlorobutadiene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
2-Hexanone	ND	10		µg/L	1	7/28/2015 1:09:14 AM	R27785
Isopropylbenzene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
4-Isopropyltoluene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
4-Methyl-2-pentanone	ND	10		µg/L	1	7/28/2015 1:09:14 AM	R27785
Methylene Chloride	ND	3.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
n-Butylbenzene	ND	3.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
n-Propylbenzene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
sec-Butylbenzene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1507B84

Date Reported: 8/3/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: System Influent

Project: GBR Quarterly Sampling

Collection Date: 7/24/2015 12:05:00 PM

Lab ID: 1507B84-001

Matrix: AQUEOUS

Received Date: 7/25/2015 9:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Styrene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
tert-Butylbenzene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
trans-1,2-DCE	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
Trichlorofluoromethane	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
Vinyl chloride	ND	1.0		µg/L	1	7/28/2015 1:09:14 AM	R27785
Xylenes, Total	ND	1.5		µg/L	1	7/28/2015 1:09:14 AM	R27785
Surr: 1,2-Dichloroethane-d4	98.2	70-130		%REC	1	7/28/2015 1:09:14 AM	R27785
Surr: 4-Bromofluorobenzene	101	70-130		%REC	1	7/28/2015 1:09:14 AM	R27785
Surr: Dibromofluoromethane	102	70-130		%REC	1	7/28/2015 1:09:14 AM	R27785
Surr: Toluene-d8	95.8	70-130		%REC	1	7/28/2015 1:09:14 AM	R27785

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order 1507B84

Date Reported: 8/3/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: System Effluent

Project: GBR Quarterly Sampling

Collection Date: 7/24/2015 12:10:00 PM

Lab ID: 1507B84-002

Matrix: AQUEOUS

Received Date: 7/25/2015 9:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2340B: HARDNESS							Analyst: JLF
Hardness (As CaCO ₃)	1100	6.6		mg/L	1	7/30/2015 3:09:00 PM	R27863
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	0.71	0.10		mg/L	1	7/29/2015 12:40:58 AM	R27827
Chloride	89	10		mg/L	20	7/29/2015 12:53:23 AM	R27827
Bromide	0.28	0.10		mg/L	1	7/29/2015 12:40:58 AM	R27827
Phosphorus, Orthophosphate (As P)	ND	10	H	mg/L	20	7/29/2015 12:53:23 AM	R27827
Sulfate	1800	25	*	mg/L	50	7/30/2015 3:48:21 AM	R27852
Nitrate+Nitrite as N	ND	1.0		mg/L	5	7/29/2015 1:18:12 AM	R27827
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	3500	0.010		µmhos/cm	1	7/28/2015 7:53:44 PM	R27844
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	325.6	20.00		mg/L CaCO ₃	1	7/28/2015 7:53:44 PM	R27844
Carbonate (As CaCO ₃)	ND	2.000		mg/L CaCO ₃	1	7/28/2015 7:53:44 PM	R27844
Total Alkalinity (as CaCO ₃)	325.6	20.00		mg/L CaCO ₃	1	7/28/2015 7:53:44 PM	R27844
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	2880	20.0	*	mg/L	1	7/30/2015 1:27:00 PM	20506
SM4500-H+B: PH							Analyst: JRR
pH	7.55	1.68	H	pH units	1	7/28/2015 7:53:44 PM	R27844
EPA METHOD 200.7: METALS							Analyst: JLF
Calcium	390	10		mg/L	10	7/30/2015 4:47:30 PM	20508
Iron	ND	0.020		mg/L	1	7/30/2015 4:28:18 PM	20508
Magnesium	33	1.0		mg/L	1	7/30/2015 4:28:18 PM	20508
Manganese	0.40	0.0020	*	mg/L	1	7/30/2015 4:28:18 PM	20508
Potassium	2.9	1.0		mg/L	1	7/30/2015 4:28:18 PM	20508
Sodium	460	10		mg/L	10	7/30/2015 4:47:30 PM	20508
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
Toluene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
Ethylbenzene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
Naphthalene	ND	2.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
1-Methylnaphthalene	ND	4.0		µg/L	1	7/28/2015 1:36:40 AM	R27785

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1507B84

Date Reported: 8/3/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: System Effluent

Project: GBR Quarterly Sampling

Collection Date: 7/24/2015 12:10:00 PM

Lab ID: 1507B84-002

Matrix: AQUEOUS

Received Date: 7/25/2015 9:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
2-Methylnaphthalene	ND	4.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
Acetone	ND	10		µg/L	1	7/28/2015 1:36:40 AM	R27785
Bromobenzene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
Bromodichloromethane	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
Bromoform	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
Bromomethane	ND	3.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
2-Butanone	ND	10		µg/L	1	7/28/2015 1:36:40 AM	R27785
Carbon disulfide	ND	10		µg/L	1	7/28/2015 1:36:40 AM	R27785
Carbon Tetrachloride	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
Chlorobenzene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
Chloroethane	ND	2.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
Chloroform	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
Chloromethane	ND	3.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
2-Chlorotoluene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
4-Chlorotoluene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
cis-1,2-DCE	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
Dibromochloromethane	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
Dibromomethane	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
1,1-Dichloroethane	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
1,1-Dichloroethene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
1,2-Dichloropropane	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
1,3-Dichloropropane	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
2,2-Dichloropropane	ND	2.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
1,1-Dichloropropene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
Hexachlorobutadiene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
2-Hexanone	ND	10		µg/L	1	7/28/2015 1:36:40 AM	R27785
Isopropylbenzene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
4-Isopropyltoluene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
4-Methyl-2-pentanone	ND	10		µg/L	1	7/28/2015 1:36:40 AM	R27785
Methylene Chloride	ND	3.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
n-Butylbenzene	ND	3.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
n-Propylbenzene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
sec-Butylbenzene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order 1507B84

Date Reported: 8/3/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** System Effluent**Project:** GBR Quarterly Sampling**Collection Date:** 7/24/2015 12:10:00 PM**Lab ID:** 1507B84-002**Matrix:** AQUEOUS**Received Date:** 7/25/2015 9:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Styrene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
tert-Butylbenzene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
trans-1,2-DCE	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
Trichlorofluoromethane	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
Vinyl chloride	ND	1.0		µg/L	1	7/28/2015 1:36:40 AM	R27785
Xylenes, Total	ND	1.5		µg/L	1	7/28/2015 1:36:40 AM	R27785
Surr: 1,2-Dichloroethane-d4	99.8	70-130		%REC	1	7/28/2015 1:36:40 AM	R27785
Surr: 4-Bromofluorobenzene	106	70-130		%REC	1	7/28/2015 1:36:40 AM	R27785
Surr: Dibromofluoromethane	103	70-130		%REC	1	7/28/2015 1:36:40 AM	R27785
Surr: Toluene-d8	96.4	70-130		%REC	1	7/28/2015 1:36:40 AM	R27785

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507B84

03-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID	MB-20508		SampType:	MBLK		TestCode:	EPA Method 200.7: Metals			
Client ID:	PBW		Batch ID:	20508		RunNo:	27863			
Prep Date:	7/29/2015		Analysis Date:	7/30/2015		SeqNo:	838071		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-20508		SampType:	LCS		TestCode:	EPA Method 200.7: Metals			
Client ID:	LCSW		Batch ID:	20508		RunNo:	27863			
Prep Date:	7/29/2015		Analysis Date:	7/30/2015		SeqNo:	838072		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	99.2	85	115			
Iron	0.49	0.020	0.5000	0	97.8	85	115			
Magnesium	51	1.0	50.00	0	102	85	115			
Manganese	0.48	0.0020	0.5000	0	96.2	85	115			
Potassium	49	1.0	50.00	0	97.6	85	115			
Sodium	50	1.0	50.00	0	99.8	85	115			

Sample ID	LLLCS-20508		SampType:	LCSLL		TestCode:	EPA Method 200.7: Metals			
Client ID:	BatchQC		Batch ID:	20508		RunNo:	27863			
Prep Date:	7/29/2015		Analysis Date:	7/30/2015		SeqNo:	838073		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0	0.5000	0	102	50	150			
Iron	ND	0.020	0.02000	0	96.6	50	150			
Magnesium	ND	1.0	0.5000	0	109	50	150			
Manganese	0.0020	0.0020	0.002000	0	100	50	150			
Potassium	ND	1.0	0.5000	0	96.8	50	150			
Sodium	ND	1.0	0.5000	0	108	50	150			

Sample ID	MB		SampType:	MBLK		TestCode:	EPA Method 200.7: Metals			
Client ID:	PBW		Batch ID:	R27875		RunNo:	27875			
Prep Date:			Analysis Date:	7/31/2015		SeqNo:	838535		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								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507B84

03-Aug-15

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:	R27875	RunNo:	27875					
Prep Date:		Analysis Date:	7/31/2015	SeqNo:	838535	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 200.7: Metals					
Client ID:	LCSW	Batch ID:	R27875	RunNo:	27875					
Prep Date:		Analysis Date:	7/31/2015	SeqNo:	838536	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	51	1.0	50.00	0	103	85	115			
Iron	0.50	0.020	0.5000	0	99.5	85	115			
Magnesium	51	1.0	50.00	0	102	85	115			
Manganese	0.49	0.0020	0.5000	0	97.6	85	115			
Potassium	49	1.0	50.00	0	98.2	85	115			
Sodium	50	1.0	50.00	0	99.8	85	115			

Sample ID	LLLCS	SampType:	LCSLL	TestCode:	EPA Method 200.7: Metals					
Client ID:	BatchQC	Batch ID:	R27875	RunNo:	27875					
Prep Date:		Analysis Date:	7/31/2015	SeqNo:	838537	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0	0.5000	0	107	50	150			
Iron	0.023	0.020	0.02000	0	117	50	150			
Magnesium	ND	1.0	0.5000	0	108	50	150			
Manganese	0.0021	0.0020	0.002000	0	105	50	150			
Potassium	ND	1.0	0.5000	0	85.9	50	150			
Sodium	ND	1.0	0.5000	0	107	50	150			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	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 Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507B84

03-Aug-15

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: R27827		RunNo: 27827							
Prep Date:	Analysis Date: 7/28/2015		SeqNo: 836710		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								
Nitrate+Nitrite as N	ND	0.20								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R27827		RunNo: 27827							
Prep Date:	Analysis Date: 7/28/2015		SeqNo: 836711		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	96.8	90	110			
Chloride	4.9	0.50	5.000	0	98.0	90	110			
Bromide	2.4	0.10	2.500	0	97.6	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	97.8	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	101	90	110			

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R27827		RunNo: 27827							
Prep Date:	Analysis Date: 7/28/2015		SeqNo: 836769		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								
Nitrate+Nitrite as N	ND	0.20								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R27827		RunNo: 27827							
Prep Date:	Analysis Date: 7/28/2015		SeqNo: 836770		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Chloride	4.7	0.50	5.000	0	94.0	90	110			
Bromide	2.3	0.10	2.500	0	93.0	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.6	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	96.6	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507B84

03-Aug-15

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:	R27852	RunNo:	27852					
Prep Date:		Analysis Date:	7/29/2015	SeqNo:	837739	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:	R27852	RunNo:	27852					
Prep Date:		Analysis Date:	7/29/2015	SeqNo:	837740	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	10	0.50	10.00	0	102	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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 Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507B84

03-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID	rb1	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R27785			RunNo: 27785					
Prep Date:		Analysis Date: 7/27/2015			SeqNo: 835359		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	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:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507B84

03-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID	rb1	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R27785	RunNo:	27785					
Prep Date:		Analysis Date:	7/27/2015	SeqNo:	835359	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	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.8		10.00		97.6	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R27785	RunNo:	27785					
Prep Date:		Analysis Date:	7/27/2015	SeqNo:	835369	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	20	1.0	20.00	0	98.6	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	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 Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507B84

03-Aug-15

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: R27785			RunNo: 27785						
Prep Date:	Analysis Date: 7/27/2015			SeqNo: 835369			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	112	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.0	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.5		10.00		95.2	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507B84

03-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID	mb-1		SampType:	MBLK		TestCode:	SM2320B: Alkalinity				
Client ID:	PBW		Batch ID:	R27844		RunNo:	27844				
Prep Date:			Analysis Date:	7/28/2015		SeqNo:	837175		Units: mg/L CaCO3		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Total Alkalinity (as CaCO3)	ND	20.00									

Sample ID	lcs-1		SampType:	LCS		TestCode:	SM2320B: Alkalinity				
Client ID:	LCSW		Batch ID:	R27844		RunNo:	27844				
Prep Date:			Analysis Date:	7/28/2015		SeqNo:	837176		Units:	mg/L CaCO3	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Total Alkalinity (as CaCO3)	79.20	20.00	80.00	0	99.0	90	110				

Sample ID	mb-2	SampType:	MBLK		TestCode:	SM2320B: Alkalinity				
Client ID:	PBW	Batch ID:	R27844		RunNo:	27844				
Prep Date:		Analysis Date:	7/28/2015		SeqNo:	837199	Units:	mg/L CaCO3		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID	lcs-2		SampType:	LCS		TestCode:	SM2320B: Alkalinity				
Client ID:	LCSW		Batch ID:	R27844		RunNo:	27844				
Prep Date:			Analysis Date:	7/28/2015		SeqNo:	837200		Units: mg/L CaCO3		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Total Alkalinity (as CaCO3)	79.96	20.00	80.00	0	100	90	110				

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | 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 Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507B84

03-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Quarterly Sampling

Sample ID	MB-20506	SampType:	MBLK	TestCode:	SM2540C MOD: Total Dissolved Solids					
Client ID:	PBW	Batch ID:	20506	RunNo:	27859					
Prep Date:	7/29/2015	Analysis Date:	7/30/2015	SeqNo:	837997	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-20506	SampType:	LCS	TestCode:	SM2540C MOD: Total Dissolved Solids					
Client ID:	LCSW	Batch ID:	20506	RunNo:	27859					
Prep Date:	7/29/2015	Analysis Date:	7/30/2015	SeqNo:	837998	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.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1507BB4

ReptNo: 1

Received by/date:

ML *7/25/15*

Logged By: Lindsay Mangin

7/25/2015 9:10:00 AM

[Signature]

Completed By: Lindsay Mangin

7/27/2015 7:24:32 AM

[Signature]

Reviewed By:

Ja *07/27/15*

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? Courier

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 ☒ *ML*
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels? Yes ☒ No ☐ # of preserved bottles checked for pH: 4
(Note discrepancies on chain of custody) (<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? Yes ☒ No ☒ Checked by: CS
(If no, notify customer for authorization.) *FOR VOA - RECEIVED AT 10:00 AM. NO COOLING. WILL BE REANALYZED. 7/27/15 NOT OPEN, NO ANALYST TO REANALYZE.*

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	2.7	Good	Yes			

Chain-of-Custody Record		Turn-Around Time:
Client: Kelly Robinson	☒ Standard	☐ Rush
Western Refining	Project Name: GBR Quarterly Sampling	
Mailing Address: 111 CR 4990	Project #: WR1009	
Bloomfield, NM. 87413	Project Manager: Ashley Ager	
Phone #: 970-385-1096	Sampler: Alex Crooks	
email or Fax#: Kelly.Robinson@wnr.com	On Ice: ☒ Yes ☐ No	
QA/QC Package:	Sample Temperature: 2.7	
☒ Standard		
☐ Level 4 (Full Validation)		
Accreditation		
☐ NELAP		
☐ Other		
☐ EDD (Type)		

☒ Standard ☐ Rush

Project Name: GBR Quarterly Sampling

WR1009

Ashley Ager

On Ice: ☒ Yes ☐ No

Sample Temperature: 27



www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

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)
	XX See Attached
	Air Bubbles (Y or N)

Date:	Time:	Relinquished by:	Received by:	Date	Time
7/24/15	1400	C. Cox	M. W. W. W.	7/24/15	1400
Date:	Time:	Relinquished by:	Received by:	Date	Time
7/24/15	1107	M. W. W. W.		7/25/15	0910

Remarks:

Please cc:
Dhencmann@ltenv.com
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.

**GIANT BLOOMFIELD REFINERY
WESTERN REFINING
ATTACHMENT TO COC**

SAMPLING CONDUCTED ON 7/24/15 BY Alex Crooks

Sample ID	QUARTERLY (JULY)
System Influent	VOC
	GWC
System Effluent	VOC
	GWC

Analysis	method	Bottle
VOC	method 8260	3 - HCL VOA

GWC		
pH	SM 4500-H+B	1 - 500ml (non preserved)
EC	SM 2510B	
TDS	SM 2540C MOD	
alkalinity	SM 2320B	
hardness	SM 2340B	
ANIONS	EPA Method 300.0	1 - 500ml H2SO4
	nitrate/nitrite	
	bromide	500ml
	chloride	
	sulfate	
	phosphorus	
	fluoride	
CATIONS / METALS	EPA Method 200.7	1 - 500ml HNO3
	calcium	
	iron	
	magnesium	
	manganese	
	potassium	
	sodium	





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

September 04, 2015

Devin Hencmann
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413
TEL: (970) 403-6023
FAX

RE: GBR Annual Sampling

OrderNo.: 1508076

Dear Devin Hencmann:

Hall Environmental Analysis Laboratory received 7 sample(s) on 8/4/2015 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 qualifiers 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 1508076

Date Reported: 9/4/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GRW-3

Project: GBR Annual Sampling

Collection Date: 8/3/2015 12:00:00 PM

Lab ID: 1508076-001

Matrix: AQUEOUS

Received Date: 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2340B: HARDNESS							Analyst: ELS
Hardness (As CaCO3)	1200	6.6		mg/L	1	8/12/2015 1:03:00 PM	R28152
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	0.95	0.10		mg/L	1	8/4/2015 8:02:02 PM	R27968
Chloride	38	10		mg/L	20	8/4/2015 8:14:27 PM	R27968
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	8/4/2015 8:02:02 PM	R27968
Bromide	0.16	0.10		mg/L	1	8/4/2015 8:02:02 PM	R27968
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	8/4/2015 8:02:02 PM	R27968
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	8/4/2015 8:14:27 PM	R27968
Sulfate	1900	50	*	mg/L	100	8/15/2015 1:28:56 PM	R28252
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	3900	0.010		µmhos/cm	1	8/11/2015 4:20:46 PM	R28130
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO3)	322.9	20.00		mg/L CaCO3	1	8/11/2015 4:20:46 PM	R28130
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	8/11/2015 4:20:46 PM	R28130
Total Alkalinity (as CaCO3)	322.9	20.00		mg/L CaCO3	1	8/11/2015 4:20:46 PM	R28130
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	3320	40.0	*D	mg/L	1	8/6/2015 8:33:00 PM	20626
SM4500-H+B: PH							Analyst: JRR
pH	7.49	1.68	H	pH units	1	8/11/2015 4:20:46 PM	R28130
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	420	5.0		mg/L	5	8/12/2015 4:08:03 PM	A28152
Iron	0.89	0.020	*	mg/L	1	8/12/2015 4:06:07 PM	A28152
Magnesium	24	1.0		mg/L	1	8/12/2015 4:06:07 PM	A28152
Manganese	0.69	0.0020	*	mg/L	1	8/12/2015 4:06:07 PM	A28152
Potassium	5.8	1.0		mg/L	1	8/12/2015 4:06:07 PM	A28152
Sodium	650	10		mg/L	10	8/19/2015 2:10:23 PM	A28328
EPA METHOD 8270C: PAHS							Analyst: DAM
Naphthalene	ND	0.50		µg/L	1	8/12/2015 1:24:43 PM	20631
1-Methylnaphthalene	ND	0.50		µg/L	1	8/12/2015 1:24:43 PM	20631
2-Methylnaphthalene	ND	0.50		µg/L	1	8/12/2015 1:24:43 PM	20631
Acenaphthylene	ND	0.50		µg/L	1	8/12/2015 1:24:43 PM	20631
Acenaphthene	ND	0.50		µg/L	1	8/12/2015 1:24:43 PM	20631
Fluorene	0.66	0.50		µg/L	1	8/12/2015 1:24:43 PM	20631
Phenanthrene	ND	0.50		µg/L	1	8/12/2015 1:24:43 PM	20631
Anthracene	ND	0.50		µg/L	1	8/12/2015 1:24:43 PM	20631
Fluoranthene	ND	0.50		µg/L	1	8/12/2015 1:24:43 PM	20631

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508076

Date Reported: 9/4/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GRW-3

Project: GBR Annual Sampling

Collection Date: 8/3/2015 12:00:00 PM

Lab ID: 1508076-001

Matrix: AQUEOUS

Received Date: 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: PAHS							Analyst: DAM
Pyrene	ND	0.50		µg/L	1	8/12/2015 1:24:43 PM	20631
Benz(a)anthracene	ND	0.50		µg/L	1	8/12/2015 1:24:43 PM	20631
Chrysene	ND	0.50		µg/L	1	8/12/2015 1:24:43 PM	20631
Benzo(b)fluoranthene	ND	0.50		µg/L	1	8/12/2015 1:24:43 PM	20631
Benzo(k)fluoranthene	ND	0.50		µg/L	1	8/12/2015 1:24:43 PM	20631
Benzo(a)pyrene	ND	0.50		µg/L	1	8/12/2015 1:24:43 PM	20631
Dibenz(a,h)anthracene	ND	0.50		µg/L	1	8/12/2015 1:24:43 PM	20631
Benzo(g,h,i)perylene	ND	0.50		µg/L	1	8/12/2015 1:24:43 PM	20631
Indeno(1,2,3-cd)pyrene	ND	0.50		µg/L	1	8/12/2015 1:24:43 PM	20631
Surr: N-hexadecane	66.9	26.5-130		%REC	1	8/12/2015 1:24:43 PM	20631
Surr: Benzo(e)pyrene	66.1	35.5-125		%REC	1	8/12/2015 1:24:43 PM	20631
EPA METHOD 8260B: VOLATILES							Analyst: BCN
Benzene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Toluene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Ethylbenzene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Naphthalene	ND	2.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
1-Methylnaphthalene	ND	4.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
2-Methylnaphthalene	ND	4.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Acetone	ND	10		µg/L	1	8/5/2015 3:20:23 PM	R27990
Bromobenzene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Bromodichloromethane	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Bromoform	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Bromomethane	ND	3.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
2-Butanone	ND	10		µg/L	1	8/5/2015 3:20:23 PM	R27990
Carbon disulfide	ND	10		µg/L	1	8/5/2015 3:20:23 PM	R27990
Carbon Tetrachloride	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Chlorobenzene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Chloroethane	ND	2.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Chloroform	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Chloromethane	ND	3.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
2-Chlorotoluene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
4-Chlorotoluene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
cis-1,2-DCE	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order 1508076

Date Reported: 9/4/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** GRW-3**Project:** GBR Annual Sampling**Collection Date:** 8/3/2015 12:00:00 PM**Lab ID:** 1508076-001**Matrix:** AQUEOUS**Received Date:** 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BCN
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Dibromochloromethane	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Dibromomethane	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
1,1-Dichloroethane	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
1,1-Dichloroethene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
1,2-Dichloropropane	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
1,3-Dichloropropane	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
2,2-Dichloropropane	ND	2.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
1,1-Dichloropropene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Hexachlorobutadiene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
2-Hexanone	ND	10		µg/L	1	8/5/2015 3:20:23 PM	R27990
Isopropylbenzene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
4-Isopropyltoluene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
4-Methyl-2-pentanone	ND	10		µg/L	1	8/5/2015 3:20:23 PM	R27990
Methylene Chloride	ND	3.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
n-Butylbenzene	ND	3.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
n-Propylbenzene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
sec-Butylbenzene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Styrene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
tert-Butylbenzene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
trans-1,2-DCE	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Trichlorofluoromethane	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Vinyl chloride	ND	1.0		µg/L	1	8/5/2015 3:20:23 PM	R27990
Xylenes, Total	ND	1.5		µg/L	1	8/5/2015 3:20:23 PM	R27990
Surr: 1,2-Dichloroethane-d4	94.7	70-130		%REC	1	8/5/2015 3:20:23 PM	R27990

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508076

Date Reported: 9/4/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GRW-3

Project: GBR Annual Sampling

Collection Date: 8/3/2015 12:00:00 PM

Lab ID: 1508076-001

Matrix: AQUEOUS

Received Date: 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BCN
Surr: 4-Bromofluorobenzene	98.0	70-130		%REC	1	8/5/2015 3:20:23 PM	R27990
Surr: Dibromofluoromethane	95.7	70-130		%REC	1	8/5/2015 3:20:23 PM	R27990
Surr: Toluene-d8	90.8	70-130		%REC	1	8/5/2015 3:20:23 PM	R27990

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**Lab Order **1508076**Date Reported: **9/4/2015****CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** System Influent**Project:** GBR Annual Sampling**Collection Date:** 8/3/2015 12:35:00 PM**Lab ID:** 1508076-002**Matrix:** AQUEOUS**Received Date:** 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2340B: HARDNESS							Analyst: ELS
Hardness (As CaCO3)	1100	6.6		mg/L	1	8/12/2015 1:03:00 PM	R28152
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	0.66	0.10		mg/L	1	8/4/2015 8:26:52 PM	R27968
Chloride	92	10		mg/L	20	8/4/2015 8:39:17 PM	R27968
Nitrogen, Nitrite (As N)	0.70	0.10		mg/L	1	8/4/2015 8:26:52 PM	R27968
Bromide	6.6	2.0		mg/L	20	8/4/2015 8:39:17 PM	R27968
Nitrogen, Nitrate (As N)	2.1	0.10		mg/L	1	8/4/2015 8:26:52 PM	R27968
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	8/4/2015 8:39:17 PM	R27968
Sulfate	1600	50	*	mg/L	100	8/15/2015 1:41:20 PM	R28252
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	3400	0.010		µmhos/cm	1	8/11/2015 4:36:04 PM	R28130
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO3)	249.6	20.00		mg/L CaCO3	1	8/11/2015 4:36:04 PM	R28130
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	8/11/2015 4:36:04 PM	R28130
Total Alkalinity (as CaCO3)	249.6	20.00		mg/L CaCO3	1	8/11/2015 4:36:04 PM	R28130
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	2910	20.0	*	mg/L	1	8/6/2015 8:33:00 PM	20626
SM4500-H+B: PH							Analyst: JRR
pH	7.38	1.68	H	pH units	1	8/11/2015 4:36:04 PM	R28130
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	370	5.0		mg/L	5	8/12/2015 4:11:48 PM	A28152
Iron	0.028	0.020		mg/L	1	8/12/2015 4:09:52 PM	A28152
Magnesium	34	1.0		mg/L	1	8/12/2015 4:09:52 PM	A28152
Manganese	0.21	0.0020	*	mg/L	1	8/12/2015 4:09:52 PM	A28152
Potassium	3.0	1.0		mg/L	1	8/12/2015 4:09:52 PM	A28152
Sodium	410	5.0		mg/L	5	8/12/2015 4:11:48 PM	A28152
EPA METHOD 8260B: VOLATILES							Analyst: BCN
Benzene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Toluene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Ethylbenzene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Naphthalene	ND	2.0		µg/L	1	8/5/2015 4:46:43 PM	R27990

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508076

Date Reported: 9/4/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: System Influent

Project: GBR Annual Sampling

Collection Date: 8/3/2015 12:35:00 PM

Lab ID: 1508076-002

Matrix: AQUEOUS

Received Date: 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BCN
1-Methylnaphthalene	ND	4.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
2-Methylnaphthalene	ND	4.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Acetone	ND	10		µg/L	1	8/5/2015 4:46:43 PM	R27990
Bromobenzene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Bromodichloromethane	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Bromoform	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Bromomethane	ND	3.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
2-Butanone	ND	10		µg/L	1	8/5/2015 4:46:43 PM	R27990
Carbon disulfide	ND	10		µg/L	1	8/5/2015 4:46:43 PM	R27990
Carbon Tetrachloride	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Chlorobenzene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Chloroethane	ND	2.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Chloroform	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Chloromethane	ND	3.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
2-Chlorotoluene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
4-Chlorotoluene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
cis-1,2-DCE	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Dibromochloromethane	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Dibromomethane	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
1,1-Dichloroethane	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
1,1-Dichloroethene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
1,2-Dichloropropane	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
1,3-Dichloropropane	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
2,2-Dichloropropane	ND	2.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
1,1-Dichloropropene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Hexachlorobutadiene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
2-Hexanone	ND	10		µg/L	1	8/5/2015 4:46:43 PM	R27990
Isopropylbenzene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
4-Isopropyltoluene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
4-Methyl-2-pentanone	ND	10		µg/L	1	8/5/2015 4:46:43 PM	R27990
Methylene Chloride	ND	3.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
n-Butylbenzene	ND	3.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
n-Propylbenzene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990

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
	D Sample Diluted Due to Matrix	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 Not In Range:
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical ReportLab Order **1508076**Date Reported: **9/4/2015****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** System Influent**Project:** GBR Annual Sampling**Collection Date:** 8/3/2015 12:35:00 PM**Lab ID:** 1508076-002**Matrix:** AQUEOUS**Received Date:** 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BCN
sec-Butylbenzene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Styrene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
tert-Butylbenzene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
trans-1,2-DCE	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Trichlorofluoromethane	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Vinyl chloride	ND	1.0		µg/L	1	8/5/2015 4:46:43 PM	R27990
Xylenes, Total	ND	1.5		µg/L	1	8/5/2015 4:46:43 PM	R27990
Surr: 1,2-Dichloroethane-d4	96.2	70-130		%REC	1	8/5/2015 4:46:43 PM	R27990
Surr: 4-Bromofluorobenzene	98.0	70-130		%REC	1	8/5/2015 4:46:43 PM	R27990
Surr: Dibromofluoromethane	98.6	70-130		%REC	1	8/5/2015 4:46:43 PM	R27990
Surr: Toluene-d8	91.6	70-130		%REC	1	8/5/2015 4:46:43 PM	R27990

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508076

Date Reported: 9/4/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: System Effluent

Project: GBR Annual Sampling

Collection Date: 8/3/2015 12:55:00 PM

Lab ID: 1508076-003

Matrix: AQUEOUS

Received Date: 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS							Analyst: DBD
Antimony	ND	0.0010		mg/L	1	8/9/2015 11:51:19 AM	A28323
Arsenic	ND	0.0010		mg/L	1	8/9/2015 11:51:19 AM	A28323
Copper	0.0025	0.0010		mg/L	1	8/9/2015 11:51:19 AM	A28323
Lead	ND	0.00050		mg/L	1	8/9/2015 11:51:19 AM	A28323
Selenium	0.0069	0.0010		mg/L	1	8/9/2015 11:51:19 AM	A28323
Thallium	ND	0.00050		mg/L	1	8/9/2015 11:51:19 AM	A28323
SM2340B: HARDNESS							Analyst: ELS
Hardness (As CaCO3)	1000	6.6		mg/L	1	8/2/2015 1:03:00 PM	R28152
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	0.67	0.10		mg/L	1	8/4/2015 8:51:41 PM	R27968
Chloride	91	10		mg/L	20	8/4/2015 9:04:05 PM	R27968
Nitrogen, Nitrite (As N)	0.64	0.10		mg/L	1	8/4/2015 8:51:41 PM	R27968
Bromide	5.8	2.0		mg/L	20	8/4/2015 9:04:05 PM	R27968
Nitrogen, Nitrate (As N)	1.6	0.10		mg/L	1	8/4/2015 8:51:41 PM	R27968
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	8/4/2015 9:04:05 PM	R27968
Sulfate	1600	50	*	mg/L	100	8/15/2015 1:53:45 PM	R28252
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	3400	0.010		µmhos/cm	1	8/11/2015 4:48:58 PM	R28130
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO3)	286.5	20.00		mg/L CaCO3	1	8/11/2015 4:48:58 PM	R28130
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	8/11/2015 4:48:58 PM	R28130
Total Alkalinity (as CaCO3)	286.5	20.00		mg/L CaCO3	1	8/11/2015 4:48:58 PM	R28130
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	2880	20.0	*	mg/L	1	8/3/2015 8:33:00 PM	20626
SM4500-H+B: PH							Analyst: JRR
pH	7.48	1.68	H	pH units	1	8/11/2015 4:48:58 PM	R28130
EPA METHOD 200.7: METALS							Analyst: ELS
Barium	0.018	0.0020		mg/L	1	8/12/2015 4:13:51 PM	A28152
Beryllium	ND	0.0020		mg/L	1	8/12/2015 4:13:51 PM	A28152
Cadmium	ND	0.0020		mg/L	1	8/12/2015 4:13:51 PM	A28152
Calcium	360	5.0		mg/L	5	8/12/2015 4:15:55 PM	A28152
Chromium	ND	0.0060		mg/L	1	8/12/2015 4:13:51 PM	A28152
Iron	ND	0.020		mg/L	1	8/12/2015 4:13:51 PM	A28152
Magnesium	34	1.0		mg/L	1	8/12/2015 4:13:51 PM	A28152
Manganese	0.30	0.0020	*	mg/L	1	8/12/2015 4:13:51 PM	A28152
Nickel	ND	0.010		mg/L	1	8/12/2015 4:13:51 PM	A28152

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 1508076

Date Reported: 9/4/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: System Effluent

Project: GBR Annual Sampling

Collection Date: 8/3/2015 12:55:00 PM

Lab ID: 1508076-003

Matrix: AQUEOUS

Received Date: 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: METALS							Analyst: ELS
Potassium	3.2	1.0		mg/L	1	8/12/2015 4:13:51 PM	A28152
Silver	ND	0.0050		mg/L	1	8/12/2015 4:13:51 PM	A28152
Sodium	430	5.0		mg/L	5	8/12/2015 4:15:55 PM	A28152
Zinc	0.024	0.010		mg/L	1	8/12/2015 4:13:51 PM	A28152
EPA METHOD 245.1: MERCURY							Analyst: JLF
Mercury	ND	0.00020		mg/L	1	8/7/2015 2:45:35 PM	20665
EPA METHOD 8270C: PAHS							Analyst: DAM
Naphthalene	ND	0.50		µg/L	1	8/12/2015 1:47:56 PM	20631
1-Methylnaphthalene	ND	0.50		µg/L	1	8/12/2015 1:47:56 PM	20631
2-Methylnaphthalene	ND	0.50		µg/L	1	8/12/2015 1:47:56 PM	20631
Acenaphthylene	ND	0.50		µg/L	1	8/12/2015 1:47:56 PM	20631
Acenaphthene	ND	0.50		µg/L	1	8/12/2015 1:47:56 PM	20631
Fluorene	ND	0.50		µg/L	1	8/12/2015 1:47:56 PM	20631
Phenanthrene	ND	0.50		µg/L	1	8/12/2015 1:47:56 PM	20631
Anthracene	ND	0.50		µg/L	1	8/12/2015 1:47:56 PM	20631
Fluoranthene	ND	0.50		µg/L	1	8/12/2015 1:47:56 PM	20631
Pyrene	ND	0.50		µg/L	1	8/12/2015 1:47:56 PM	20631
Benz(a)anthracene	ND	0.50		µg/L	1	8/12/2015 1:47:56 PM	20631
Chrysene	ND	0.50		µg/L	1	8/12/2015 1:47:56 PM	20631
Benzo(b)fluoranthene	ND	0.50		µg/L	1	8/12/2015 1:47:56 PM	20631
Benzo(k)fluoranthene	ND	0.50		µg/L	1	8/12/2015 1:47:56 PM	20631
Benzo(a)pyrene	ND	0.50		µg/L	1	8/12/2015 1:47:56 PM	20631
Dibenz(a,h)anthracene	ND	0.50		µg/L	1	8/12/2015 1:47:56 PM	20631
Benzo(g,h,i)perylene	ND	0.50		µg/L	1	8/12/2015 1:47:56 PM	20631
Indeno(1,2,3-cd)pyrene	ND	0.50		µg/L	1	8/12/2015 1:47:56 PM	20631
Surr: N-hexadecane	56.2	26.5-130		%REC	1	8/12/2015 1:47:56 PM	20631
Surr: Benzo(e)pyrene	50.4	35.5-125		%REC	1	8/12/2015 1:47:56 PM	20631
EPA METHOD 8260B: VOLATILES							Analyst: BCN
Benzene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
Toluene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
Ethylbenzene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
Naphthalene	ND	2.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
1-Methylnaphthalene	ND	4.0		µg/L	1	8/5/2015 5:15:26 PM	R27990

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508076

Date Reported: 9/4/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: System Effluent

Project: GBR Annual Sampling

Collection Date: 8/3/2015 12:55:00 PM

Lab ID: 1508076-003

Matrix: AQUEOUS

Received Date: 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BCN
2-Methylnaphthalene	ND	4.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
Acetone	ND	10		µg/L	1	8/5/2015 5:15:26 PM	R27990
Bromobenzene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
Bromodichloromethane	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
Bromoform	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
Bromomethane	ND	3.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
2-Butanone	ND	10		µg/L	1	8/5/2015 5:15:26 PM	R27990
Carbon disulfide	ND	10		µg/L	1	8/5/2015 5:15:26 PM	R27990
Carbon Tetrachloride	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
Chlorobenzene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
Chloroethane	ND	2.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
Chloroform	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
Chloromethane	ND	3.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
2-Chlorotoluene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
4-Chlorotoluene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
cis-1,2-DCE	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
Dibromochloromethane	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
Dibromomethane	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
1,1-Dichloroethane	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
1,1-Dichloroethene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
1,2-Dichloropropane	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
1,3-Dichloropropane	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
2,2-Dichloropropane	ND	2.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
1,1-Dichloropropene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
Hexachlorobutadiene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
2-Hexanone	ND	10		µg/L	1	8/5/2015 5:15:26 PM	R27990
Isopropylbenzene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
4-Isopropyltoluene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
4-Methyl-2-pentanone	ND	10		µg/L	1	8/5/2015 5:15:26 PM	R27990
Methylene Chloride	ND	3.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
n-Butylbenzene	ND	3.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
n-Propylbenzene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
sec-Butylbenzene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order 1508076

Date Reported: 9/4/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: System Effluent

Project: GBR Annual Sampling

Collection Date: 8/3/2015 12:55:00 PM

Lab ID: 1508076-003

Matrix: AQUEOUS

Received Date: 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BCN
Styrene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
tert-Butylbenzene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
trans-1,2-DCE	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
Trichlorofluoromethane	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
Vinyl chloride	ND	1.0		µg/L	1	8/5/2015 5:15:26 PM	R27990
Xylenes, Total	ND	1.5		µg/L	1	8/5/2015 5:15:26 PM	R27990
Surr: 1,2-Dichloroethane-d4	91.0	70-130		%REC	1	8/5/2015 5:15:26 PM	R27990
Surr: 4-Bromofluorobenzene	101	70-130		%REC	1	8/5/2015 5:15:26 PM	R27990
Surr: Dibromofluoromethane	93.9	70-130		%REC	1	8/5/2015 5:15:26 PM	R27990
Surr: Toluene-d8	96.5	70-130		%REC	1	8/5/2015 5:15:26 PM	R27990

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508076

Date Reported: 9/4/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-24D

Project: GBR Annual Sampling

Collection Date: 8/3/2015 1:35:00 PM

Lab ID: 1508076-004

Matrix: AQUEOUS

Received Date: 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2340B: HARDNESS							Analyst: ELS
Hardness (As CaCO ₃)	1100	6.6		mg/L	1	8/9/2015 11:45:00 AM	R28328
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	0.96	0.10		mg/L	1	8/4/2015 9:41:18 PM	R27968
Chloride	160	10		mg/L	20	8/4/2015 9:53:42 PM	R27968
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	8/4/2015 9:41:18 PM	R27968
Bromide	3.7	2.0		mg/L	20	8/4/2015 9:53:42 PM	R27968
Nitrogen, Nitrate (As N)	0.23	0.10		mg/L	1	8/4/2015 9:41:18 PM	R27968
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	8/4/2015 9:53:42 PM	R27968
Sulfate	2100	50	*	mg/L	100	8/15/2015 2:06:10 PM	R28252
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	4100	0.010		µmhos/cm	1	8/11/2015 5:02:37 PM	R28130
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	203.4	20.00		mg/L CaCO ₃	1	8/11/2015 5:02:37 PM	R28130
Carbonate (As CaCO ₃)	ND	2.000		mg/L CaCO ₃	1	8/11/2015 5:02:37 PM	R28130
Total Alkalinity (as CaCO ₃)	203.4	20.00		mg/L CaCO ₃	1	8/11/2015 5:02:37 PM	R28130
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	3380	100	*D	mg/L	1	8/6/2015 8:33:00 PM	20626
SM4500-H+B: PH							Analyst: JRR
pH	7.48	1.68	H	pH units	1	8/11/2015 5:02:37 PM	R28130
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	390	5.0		mg/L	5	8/19/2015 2:19:44 PM	20723
Iron	11	0.40	*	mg/L	20	8/19/2015 2:36:37 PM	20723
Magnesium	40	1.0		mg/L	1	8/19/2015 2:12:28 PM	20723
Manganese	1.8	0.010	*	mg/L	5	8/12/2015 4:17:59 PM	20723
Potassium	7.6	1.0		mg/L	1	8/19/2015 2:12:28 PM	20723
Sodium	590	10		mg/L	10	8/12/2015 4:29:00 PM	20723
EPA METHOD 8270C: PAHS							Analyst: DAM
Naphthalene	ND	0.50		µg/L	1	8/12/2015 2:11:09 PM	20631
1-Methylnaphthalene	ND	0.50		µg/L	1	8/12/2015 2:11:09 PM	20631
2-Methylnaphthalene	ND	0.50		µg/L	1	8/12/2015 2:11:09 PM	20631
Acenaphthylene	ND	0.50		µg/L	1	8/12/2015 2:11:09 PM	20631
Acenaphthene	ND	0.50		µg/L	1	8/12/2015 2:11:09 PM	20631
Fluorene	ND	0.50		µg/L	1	8/12/2015 2:11:09 PM	20631
Phenanthrene	ND	0.50		µg/L	1	8/12/2015 2:11:09 PM	20631
Anthracene	ND	0.50		µg/L	1	8/12/2015 2:11:09 PM	20631
Fluoranthene	ND	0.50		µg/L	1	8/12/2015 2:11:09 PM	20631

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508076

Date Reported: 9/4/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-24D

Project: GBR Annual Sampling

Collection Date: 8/3/2015 1:35:00 PM

Lab ID: 1508076-004

Matrix: AQUEOUS

Received Date: 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: PAHS							Analyst: DAM
Pyrene	ND	0.50		µg/L	1	8/12/2015 2:11:09 PM	20631
Benz(a)anthracene	ND	0.50		µg/L	1	8/12/2015 2:11:09 PM	20631
Chrysene	ND	0.50		µg/L	1	8/12/2015 2:11:09 PM	20631
Benzo(b)fluoranthene	ND	0.50		µg/L	1	8/12/2015 2:11:09 PM	20631
Benzo(k)fluoranthene	ND	0.50		µg/L	1	8/12/2015 2:11:09 PM	20631
Benzo(a)pyrene	ND	0.50		µg/L	1	8/12/2015 2:11:09 PM	20631
Dibenz(a,h)anthracene	ND	0.50		µg/L	1	8/12/2015 2:11:09 PM	20631
Benzo(g,h,i)perylene	ND	0.50		µg/L	1	8/12/2015 2:11:09 PM	20631
Indeno(1,2,3-cd)pyrene	ND	0.50		µg/L	1	8/12/2015 2:11:09 PM	20631
Surr: N-hexadecane	58.8	26.5-130		%REC	1	8/12/2015 2:11:09 PM	20631
Surr: Benzo(e)pyrene	57.4	35.5-125		%REC	1	8/12/2015 2:11:09 PM	20631
EPA METHOD 8260B: VOLATILES							Analyst: BCN
Benzene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Toluene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Ethylbenzene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Naphthalene	ND	2.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
1-Methylnaphthalene	ND	4.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
2-Methylnaphthalene	ND	4.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Acetone	ND	10		µg/L	1	8/5/2015 5:44:09 PM	R27990
Bromobenzene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Bromodichloromethane	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Bromoform	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Bromomethane	ND	3.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
2-Butanone	ND	10		µg/L	1	8/5/2015 5:44:09 PM	R27990
Carbon disulfide	ND	10		µg/L	1	8/5/2015 5:44:09 PM	R27990
Carbon Tetrachloride	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Chlorobenzene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Chloroethane	ND	2.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Chloroform	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Chloromethane	ND	3.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
2-Chlorotoluene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
4-Chlorotoluene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
cis-1,2-DCE	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508076

Date Reported: 9/4/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-24D

Project: GBR Annual Sampling

Collection Date: 8/3/2015 1:35:00 PM

Lab ID: 1508076-004

Matrix: AQUEOUS

Received Date: 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BCN
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Dibromochloromethane	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Dibromomethane	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
1,1-Dichloroethane	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
1,1-Dichloroethene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
1,2-Dichloropropane	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
1,3-Dichloropropane	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
2,2-Dichloropropane	ND	2.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
1,1-Dichloropropene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Hexachlorobutadiene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
2-Hexanone	ND	10		µg/L	1	8/5/2015 5:44:09 PM	R27990
Isopropylbenzene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
4-Isopropyltoluene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
4-Methyl-2-pentanone	ND	10		µg/L	1	8/5/2015 5:44:09 PM	R27990
Methylene Chloride	ND	3.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
n-Butylbenzene	ND	3.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
n-Propylbenzene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
sec-Butylbenzene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Styrene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
tert-Butylbenzene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
trans-1,2-DCE	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Trichlorofluoromethane	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Vinyl chloride	ND	1.0		µg/L	1	8/5/2015 5:44:09 PM	R27990
Xylenes, Total	ND	1.5		µg/L	1	8/5/2015 5:44:09 PM	R27990
Surr: 1,2-Dichloroethane-d4	96.0	70-130		%REC	1	8/5/2015 5:44:09 PM	R27990

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical ReportLab Order **1508076**Date Reported: **9/4/2015****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** GBR-24D**Project:** GBR Annual Sampling**Collection Date:** 8/3/2015 1:35:00 PM**Lab ID:** 1508076-004**Matrix:** AQUEOUS**Received Date:** 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BCN
Surr: 4-Bromofluorobenzene	104	70-130		%REC	1	8/5/2015 5:44:09 PM	R27990
Surr: Dibromofluoromethane	102	70-130		%REC	1	8/5/2015 5:44:09 PM	R27990
Surr: Toluene-d8	91.9	70-130		%REC	1	8/5/2015 5:44:09 PM	R27990

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508076

Date Reported: 9/4/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-50

Project: GBR Annual Sampling

Collection Date: 8/3/2015 3:00:00 PM

Lab ID: 1508076-005

Matrix: AQUEOUS

Received Date: 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2340B: HARDNESS							Analyst: ELS
Hardness (As CaCO ₃)	1200	6.6		mg/L	1	8/19/2015 11:45:00 AM	R28328
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	0.59	0.10		mg/L	1	8/4/2015 10:06:06 PM	R27968
Chloride	310	10	*	mg/L	20	8/4/2015 10:18:31 PM	R27968
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	8/4/2015 10:06:06 PM	R27968
Bromide	5.8	2.0		mg/L	20	8/4/2015 10:18:31 PM	R27968
Nitrogen, Nitrate (As N)	5.2	2.0		mg/L	20	8/4/2015 10:18:31 PM	R27968
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	8/4/2015 10:18:31 PM	R27968
Sulfate	1600	50	*	mg/L	100	8/15/2015 11:12:09 PM	R28252
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	3700	0.010		µmhos/cm	1	8/11/2015 5:13:33 PM	R28130
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	213.4	20.00		mg/L CaCO ₃	1	8/11/2015 5:13:33 PM	R28130
Carbonate (As CaCO ₃)	ND	2.000		mg/L CaCO ₃	1	8/11/2015 5:13:33 PM	R28130
Total Alkalinity (as CaCO ₃)	213.4	20.00		mg/L CaCO ₃	1	8/11/2015 5:13:33 PM	R28130
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	3020	100	*D	mg/L	1	8/3/2015 8:33:00 PM	20626
SM4500-H+B: PH							Analyst: JRR
pH	7.32	1.68	H	pH units	1	8/11/2015 5:13:33 PM	R28130
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	410	5.0		mg/L	5	8/19/2015 2:45:19 PM	20723
Iron	7.6	0.20	*	mg/L	10	8/12/2015 4:36:31 PM	20723
Magnesium	42	1.0		mg/L	1	8/19/2015 2:38:40 PM	20723
Manganese	0.50	0.010	*	mg/L	5	8/12/2015 4:30:57 PM	20723
Potassium	4.3	1.0		mg/L	1	8/19/2015 2:38:40 PM	20723
Sodium	420	5.0		mg/L	5	8/19/2015 2:45:19 PM	20723
EPA METHOD 8270C: PAHS							Analyst: DAM
Naphthalene	ND	0.50		µg/L	1	8/12/2015 2:34:24 PM	20631
1-Methylnaphthalene	ND	0.50		µg/L	1	8/12/2015 2:34:24 PM	20631
2-Methylnaphthalene	ND	0.50		µg/L	1	8/12/2015 2:34:24 PM	20631
Acenaphthylene	ND	0.50		µg/L	1	8/12/2015 2:34:24 PM	20631
Acenaphthene	ND	0.50		µg/L	1	8/12/2015 2:34:24 PM	20631
Fluorene	ND	0.50		µg/L	1	8/12/2015 2:34:24 PM	20631
Phenanthrene	ND	0.50		µg/L	1	8/12/2015 2:34:24 PM	20631
Anthracene	ND	0.50		µg/L	1	8/12/2015 2:34:24 PM	20631
Fluoranthene	ND	0.50		µg/L	1	8/12/2015 2:34:24 PM	20631

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 1508076

Date Reported: 9/4/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-30

Project: GBR Annual Sampling

Collection Date: 8/3/2015 3:00:00 PM

Lab ID: 1508076-005

Matrix: AQUEOUS

Received Date: 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: PAHS							Analyst: DAM
Pyrene	ND	0.50		µg/L	1	8/12/2015 2:34:24 PM	20631
Benz(a)anthracene	ND	0.50		µg/L	1	8/12/2015 2:34:24 PM	20631
Chrysene	ND	0.50		µg/L	1	8/12/2015 2:34:24 PM	20631
Benzo(b)fluoranthene	ND	0.50		µg/L	1	8/12/2015 2:34:24 PM	20631
Benzo(k)fluoranthene	ND	0.50		µg/L	1	8/12/2015 2:34:24 PM	20631
Benzo(a)pyrene	ND	0.50		µg/L	1	8/12/2015 2:34:24 PM	20631
Dibenz(a,h)anthracene	ND	0.50		µg/L	1	8/12/2015 2:34:24 PM	20631
Benzo(g,h,i)perylene	ND	0.50		µg/L	1	8/12/2015 2:34:24 PM	20631
Indeno(1,2,3-cd)pyrene	ND	0.50		µg/L	1	8/12/2015 2:34:24 PM	20631
Surr: N-hexadecane	69.1	26.5-130		%REC	1	8/12/2015 2:34:24 PM	20631
Surr: Benzo(e)pyrene	64.7	35.5-125		%REC	1	8/12/2015 2:34:24 PM	20631
EPA METHOD 8260B: VOLATILES							Analyst: BCN
Benzene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Toluene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Ethylbenzene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Naphthalene	ND	2.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
1-Methylnaphthalene	ND	4.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
2-Methylnaphthalene	ND	4.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Acetone	ND	10		µg/L	1	8/5/2015 6:12:57 PM	R27990
Bromobenzene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Bromodichloromethane	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Bromoform	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Bromomethane	ND	3.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
2-Butanone	ND	10		µg/L	1	8/5/2015 6:12:57 PM	R27990
Carbon disulfide	ND	10		µg/L	1	8/5/2015 6:12:57 PM	R27990
Carbon Tetrachloride	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Chlorobenzene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Chloroethane	ND	2.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Chloroform	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Chloromethane	ND	3.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
2-Chlorotoluene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
4-Chlorotoluene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
cis-1,2-DCE	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508076

Date Reported: 9/4/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-30

Project: GBR Annual Sampling

Collection Date: 8/3/2015 3:00:00 PM

Lab ID: 1508076-005

Matrix: AQUEOUS

Received Date: 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BCN
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Dibromochloromethane	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Dibromomethane	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
1,1-Dichloroethane	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
1,1-Dichloroethene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
1,2-Dichloropropane	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
1,3-Dichloropropane	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
2,2-Dichloropropane	ND	2.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
1,1-Dichloropropene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Hexachlorobutadiene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
2-Hexanone	ND	10		µg/L	1	8/5/2015 6:12:57 PM	R27990
Isopropylbenzene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
4-Isopropyltoluene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
4-Methyl-2-pentanone	ND	10		µg/L	1	8/5/2015 6:12:57 PM	R27990
Methylene Chloride	ND	3.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
n-Butylbenzene	ND	3.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
n-Propylbenzene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
sec-Butylbenzene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Styrene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
tert-Butylbenzene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
trans-1,2-DCE	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Trichlorofluoromethane	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Vinyl chloride	ND	1.0		µg/L	1	8/5/2015 6:12:57 PM	R27990
Xylenes, Total	ND	1.5		µg/L	1	8/5/2015 6:12:57 PM	R27990
Surr: 1,2-Dichloroethane-d4	95.1	70-130		%REC	1	8/5/2015 6:12:57 PM	R27990

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical ReportLab Order **1508076**

Date Reported: 9/4/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** GBR-30**Project:** GBR Annual Sampling**Collection Date:** 8/3/2015 3:00:00 PM**Lab ID:** 1508076-005**Matrix:** AQUEOUS**Received Date:** 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BCN
Surr: 4-Bromofluorobenzene	104	70-130		%REC	1	8/5/2015 6:12:57 PM	R27990
Surr: Dibromofluoromethane	96.7	70-130		%REC	1	8/5/2015 6:12:57 PM	R27990
Surr: Toluene-d8	89.3	70-130		%REC	1	8/5/2015 6:12:57 PM	R27990

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508076

Date Reported: 9/4/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-31

Project: GBR Annual Sampling

Collection Date: 8/3/2015 4:00:00 PM

Lab ID: 1508076-006

Matrix: AQUEOUS

Received Date: 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2340B: HARDNESS							Analyst: ELS
Hardness (As CaCO ₃)	1200	6.6		mg/L	1	8/19/2015 11:45:00 AM	R28328
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	0.63	0.10		mg/L	1	8/4/2015 10:30:56 PM	R27968
Chloride	250	10		mg/L	20	8/4/2015 10:43:21 PM	R27968
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	8/4/2015 10:30:56 PM	R27968
Bromide	9.0	2.0		mg/L	20	8/4/2015 10:43:21 PM	R27968
Nitrogen, Nitrate (As N)	2.6	2.0		mg/L	20	8/4/2015 10:43:21 PM	R27968
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	8/4/2015 10:43:21 PM	R27968
Sulfate	1700	100	*	mg/L	200	8/15/2015 11:24:33 PM	R28252
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	3900	0.010		µmhos/cm	1	8/11/2015 5:25:24 PM	R28130
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	260.8	20.00		mg/L CaCO ₃	1	8/11/2015 5:25:24 PM	R28130
Carbonate (As CaCO ₃)	ND	2.000		mg/L CaCO ₃	1	8/11/2015 5:25:24 PM	R28130
Total Alkalinity (as CaCO ₃)	260.8	20.00		mg/L CaCO ₃	1	8/11/2015 5:25:24 PM	R28130
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	3170	40.0	*D	mg/L	1	8/5/2015 8:33:00 PM	20626
SM4500-H+B: PH							Analyst: JRR
pH	7.45	1.68	H	pH units	1	8/11/2015 5:25:24 PM	R28130
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	420	5.0		mg/L	5	8/19/2015 3:07:49 PM	20833
Iron	2.4	0.10	*	mg/L	5	8/19/2015 3:07:49 PM	20833
Magnesium	39	1.0		mg/L	1	8/19/2015 3:02:19 PM	20833
Manganese	0.45	0.0020	*	mg/L	1	8/19/2015 3:02:19 PM	20833
Potassium	2.9	1.0		mg/L	1	8/19/2015 3:02:19 PM	20833
Sodium	520	10		mg/L	10	8/20/2015 12:06:29 PM	20833
EPA METHOD 8270C: PAHS							Analyst: DAM
Naphthalene	ND	0.50		µg/L	1	8/12/2015 2:57:33 PM	20631
1-Methylnaphthalene	ND	0.50		µg/L	1	8/12/2015 2:57:33 PM	20631
2-Methylnaphthalene	ND	0.50		µg/L	1	8/12/2015 2:57:33 PM	20631
Acenaphthylene	ND	0.50		µg/L	1	8/12/2015 2:57:33 PM	20631
Acenaphthene	ND	0.50		µg/L	1	8/12/2015 2:57:33 PM	20631
Fluorene	ND	0.50		µg/L	1	8/12/2015 2:57:33 PM	20631
Phenanthrene	ND	0.50		µg/L	1	8/12/2015 2:57:33 PM	20631
Anthracene	ND	0.50		µg/L	1	8/12/2015 2:57:33 PM	20631
Fluoranthene	ND	0.50		µg/L	1	8/12/2015 2:57:33 PM	20631

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 1508076

Date Reported: 9/4/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-31

Project: GBR Annual Sampling

Collection Date: 8/3/2015 4:00:00 PM

Lab ID: 1508076-006

Matrix: AQUEOUS

Received Date: 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: PAHS							Analyst: DAM
Pyrene	ND	0.50		µg/L	1	8/12/2015 2:57:33 PM	20631
Benz(a)anthracene	ND	0.50		µg/L	1	8/12/2015 2:57:33 PM	20631
Chrysene	ND	0.50		µg/L	1	8/12/2015 2:57:33 PM	20631
Benzo(b)fluoranthene	ND	0.50		µg/L	1	8/12/2015 2:57:33 PM	20631
Benzo(k)fluoranthene	ND	0.50		µg/L	1	8/12/2015 2:57:33 PM	20631
Benzo(a)pyrene	ND	0.50		µg/L	1	8/12/2015 2:57:33 PM	20631
Dibenz(a,h)anthracene	ND	0.50		µg/L	1	8/12/2015 2:57:33 PM	20631
Benzo(g,h,i)perylene	ND	0.50		µg/L	1	8/12/2015 2:57:33 PM	20631
Indeno(1,2,3-cd)pyrene	ND	0.50		µg/L	1	8/12/2015 2:57:33 PM	20631
Surr: N-hexadecane	65.0	26.5-130		%REC	1	8/12/2015 2:57:33 PM	20631
Surr: Benzo(e)pyrene	69.6	35.5-125		%REC	1	8/12/2015 2:57:33 PM	20631
EPA METHOD 8260B: VOLATILES							Analyst: BCN
Benzene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Toluene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Ethylbenzene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Naphthalene	ND	2.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
1-Methylnaphthalene	ND	4.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
2-Methylnaphthalene	ND	4.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Acetone	ND	10		µg/L	1	8/5/2015 6:41:37 PM	R27990
Bromobenzene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Bromodichloromethane	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Bromoform	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Bromomethane	ND	3.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
2-Butanone	ND	10		µg/L	1	8/5/2015 6:41:37 PM	R27990
Carbon disulfide	ND	10		µg/L	1	8/5/2015 6:41:37 PM	R27990
Carbon Tetrachloride	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Chlorobenzene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Chloroethane	ND	2.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Chloroform	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Chloromethane	ND	3.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
2-Chlorotoluene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
4-Chlorotoluene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
cis-1,2-DCE	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508076

Date Reported: 9/4/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-31

Project: GBR Annual Sampling

Collection Date: 8/3/2015 4:00:00 PM

Lab ID: 1508076-006

Matrix: AQUEOUS

Received Date: 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BCN
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Dibromochloromethane	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Dibromomethane	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
1,1-Dichloroethane	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
1,1-Dichloroethene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
1,2-Dichloropropane	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
1,3-Dichloropropane	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
2,2-Dichloropropane	ND	2.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
1,1-Dichloropropene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Hexachlorobutadiene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
2-Hexanone	ND	10		µg/L	1	8/5/2015 6:41:37 PM	R27990
Isopropylbenzene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
4-Isopropyltoluene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
4-Methyl-2-pentanone	ND	10		µg/L	1	8/5/2015 6:41:37 PM	R27990
Methylene Chloride	ND	3.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
n-Butylbenzene	ND	3.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
n-Propylbenzene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
sec-Butylbenzene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Styrene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
tert-Butylbenzene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
trans-1,2-DCE	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Trichlorofluoromethane	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Vinyl chloride	ND	1.0		µg/L	1	8/5/2015 6:41:37 PM	R27990
Xylenes, Total	ND	1.5		µg/L	1	8/5/2015 6:41:37 PM	R27990
Surr: 1,2-Dichloroethane-d4	89.1	70-130		%REC	1	8/5/2015 6:41:37 PM	R27990

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical ReportLab Order **1508076**Date Reported: **9/4/2015****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** GBR-31**Project:** GBR Annual Sampling**Collection Date:** 8/3/2015 4:00:00 PM**Lab ID:** 1508076-006**Matrix:** AQUEOUS**Received Date:** 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BCN
Surr: 4-Bromofluorobenzene	100	70-130		%REC	1	8/5/2015 6:41:37 PM	R27990
Surr: Dibromofluoromethane	92.1	70-130		%REC	1	8/5/2015 6:41:37 PM	R27990
Surr: Toluene-d8	86.2	70-130		%REC	1	8/5/2015 6:41:37 PM	R27990

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508076

Date Reported: 9/4/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SHS-8

Project: GBR Annual Sampling

Collection Date: 8/3/2015 4:45:00 PM

Lab ID: 1508076-007

Matrix: AQUEOUS

Received Date: 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2340B: HARDNESS							Analyst: ELS
Hardness (As CaCO ₃)	230	6.6		mg/L	1	8/19/2015 11:45:00 AM	R28328
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	1.1	0.50		mg/L	5	8/4/2015 10:55:45 PM	R27968
Chloride	120	10		mg/L	20	8/4/2015 11:08:10 PM	R27968
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	8/4/2015 10:55:45 PM	R27968
Bromide	0.89	0.50		mg/L	5	8/4/2015 10:55:45 PM	R27968
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	8/4/2015 10:55:45 PM	R27968
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	8/4/2015 10:55:45 PM	R27968
Sulfate	47	2.5		mg/L	5	8/4/2015 10:55:45 PM	R27968
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	2100	0.010		µmhos/cm	1	8/11/2015 5:43:02 PM	R28130
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	939.6	20.00		mg/L CaCO ₃	1	8/11/2015 5:43:02 PM	R28130
Carbonate (As CaCO ₃)	ND	2.000		mg/L CaCO ₃	1	8/11/2015 5:43:02 PM	R28130
Total Alkalinity (as CaCO ₃)	939.6	20.00		mg/L CaCO ₃	1	8/11/2015 5:43:02 PM	R28130
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	1300	100	*D	mg/L	1	8/5/2015 8:33:00 PM	20626
SM4500-H+B: PH							Analyst: JRR
pH	7.21	1.68	H	pH units	1	8/11/2015 5:43:02 PM	R28130
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	73	1.0		mg/L	1	8/19/2015 3:14:08 PM	20859
Iron	8.6	0.20	*	mg/L	10	8/20/2015 12:08:32 PM	20859
Magnesium	11	1.0		mg/L	1	8/19/2015 3:14:08 PM	20859
Manganese	0.41	0.0020	*	mg/L	1	8/19/2015 3:14:08 PM	20859
Potassium	1.4	1.0		mg/L	1	8/19/2015 3:14:08 PM	20859
Sodium	410	5.0		mg/L	5	8/19/2015 3:15:54 PM	20859
EPA METHOD 8260B: VOLATILES							Analyst: BCN
Benzene	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Toluene	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Ethylbenzene	14	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Naphthalene	5.6	2.0		µg/L	1	8/5/2015 7:10:11 PM	R27990

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order 1508076

Date Reported: 9/4/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SHS-8

Project: GBR Annual Sampling

Collection Date: 8/3/2015 4:45:00 PM

Lab ID: 1508076-007

Matrix: AQUEOUS

Received Date: 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BCN
1-Methylnaphthalene	24	4.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
2-Methylnaphthalene	8.5	4.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Acetone	ND	10		µg/L	1	8/5/2015 7:10:11 PM	R27990
Bromobenzene	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Bromodichloromethane	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Bromoform	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Bromomethane	ND	3.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
2-Butanone	ND	10		µg/L	1	8/5/2015 7:10:11 PM	R27990
Carbon disulfide	ND	10		µg/L	1	8/5/2015 7:10:11 PM	R27990
Carbon Tetrachloride	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Chlorobenzene	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Chloroethane	ND	2.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Chloroform	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Chloromethane	ND	3.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
2-Chlorotoluene	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
4-Chlorotoluene	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
cis-1,2-DCE	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Dibromochloromethane	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Dibromomethane	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
1,1-Dichloroethane	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
1,1-Dichloroethene	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
1,2-Dichloropropane	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
1,3-Dichloropropane	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
2,2-Dichloropropane	ND	2.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
1,1-Dichloropropene	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Hexachlorobutadiene	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
2-Hexanone	ND	10		µg/L	1	8/5/2015 7:10:11 PM	R27990
Isopropylbenzene	9.6	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
4-Isopropyltoluene	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
4-Methyl-2-pentanone	ND	10		µg/L	1	8/5/2015 7:10:11 PM	R27990
Methylene Chloride	ND	3.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
n-Butylbenzene	ND	3.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
n-Propylbenzene	9.0	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508076

Date Reported: 9/4/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SHS-8

Project: GBR Annual Sampling

Collection Date: 8/3/2015 4:45:00 PM

Lab ID: 1508076-007

Matrix: AQUEOUS

Received Date: 8/4/2015 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BCN
sec-Butylbenzene	3.6	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Styrene	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
tert-Butylbenzene	1.1	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
trans-1,2-DCE	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Trichlorofluoromethane	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Vinyl chloride	ND	1.0		µg/L	1	8/5/2015 7:10:11 PM	R27990
Xylenes, Total	ND	1.5		µg/L	1	8/5/2015 7:10:11 PM	R27990
Surr: 1,2-Dichloroethane-d4	94.0	70-130		%REC	1	8/5/2015 7:10:11 PM	R27990
Surr: 4-Bromofluorobenzene	113	70-130		%REC	1	8/5/2015 7:10:11 PM	R27990
Surr: Dibromofluoromethane	94.4	70-130		%REC	1	8/5/2015 7:10:11 PM	R27990
Surr: Toluene-d8	92.4	70-130		%REC	1	8/5/2015 7:10:11 PM	R27990

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508076

04-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	MB-20723		SampType:	MBLK		TestCode:	EPA Method 200.7: Metals				
Client ID:	PBW		Batch ID:	20723		RunNo:	28124				
Prep Date:	8/11/2015		Analysis Date:	8/12/2015		SeqNo:	847227		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-20723			SampType:	LCS		TestCode:	EPA Method 200.7: Metals			
Client ID:	LCSW			Batch ID:	20723		RunNo:	28124			
Prep Date:	8/11/2015			Analysis Date:	8/12/2015		SeqNo:	847228		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Calcium	50	1.0	50.00	0	101	85	115
Iron	0.49	0.020	0.5000	0	97.9	85	115
Magnesium	50	1.0	50.00	0	101	85	115
Manganese	0.47	0.0020	0.5000	0	95.0	85	115
Potassium	49	1.0	50.00	0	97.2	85	115
Sodium	50	1.0	50.00	0	99.3	85	115

Sample ID	LLLCS-20723	SampType:	LCSLL	TestCode:	EPA Method 200.7: Metals					
Client ID:	BatchQC	Batch ID:	20723	RunNo:	28124					
Prep Date:	8/11/2015	Analysis Date:	8/12/2015	SeqNo:	847229	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	ND	1.0	0.5000	0	105	50	150
Iron	0.022	0.020	0.02000	0	112	50	150
Magnesium	ND	1.0	0.5000	0	108	50	150
Manganese	0.0021	0.0020	0.002000	0	106	50	150
Potassium	ND	1.0	0.5000	0	103	50	150
Sodium	ND	1.0	0.5000	0	112	50	150

Sample ID	MB	SampType: MBLK			TestCode: EPA Method 200.7: Metals					
Client ID:	PBW	Batch ID: A28152			RunNo: 28152					
Prep Date:		Analysis Date: 8/12/2015			SeqNo: 848129		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

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | 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 Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508076

04-Sep-15

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:	A28152		RunNo:	28152			
Prep Date:			Analysis Date:	8/12/2015		SeqNo:	848129		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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		SampType:	LCS		TestCode:	EPA Method 200.7: Metals			
Client ID:	LCSW		Batch ID:	A28152		RunNo:	28152			
Prep Date:			Analysis Date:	8/12/2015		SeqNo:	848130		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.5	85	115			
Beryllium	0.50	0.0020	0.5000	0	101	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.7	85	115			
Calcium	48	1.0	50.00	0	95.9	85	115			
Chromium	0.48	0.0060	0.5000	0	96.7	85	115			
Iron	0.47	0.020	0.5000	0	94.9	85	115			
Magnesium	50	1.0	50.00	0	99.4	85	115			
Manganese	0.47	0.0020	0.5000	0	93.8	85	115			
Nickel	0.46	0.010	0.5000	0	91.7	85	115			
Potassium	48	1.0	50.00	0	96.2	85	115			
Silver	0.099	0.0050	0.1000	0	99.4	85	115			
Sodium	49	1.0	50.00	0	98.9	85	115			
Zinc	0.47	0.010	0.5000	0	94.9	85	115			

Sample ID	LLCS		SampType:	LCSLL		TestCode:	EPA Method 200.7: Metals			
Client ID:	BatchQC		Batch ID:	A28152		RunNo:	28152			
Prep Date:			Analysis Date:	8/12/2015		SeqNo:	848131		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0026	0.0020	0.002000	0	129	50	150			
Beryllium	0.0020	0.0020	0.002000	0	101	50	150			
Cadmium	ND	0.0020	0.002000	0	99.0	50	150			
Calcium	ND	1.0	0.5000	0	101	50	150			
Chromium	0.0062	0.0060	0.006000	0	104	50	150			
Iron	ND	0.020	0.02000	0	99.8	50	150			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508076

04-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	LL LCS	SampType:	LCSLL	TestCode:	EPA Method 200.7: Metals					
Client ID:	BatchQC	Batch ID:	A28152	RunNo:	28152					
Prep Date:		Analysis Date:	8/12/2015	SeqNo:	848131	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	ND	1.0	0.5000	0	103	50	150			
Manganese	ND	0.0020	0.002000	0	96.5	50	150			
Nickel	ND	0.010	0.005000	0	96.0	50	150			
Potassium	ND	1.0	0.5000	0	121	50	150			
Silver	ND	0.0050	0.005000	0	97.4	50	150			
Sodium	ND	1.0	0.5000	0	103	50	150			
Zinc	ND	0.010	0.005000	0	105	50	150			

Sample ID	1508076-004DMS	SampType:	MS	TestCode:	EPA Method 200.7: Metals					
Client ID:	GBR-24D	Batch ID:	20723	RunNo:	28152					
Prep Date:	8/11/2015	Analysis Date:	8/12/2015	SeqNo:	848216	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	2.3	0.010	0.5000	1.764	101	70	130			

Sample ID	1508076-004DMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Metals					
Client ID:	GBR-24D	Batch ID:	20723	RunNo:	28152					
Prep Date:	8/11/2015	Analysis Date:	8/12/2015	SeqNo:	848220	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	2.4	0.010	0.5000	1.764	123	70	130	4.79	20	

Sample ID	1508076-005DMS	SampType:	MS	TestCode:	EPA Method 200.7: Metals					
Client ID:	GBR-30	Batch ID:	20723	RunNo:	28152					
Prep Date:	8/11/2015	Analysis Date:	8/12/2015	SeqNo:	848223	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	0.97	0.010	0.5000	0.5025	92.5	70	130			

Sample ID	1508076-005DMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Metals					
Client ID:	GBR-30	Batch ID:	20723	RunNo:	28152					
Prep Date:	8/11/2015	Analysis Date:	8/12/2015	SeqNo:	848224	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	0.99	0.010	0.5000	0.5025	97.2	70	130	2.40	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508076

04-Sep-15

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:	A28328	RunNo:	28328					
Prep Date:		Analysis Date:	8/19/2015	SeqNo:	855169	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 200.7: Metals					
Client ID:	LCSW	Batch ID:	A28328	RunNo:	28328					
Prep Date:		Analysis Date:	8/19/2015	SeqNo:	855170	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	RPDLimit	Qual
Sodium	51	1.0	50.00	0	102	85	115			

Sample ID	LLCS	SampType:	LCSLL	TestCode:	EPA Method 200.7: Metals					
Client ID:	BatchQC	Batch ID:	A28328	RunNo:	28328					
Prep Date:		Analysis Date:	8/19/2015	SeqNo:	855171	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	RPDLimit	Qual
Sodium	ND	1.0	0.5000	0	104	50	150			

Sample ID	MB-20833	SampType:	MBLK	TestCode:	EPA Method 200.7: Metals					
Client ID:	PBW	Batch ID:	20833	RunNo:	28328					
Prep Date:	8/17/2015	Analysis Date:	8/19/2015	SeqNo:	855178	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	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-20833	SampType:	LCS	TestCode:	EPA Method 200.7: Metals					
Client ID:	LCSW	Batch ID:	20833	RunNo:	28328					
Prep Date:	8/17/2015	Analysis Date:	8/19/2015	SeqNo:	855182	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	RPDLimit	Qual
Calcium	46	1.0	50.00	0	92.9	85	115			
Iron	0.46	0.020	0.5000	0	92.3	85	115			
Magnesium	51	1.0	50.00	0	101	85	115			
Manganese	0.45	0.0020	0.5000	0	89.1	85	115			
Potassium	50	1.0	50.00	0	99.5	85	115			
Sodium	51	1.0	50.00	0	102	85	115			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508076

04-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	LLLCS-20833		SampType: LCSLL		TestCode: EPA Method 200.7: Metals					
Client ID:	BatchQC		Batch ID: 20833		RunNo: 28328					
Prep Date:	8/17/2015		Analysis Date: 8/19/2015		SeqNo: 855183		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0	0.5000	0	89.3	50	150			
Iron	0.030	0.020	0.02000	0	148	50	150			
Magnesium	ND	1.0	0.5000	0	101	50	150			
Manganese	ND	0.0020	0.002000	0	99.5	50	150			
Potassium	ND	1.0	0.5000	0	116	50	150			
Sodium	ND	1.0	0.5000	0	110	50	150			

Sample ID	MB-20859	SampType:	MBLK	TestCode:	EPA Method 200.7: Metals					
Client ID:	PBW	Batch ID:	20859	RunNo:	28328					
Prep Date:	8/18/2015	Analysis Date:	8/19/2015	SeqNo:	855184	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID	LCS-20859			SampType:	LCS		TestCode:	EPA Method 200.7: Metals			
Client ID:	LCSW			Batch ID:	20859		RunNo:	28328			
Prep Date:	8/18/2015			Analysis Date:	8/19/2015		SeqNo:	855185		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Calcium	51	1.0	50.00	0	101	85	115				
Magnesium	53	1.0	50.00	0	105	85	115				
Manganese	0.49	0.0020	0.5000	0	97.7	85	115				
Potassium	52	1.0	50.00	0	104	85	115				
Sodium	51	1.0	50.00	0	102	85	115				

Sample ID	LLLCS-20859			SampType:	LCSLL		TestCode:	EPA Method 200.7: Metals			
Client ID:	BatchQC			Batch ID:	20859		RunNo:	28328			
Prep Date:	8/18/2015			Analysis Date:	8/19/2015		SeqNo:	855186		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Calcium	ND	1.0	0.5000	0	107	50	150				
Magnesium	ND	1.0	0.5000	0	108	50	150				
Manganese	0.0024	0.0020	0.002000	0	118	50	150				
Potassium	ND	1.0	0.5000	0	138	50	150				
Sodium	ND	1.0	0.5000	0	109	50	150				

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | 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 Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508076

04-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	1508076-004DMS	SampType:	MS	TestCode:	EPA Method 200.7: Metals					
Client ID:	GBR-24D	Batch ID:	20723	RunNo:	28328					
Prep Date:	8/11/2015	Analysis Date:	8/19/2015	SeqNo:	855213	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{>D}	RPDLimit	Qual
Magnesium	88	1.0	50.00	39.85	95.6	70	130			
Potassium	59	1.0	50.00	7.630	102	70	130			

Sample ID	1508076-004DMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Metals					
Client ID:	GBR-24D	Batch ID:	20723	RunNo:	28328					
Prep Date:	8/11/2015	Analysis Date:	8/19/2015	SeqNo:	855214	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R>D	RPDLimit	Qual
Magnesium	88	1.0	50.00	39.85	95.4	70	130	0.104	20	
Potassium	59	1.0	50.00	7.630	103	70	130	0.404	20	

Sample ID	1508076-005DMS	SampType:	MS	TestCode:	EPA Method 200.7: Metals					
Client ID:	GBR-30	Batch ID:	20723	RunNo:	28328					
Prep Date:	8/11/2015	Analysis Date:	8/19/2015	SeqNo:	855225	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ² D	RPDLimit	Qual
Magnesium	87	1.0	50.00	41.74	91.1	70	130			
Potassium	56	1.0	50.00	4.311	103	70	130			

Sample ID	1508076-005DMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Metals					
Client ID:	GBR-30	Batch ID:	20723	RunNo:	28328					
Prep Date:	8/11/2015	Analysis Date:	8/19/2015	SeqNo:	855226	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R>D	RPDLimit	Qual
Magnesium	89	1.0	50.00	41.74	94.8	70	130	2.06	20	
Potassium	57	1.0	50.00	4.311	105	70	130	1.67	20	

Sample ID	1508076-006DMS	SampType:	MS	TestCode:	EPA Method 200.7: Metals					
Client ID:	GBR-31	Batch ID:	20833	RunNo:	28328					
Prep Date:	8/17/2015	Analysis Date:	8/19/2015	SeqNo:	855236	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{>D}	RPDLimit	Qual
Magnesium	86	1.0	50.00	39.21	94.0	70	130			
Manganese	0.88	0.0020	0.5000	0.4470	87.2	70	130			
Potassium	51	1.0	50.00	2.863	97.2	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508076

04-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	1508076-006DMSD			SampType:	MSD		TestCode:	EPA Method 200.7: Metals			
Client ID:	GBR-31		Batch ID:		20833		RunNo:	28328			
Prep Date:	8/17/2015		Analysis Date:		8/19/2015		SeqNo:	855237		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Magnesium	87	1.0	50.00	39.21	96.1	70	130	1.23	20		
Manganese	0.90	0.0020	0.5000	0.4470	90.7	70	130	1.96	20		
Potassium	52	1.0	50.00	2.863	98.5	70	130	1.21	20		

Sample ID	MB-20859		SampType:	MBLK		TestCode:	EPA Method 200.7: Metals				
Client ID:	PBW		Batch ID:	20859		RunNo:	28356				
Prep Date:	8/18/2015		Analysis Date:	8/20/2015		SeqNo:	856205		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Iron	ND	0.020									

Sample ID	LCS-20859		SampType:	LCS		TestCode:	EPA Method 200.7: Metals				
Client ID:	LCSW		Batch ID:	20859		RunNo:	28356				
Prep Date:	8/18/2015		Analysis Date:	8/20/2015		SeqNo:	856206		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Iron	0.49	0.020	0.5000	0	98.8	85	115				

Sample ID	LLLCS-20859	SampType:	LCSLL	TestCode:	EPA Method 200.7: Metals					
Client ID:	BatchQC	Batch ID:	20859	RunNo:	28356					
Prep Date:	8/18/2015	Analysis Date:	8/20/2015	SeqNo:	856207	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020	0.02000	0	94.2	50	150			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	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 Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508076

04-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Metals					
Client ID:	LCSW		Batch ID: A28323		RunNo: 28323					
Prep Date:			Analysis Date: 8/19/2015		SeqNo: 855053		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	95.3	85	115			
Arsenic	0.023	0.0010	0.02500	0	93.9	85	115			
Copper	0.024	0.0010	0.02500	0	95.4	85	115			
Lead	0.012	0.00050	0.01250	0	97.4	85	115			
Selenium	0.024	0.0010	0.02500	0	94.1	85	115			
Thallium	0.012	0.00050	0.01250	0	96.2	85	115			

Sample ID	LLLCS		SampType: LCSLL		TestCode: EPA 200.8: Metals					
Client ID:	BatchQC		Batch ID: A28323		RunNo: 28323					
Prep Date:			Analysis Date: 8/19/2015		SeqNo: 855056		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010	0.001000	0	88.5	50	150			
Arsenic	ND	0.0010	0.001000	0	81.4	50	150			
Copper	ND	0.0010	0.001000	0	91.5	50	150			
Lead	ND	0.00050	0.0005000	0	91.9	50	150			
Selenium	ND	0.0010	0.001000	0	78.7	50	150			
Thallium	ND	0.00050	0.0005000	0	90.4	50	150			

Sample ID	MB	SampType: MBLK		TestCode: EPA 200.8: Metals						
Client ID:	PBW	Batch ID: A28323		RunNo: 28323						
Prep Date:		Analysis Date: 8/19/2015		SeqNo: 855058		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								
Copper	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508076

04-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	MB-20665	SampType:	MBLK	TestCode:	EPA Method 245.1: Mercury					
Client ID:	PBW	Batch ID:	20665	RunNo:	28038					
Prep Date:	8/7/2015	Analysis Date:	8/7/2015	SeqNo:	844199	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-20665	SampType:	LCS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	LCSW	Batch ID:	20665	RunNo:	28038					
Prep Date:	8/7/2015	Analysis Date:	8/7/2015	SeqNo:	844200	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.8	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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 Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508076

04-Sep-15

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:	R27968	RunNo:	27968					
Prep Date:		Analysis Date:	8/5/2015	SeqNo:	841566	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	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R27968	RunNo:	27968					
Prep Date:		Analysis Date:	8/5/2015	SeqNo:	841567	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Chloride	4.8	0.50	5.000	0	96.4	90	110			
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	95.5	90	110			
Bromide	2.5	0.10	2.500	0	98.2	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P)	4.8	0.50	5.000	0	95.5	90	110			
Sulfate	9.8	0.50	10.00	0	98.4	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R28252	RunNo:	28252					
Prep Date:		Analysis Date:	8/15/2015	SeqNo:	852715	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:	R28252	RunNo:	28252					
Prep Date:		Analysis Date:	8/15/2015	SeqNo:	852716	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.9	0.50	10.00	0	98.7	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | 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 Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508076

04-Sep-15

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: R27990			RunNo: 27990					
Prep Date:		Analysis Date: 8/5/2015			SeqNo: 842588		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	108	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	18	1.0	20.00	0	91.8	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	116	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	103	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.9		10.00		98.5	70	130			

Sample ID	1508076-001ams	SampType:	MS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	GRW-3	Batch ID:	R27990	RunNo:	27990					
Prep Date:		Analysis Date:	8/5/2015	SeqNo:	842646	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	19	1.0	20.00	0.1540	96.0	70	130			
Chlorobenzene	18	1.0	20.00	0	87.5	70	130			
1,1-Dichloroethene	21	1.0	20.00	0.3740	101	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.1	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.4	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.2	70	130			
Surr: Toluene-d8	9.5		10.00		94.8	70	130			

Sample ID	1508076-001amsd	SampType:	MSD	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	GRW-3	Batch ID:	R27990	RunNo:	27990					
Prep Date:		Analysis Date:	8/5/2015	SeqNo:	842649	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130	0.0491	20	
Toluene	18	1.0	20.00	0.1540	90.4	70	130	6.00	20	
Chlorobenzene	17	1.0	20.00	0	84.8	70	130	3.17	20	
1,1-Dichloroethene	21	1.0	20.00	0.3740	104	70	130	2.72	20	
Trichloroethene (TCE)	19	1.0	20.00	0	94.9	70	130	5.21	20	
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.7	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130	0	0	
Surr: Dibromofluoromethane	9.4		10.00		94.4	70	130	0	0	
Surr: Toluene-d8	8.9		10.00		89.4	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508076

04-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	rb2	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R27990	RunNo:	27990					
Prep Date:		Analysis Date:	8/5/2015	SeqNo:	842749	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:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508076

04-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	rb2	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R27990	RunNo:	27990					
Prep Date:		Analysis Date:	8/5/2015	SeqNo:	842749	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	9.3		10.00		93.4	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.2	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.0	70	130			
Surr: Toluene-d8	9.0		10.00		89.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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 Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508076

04-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	mb-20631	SampType:	MBLK	TestCode:	EPA Method 8270C: PAHs					
Client ID:	PBW	Batch ID:	20631	RunNo:	28134					
Prep Date:	8/6/2015	Analysis Date:	8/12/2015	SeqNo:	848471	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	0.50								
2-Methylnaphthalene	ND	0.50								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	63		87.60		72.1	26.5	130			
Surr: Benzo(e)pyrene	13		20.00		64.3	35.5	125			

Sample ID	lcs-20631	SampType:	LCS	TestCode:	EPA Method 8270C: PAHs					
Client ID:	LCSW	Batch ID:	20631	RunNo:	28134					
Prep Date:	8/6/2015	Analysis Date:	8/12/2015	SeqNo:	848472	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	19	0.50	20.00	0	93.3	37.5	104			
1-Methylnaphthalene	19	0.50	20.00	0	95.4	39.4	108			
2-Methylnaphthalene	18	0.50	20.00	0	90.4	40.5	98.2			
Acenaphthylene	18	0.50	20.00	0	91.3	43.6	103			
Acenaphthene	18	0.50	20.00	0	89.9	42.1	104			
Fluorene	19	0.50	20.00	0	93.7	45.7	105			
Phenanthrene	18	0.50	20.00	0	91.9	52.6	104			
Anthracene	18	0.50	20.00	0	92.0	52.8	104			
Fluoranthene	19	0.50	20.00	0	96.8	53.4	109			
Pyrene	18	0.50	20.00	0	91.4	44.9	108			
Benz(a)anthracene	18	0.50	20.00	0	90.9	45.1	110			
Chrysene	17	0.50	20.00	0	84.4	40.1	131			
Benzo(b)fluoranthene	18	0.50	20.00	0	91.5	49.9	105			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508076

04-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	lcs-20631		SampType: LCS		TestCode: EPA Method 8270C: PAHs					
Client ID:	LCSW		Batch ID: 20631		RunNo: 28134					
Prep Date:	8/6/2015		Analysis Date: 8/12/2015		SeqNo: 848472		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	17	0.50	20.00	0	86.7	49.4	103			
Benzo(a)pyrene	19	0.50	20.00	0	92.9	49	100			
Dibenz(a,h)anthracene	18	0.50	20.00	0	90.0	52.9	115			
Benzo(g,h,i)perylene	19	0.50	20.00	0	95.5	43.6	107			
Indeno(1,2,3-cd)pyrene	19	0.50	20.00	0	96.4	47.6	102			
Surr: N-hexadecane	71		87.60		81.0	26.5	130			
Surr: Benzo(e)pyrene	15		20.00		75.3	35.5	125			

Sample ID	lcsd-20631	SampType: LCSD			TestCode: EPA Method 8270C: PAHs					
Client ID:	LCSS02	Batch ID: 20631			RunNo: 28134					
Prep Date:	8/6/2015	Analysis Date: 8/12/2015			SeqNo: 848473		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	19	0.50	20.00	0	94.7	37.5	104	1.49	20	
1-Methylnaphthalene	20	0.50	20.00	0	97.9	39.4	108	2.59	26.8	
2-Methylnaphthalene	19	0.50	20.00	0	95.6	40.5	98.2	5.59	23.8	
Acenaphthylene	20	0.50	20.00	0	98.9	43.6	103	7.99	28.6	
Acenaphthene	19	0.50	20.00	0	92.7	42.1	104	3.07	27	
Fluorene	19	0.50	20.00	0	96.6	45.7	105	3.05	25.7	
Phenanthrene	19	0.50	20.00	0	93.0	52.6	104	1.19	20	
Anthracene	18	0.50	20.00	0	90.0	52.8	104	2.20	21.2	
Fluoranthene	19	0.50	20.00	0	95.7	53.4	109	1.14	21.8	
Pyrene	20	0.50	20.00	0	98.5	44.9	108	7.48	31.1	
Benz(a)anthracene	19	0.50	20.00	0	93.9	45.1	110	3.25	26.6	
Chrysene	18	0.50	20.00	0	90.7	40.1	131	7.20	21.2	
Benzo(b)fluoranthene	18	0.50	20.00	0	92.0	49.9	105	0.545	20	
Benzo(k)fluoranthene	18	0.50	20.00	0	90.2	49.4	103	3.96	21	
Benzo(a)pyrene	18	0.50	20.00	0	90.4	49	100	2.73	24.8	
Dibenz(a,h)anthracene	18	0.50	20.00	0	91.8	52.9	115	1.98	26	
Benzo(g,h,i)perylene	19	0.50	20.00	0	95.5	43.6	107	0	20	
Indeno(1,2,3-cd)pyrene	20	0.50	20.00	0	98.9	47.6	102	2.56	20	
Surr: N-hexadecane	67		87.60		76.7	26.5	130	0	0	
Surr: Benzo(e)pyrene	15		20.00		72.8	35.5	125	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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 Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508076

04-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	1508076-006c dup		SampType:	DUP		TestCode:	SM2510B: Specific Conductance				
Client ID:	GBR-31		Batch ID:	R28130		RunNo:	28130				
Prep Date:			Analysis Date:	8/11/2015		SeqNo:	847405		Units: µmhos/cm		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Conductivity	3900	0.010						0.256	20		

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508076

04-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	1508076-006c dup			SampType:	DUP		TestCode:	SM4500-H+B: pH			
Client ID:	GBR-31			Batch ID:	R28130		RunNo:	28130			
Prep Date:				Analysis Date:	8/11/2015		SeqNo:	847461		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
D	Sample Diluted Due to Matrix	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 Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508076

04-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	mb-1	SampType:	MBLK	TestCode:	SM2320B: Alkalinity					
Client ID:	PBW	Batch ID:	R28130	RunNo:	28130					
Prep Date:		Analysis Date:	8/11/2015	SeqNo:	847411	Units:	mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID	lcs-1		SampType: LCS		TestCode: SM2320B: Alkalinity					
Client ID:	LCSW		Batch ID: R28130		RunNo: 28130					
Prep Date:			Analysis Date: 8/11/2015		SeqNo: 847412		Units: mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79.52	20.00	80.00	0	99.4	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | 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 Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508076

04-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	MB-20626	SampType:	MBLK	TestCode:	SM2540C MOD: Total Dissolved Solids					
Client ID:	PBW	Batch ID:	20626	RunNo:	28016					
Prep Date:	8/5/2015	Analysis Date:	8/6/2015	SeqNo:	843340	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-20626	SampType:	LCS	TestCode:	SM2540C MOD: Total Dissolved Solids					
Client ID:	LCSW	Batch ID:	20626	RunNo:	28016					
Prep Date:	8/5/2015	Analysis Date:	8/6/2015	SeqNo:	843341	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.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1508076

ReptNo. 1

Received by/date:

AM

08/04/15

Logged By: Ashley Gallegos

8/4/2015 7:45:00 AM

AG

Completed By: Ashley Gallegos

8/4/2015 11:42:57 AM

AG

Reviewed By

AG 08/04/15

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? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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

14

(≤ 2 or >12 unless noted)

Adjusted?

NO

Checked by

AG

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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			

Chain-of-Custody Record		Turn-Around Time:
Client: Kelly Robinson	☒ Standard ☐ Rush	Project Name: GSE Annual Sampling
Western Refining		
Mailing Address: 111 CR 4990	Project #: WR1009	Project Manager: Devin Heremann
Bloomfield, NM 87413		
Phone #: 970-385-1696	☒ Standard ☐ Level 4 (Full Validation)	Sampler: Alex Crooks
email or Fax#: dheremanna@trent.com		
QA/QC Package:	☐ NELAP ☐ Other	On Ice: ☒ Yes ☐ No
Accreditation		
☐ EDD (Type)		Sample Temperature: 1.8

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
8/3/15	1200	GRW	GRW-3	Various/7	Various	1508074-001
	1235		System influent	Various/6		-002
	1255		System effluent	Various/8		-003
	1355		GBR-24D	Various/7		-004
	500		GBR-30	Various/7		-005
	1600		GBR-31	Various/7		-006
	1645	✓	SHS-8	Various/10	✓	-007

Date:	Time:	Relinquished by:	Received by:	Date:	Time:
8/3/15	1700	Alexandra	Christa Wale	8/3/15	1700
Date:	Time:	Relinquished by:	Received by:	Date:	Time:
8/3/15	1932	Christa Wale	[Signature]	8/3/15	1745



www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

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	

[illegible]

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

TABLE 1

**2015 SAMPLING SCHEDULE
FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.**

influent
effluent

	Aug-15
System	VOCs, GWC
System	VOCs, GWC, PAHs, Metals
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, electrical conductivity, total dissolved solids, alkalinity, hardness, anions (bromide, chloride, sulfate, fluoride, 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

Bottle Request for Giant Bloomfield Refinery Annual Sampling:

- A trip blank for each cooler
- 16 sets for Volatile Organic Compounds method 8260
- 8 sets for Polynuclear aromatic hydrocarbons method 8270
- 6 sets for Metals: (includes 1 extra)
 - Barium
 - Beryllium
 - Cadmium
 - Chromium
 - Copper
 - Lead
 - Nickel
 - Silver
 - Zinc
 - Antimony
 - Arsenic
 - Selenium
 - Thallium
 - mercury
- 16 sets for Groundwater Chemistry:
 - pH
 - EC
 - TDS
 - Alkalinity
 - Hardness
 - Anions
 - Bromide
 - Chloride
 - Sulfate
 - Fluoride
 - Nitrate/nitrite
 - Phosphorous
 - Cations
 - Calcium
 - Iron
 - Magnesium
 - Manganese
 - Potassium
 - Sodium



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

February 23, 2016

Kelly Robinson

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (505) 632-4166

FAX (505) 632-3911

RE: GBR Annual Sampling

OrderNo.: 1508200

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/6/2015 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued August 24, 2015.

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1508200

Date Reported: 2/23/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-51

Project: GBR Annual Sampling

Collection Date: 8/5/2015 2:15:00 PM

Lab ID: 1508200-001

Matrix: AQUEOUS

Received Date: 8/6/2015 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SM2340B: HARDNESS							Analyst: ELS
Hardness (As CaCO3)	1100	6.6		mg/L	1	8/19/2015 11:45:00 AM	R28328
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	0.68	0.10		mg/L	1	8/6/2015 5:02:37 PM	R28030
Chloride	54	10		mg/L	20	8/6/2015 5:15:01 PM	R28030
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	8/6/2015 5:02:37 PM	R28030
Bromide	0.29	0.10		mg/L	1	8/6/2015 5:02:37 PM	R28030
Nitrogen, Nitrate (As N)	7.9	0.50		mg/L	5	8/7/2015 11:59:59 AM	R28061
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	8/6/2015 5:15:01 PM	R28030
Sulfate	1600	25	*	mg/L	50	8/18/2015 4:27:05 AM	R28274
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	2800	0.010		µmhos/cm	1	8/13/2015 6:28:08 PM	R28193
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO3)	203.6	20.00		mg/L CaCO3	1	8/13/2015 6:28:08 PM	B28193
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	8/13/2015 6:28:08 PM	B28193
Total Alkalinity (as CaCO3)	203.6	20.00		mg/L CaCO3	1	8/13/2015 6:28:08 PM	B28193
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	2430	100	*D	mg/L	1	8/10/2015 11:09:00 AM	20651
SM4500-H+B: PH							Analyst: JRR
pH	7.53	1.68	H	pH units	1	8/13/2015 6:28:08 PM	R28193
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	390	10		mg/L	10	8/19/2015 4:09:32 PM	20846
Iron	17	0.20	E*	mg/L	10	8/19/2015 4:09:32 PM	20846
Magnesium	31	1.0		mg/L	1	8/19/2015 4:07:50 PM	20846
Manganese	0.42	0.0020	*	mg/L	1	8/19/2015 4:07:50 PM	20846
Potassium	3.1	1.0		mg/L	1	8/19/2015 4:07:50 PM	20846
Sodium	310	10		mg/L	10	8/19/2015 4:09:32 PM	20846
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Toluene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Ethylbenzene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Naphthalene	ND	2.0		µg/L	1	8/6/2015 5:58:08 PM	R28021

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508200

Date Reported: 2/23/2016

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-51

Project: GBR Annual Sampling

Collection Date: 8/5/2015 2:15:00 PM

Lab ID: 1508200-001

Matrix: AQUEOUS

Received Date: 8/6/2015 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1-Methylnaphthalene	ND	4.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
2-Methylnaphthalene	ND	4.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Acetone	ND	10		µg/L	1	8/6/2015 5:58:08 PM	R28021
Bromobenzene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Bromodichloromethane	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Bromoform	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Bromomethane	ND	3.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
2-Butanone	ND	10		µg/L	1	8/6/2015 5:58:08 PM	R28021
Carbon disulfide	ND	10		µg/L	1	8/6/2015 5:58:08 PM	R28021
Carbon Tetrachloride	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Chlorobenzene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Chloroethane	ND	2.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Chloroform	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Chloromethane	ND	3.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
2-Chlorotoluene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
4-Chlorotoluene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
cis-1,2-DCE	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Dibromochloromethane	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Dibromomethane	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
1,1-Dichloroethane	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
1,1-Dichloroethene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
1,2-Dichloropropane	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
1,3-Dichloropropane	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
2,2-Dichloropropane	ND	2.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
1,1-Dichloropropene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Hexachlorobutadiene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
2-Hexanone	ND	10		µg/L	1	8/6/2015 5:58:08 PM	R28021
Isopropylbenzene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
4-Isopropyltoluene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
4-Methyl-2-pentanone	ND	10		µg/L	1	8/6/2015 5:58:08 PM	R28021
Methylene Chloride	ND	3.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
n-Butylbenzene	ND	3.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
n-Propylbenzene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1508200

Date Reported: 2/23/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-51

Project: GBR Annual Sampling

Collection Date: 8/5/2015 2:15:00 PM

Lab ID: 1508200-001

Matrix: AQUEOUS

Received Date: 8/6/2015 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
sec-Butylbenzene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Styrene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
tert-Butylbenzene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
trans-1,2-DCE	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Trichlorofluoromethane	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Vinyl chloride	ND	1.0		µg/L	1	8/6/2015 5:58:08 PM	R28021
Xylenes, Total	ND	1.5		µg/L	1	8/6/2015 5:58:08 PM	R28021
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	8/6/2015 5:58:08 PM	R28021
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	8/6/2015 5:58:08 PM	R28021
Surr: Dibromofluoromethane	111	70-130		%Rec	1	8/6/2015 5:58:08 PM	R28021
Surr: Toluene-d8	98.7	70-130		%Rec	1	8/6/2015 5:58:08 PM	R28021

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508200

Date Reported: 2/23/2016

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-52

Project: GBR Annual Sampling

Collection Date: 8/5/2015 12:05:00 PM

Lab ID: 1508200-002

Matrix: AQUEOUS

Received Date: 8/6/2015 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SM2340B: HARDNESS							Analyst: ELS
Hardness (As CaCO3)	1400	6.6		mg/L	1	8/9/2015 11:45:00 AM	R28328
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	0.71	0.10		mg/L	1	8/6/2015 5:27:26 PM	R28030
Chloride	65	10		mg/L	20	8/6/2015 5:39:51 PM	R28030
Bromide	0.41	0.10		mg/L	1	8/6/2015 5:27:26 PM	R28030
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	8/6/2015 5:39:51 PM	R28030
Sulfate	1400	25	*	mg/L	50	8/8/2015 4:39:29 AM	R28274
Nitrate+Nitrite as N	5.7	1.0		mg/L	5	8/9/2015 1:16:52 AM	R28308
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	3100	0.010		µmhos/cm	1	8/3/2015 6:44:06 PM	R28193
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO3)	208.3	20.00		mg/L CaCO3	1	8/3/2015 6:44:06 PM	B28193
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	8/13/2015 6:44:06 PM	B28193
Total Alkalinity (as CaCO3)	208.3	20.00		mg/L CaCO3	1	8/13/2015 6:44:06 PM	B28193
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	2840	100	*D	mg/L	1	8/10/2015 11:09:00 AM	20651
SM4500-H+B: PH							Analyst: JRR
pH	7.71	1.68	H	pH units	1	8/13/2015 6:44:06 PM	R28193
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	510	10		mg/L	10	8/19/2015 4:13:17 PM	20846
Iron	8.2	0.20	*	mg/L	10	8/19/2015 4:13:17 PM	20846
Magnesium	37	1.0		mg/L	1	8/19/2015 4:11:40 PM	20846
Manganese	0.15	0.0020	*	mg/L	1	8/19/2015 4:11:40 PM	20846
Potassium	2.8	1.0		mg/L	1	8/19/2015 4:11:40 PM	20846
Sodium	360	10		mg/L	10	8/19/2015 4:13:17 PM	20846
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/3/2015 6:25:44 PM	R28021
Toluene	ND	1.0		µg/L	1	8/3/2015 6:25:44 PM	R28021
Ethylbenzene	ND	1.0		µg/L	1	8/3/2015 6:25:44 PM	R28021
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/3/2015 6:25:44 PM	R28021
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/3/2015 6:25:44 PM	R28021
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/3/2015 6:25:44 PM	R28021
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/3/2015 6:25:44 PM	R28021
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/3/2015 6:25:44 PM	R28021
Naphthalene	ND	2.0		µg/L	1	8/3/2015 6:25:44 PM	R28021
1-Methylnaphthalene	ND	4.0		µg/L	1	8/3/2015 6:25:44 PM	R28021

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1508200

Date Reported: 2/23/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-52

Project: GBR Annual Sampling

Collection Date: 8/5/2015 12:05:00 PM

Lab ID: 1508200-002

Matrix: AQUEOUS

Received Date: 8/6/2015 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
2-Methylnaphthalene	ND	4.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
Acetone	ND	10		µg/L	1	8/6/2015 6:25:44 PM	R28021
Bromobenzene	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
Bromodichloromethane	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
Bromoform	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
Bromomethane	ND	3.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
2-Butanone	ND	10		µg/L	1	8/6/2015 6:25:44 PM	R28021
Carbon disulfide	ND	10		µg/L	1	8/6/2015 6:25:44 PM	R28021
Carbon Tetrachloride	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
Chlorobenzene	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
Chloroethane	ND	2.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
Chloroform	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
Chloromethane	ND	3.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
2-Chlorotoluene	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
4-Chlorotoluene	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
cis-1,2-DCE	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
Dibromochloromethane	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
Dibromomethane	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
1,1-Dichloroethane	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
1,1-Dichloroethene	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
1,2-Dichloropropane	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
1,3-Dichloropropane	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
2,2-Dichloropropane	ND	2.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
1,1-Dichloropropene	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
Hexachlorobutadiene	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
2-Hexanone	ND	10		µg/L	1	8/6/2015 6:25:44 PM	R28021
Isopropylbenzene	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
4-Isopropyltoluene	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
4-Methyl-2-pentanone	ND	10		µg/L	1	8/6/2015 6:25:44 PM	R28021
Methylene Chloride	ND	3.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
n-Butylbenzene	ND	3.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
n-Propylbenzene	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
sec-Butylbenzene	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508200

Date Reported: 2/23/2016

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-52

Project: GBR Annual Sampling

Collection Date: 8/5/2015 12:05:00 PM

Lab ID: 1508200-002

Matrix: AQUEOUS

Received Date: 8/6/2015 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Styrene	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
tert-Butylbenzene	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
trans-1,2-DCE	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
Trichlorofluoromethane	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
Vinyl chloride	ND	1.0		µg/L	1	8/6/2015 6:25:44 PM	R28021
Xylenes, Total	ND	1.5		µg/L	1	8/6/2015 6:25:44 PM	R28021
Surr: 1,2-Dichloroethane-d4	99.0	70-130		%Rec	1	8/6/2015 6:25:44 PM	R28021
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	8/6/2015 6:25:44 PM	R28021
Surr: Dibromofluoromethane	112	70-130		%Rec	1	8/6/2015 6:25:44 PM	R28021
Surr: Toluene-d8	102	70-130		%Rec	1	8/6/2015 6:25:44 PM	R28021

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508200

23-Feb-16

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:	R28030	RunNo:	28030					
Prep Date:		Analysis Date:	8/6/2015	SeqNo:	843941	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								
Phosphorus, Orthophosphate (As P)	ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R28030	RunNo:	28030					
Prep Date:		Analysis Date:	8/6/2015	SeqNo:	843942	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	110	90	110			
Chloride	5.3	0.50	5.000	0	106	90	110			
Nitrogen, Nitrite (As N)	1.1	0.10	1.000	0	105	90	110			
Bromide	2.7	0.10	2.500	0	109	90	110			
Phosphorus, Orthophosphate (As P)	5.4	0.50	5.000	0	108	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R28061	RunNo:	28061					
Prep Date:		Analysis Date:	8/7/2015	SeqNo:	845156	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	ND	0.10								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R28061	RunNo:	28061					
Prep Date:		Analysis Date:	8/7/2015	SeqNo:	845157	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	2.7	0.10	2.500	0	106	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R28274	RunNo:	28274					
Prep Date:		Analysis Date:	8/17/2015	SeqNo:	853827	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.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	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 Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508200

23-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	LCS		SampType:	LCS		TestCode:	EPA Method 300.0: Anions				
Client ID:	LCSW		Batch ID:	R28274		RunNo:	28274				
Prep Date:			Analysis Date:	8/17/2015		SeqNo:	853828		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	96.2	90	110				

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R28308	RunNo:	28308					
Prep Date:		Analysis Date:	8/18/2015	SeqNo:	854478	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:	R28308		RunNo:	28308				
Prep Date:			Analysis Date:	8/18/2015		SeqNo:	854479		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.1	90	110				

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | 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 Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508200

23-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	rb1	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R28021			RunNo: 28021					
Prep Date:		Analysis Date: 8/6/2015			SeqNo: 843557		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:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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 Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508200

23-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	rb1	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R28021			RunNo: 28021					
Prep Date:		Analysis Date: 8/6/2015			SeqNo: 843557		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	11		10.00		108	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	12		10.00		116	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R28021	RunNo:	28021					
Prep Date:		Analysis Date:	8/6/2015	SeqNo:	843560	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	21	1.0	20.00	0	103	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | 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 Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508200

23-Feb-16

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:	R28021	RunNo:	28021					
Prep Date:		Analysis Date:	8/6/2015	SeqNo:	843560	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20	1.0	20.00	0	101	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	108	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		98.7	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	9.9		10.00		98.6	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	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 Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508200

23-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	1508200-001b dup			SampType:	DUP		TestCode:	SM2510B: Specific Conductance			
Client ID:	GBR-51		Batch ID:	R28193		RunNo:	28193				
Prep Date:			Analysis Date:	8/13/2015		SeqNo:	849607		Units:	µmhos/cm	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Conductivity	2800	0.010						1.61	20		

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508200

23-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	1508200-001b dup			SampType:	DUP		TestCode:	SM4500-H+B: pH			
Client ID:	GBR-51			Batch ID:	R28193		RunNo:	28193			
Prep Date:				Analysis Date:	8/13/2015		SeqNo:	849617		Units:	pH units
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
pH	7.58	1.68								H	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	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 Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508200

23-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	mb-2	SampType:	MBLK	TestCode:	SM2320B: Alkalinity					
Client ID:	PBW	Batch ID:	B28193	RunNo:	28193					
Prep Date:		Analysis Date:	8/13/2015	SeqNo:	849577	Units:	mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID	lcs-2	SampType:	LCS	TestCode:	SM2320B: Alkalinity					
Client ID:	LCSW	Batch ID:	B28193	RunNo:	28193					
Prep Date:		Analysis Date:	8/13/2015	SeqNo:	849578	Units:	mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	80.48	20.00	80.00	0	101	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508200

23-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	MB-20651	SampType:	MBLK	TestCode:	SM2540C MOD: Total Dissolved Solids					
Client ID:	PBW	Batch ID:	20651	RunNo:	28071					
Prep Date:	8/6/2015	Analysis Date:	8/10/2015	SeqNo:	845536	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-20651	SampType:	LCS	TestCode:	SM2540C MOD: Total Dissolved Solids					
Client ID:	LCSW	Batch ID:	20651	RunNo:	28071					
Prep Date:	8/6/2015	Analysis Date:	8/10/2015	SeqNo:	845537	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. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | 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 Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1508200

RcptNo: 1

Received by/date:

ARM 08/06/15

Logged By:

Ashley Gallegos

8/6/2015 7:00:00 AM

AG

Completed By:

Ashley Gallegos

8/6/2015 8:41:43 AM

AG

Reviewed By:

JA 08/06/15

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? Courier

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: 4
(<20 >12 unless noted)
Adjusted? 110
Checked by: CS

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	1.4	Good	Yes			

Chain-of-Custody Record		Turn-Around Time:
Client: Kelly Robinson	☒ Standard ☐ Rush	
Western Refining	Project Name:	
Vailing Address: 111 CR 4990	GBR Annual Sampling	
Bloomfield NM 87413	Project #:	
Phone #: (970) 385-1096	WR1009	
Email or Fax#: A.Ager@LTEuv.com	Project Manager:	
QA/QC Package:	Ashley Ager	
☒ Standard ☐ Level 4 (Full Validation)	Sampler: Devin Henschmann/M. Wicks	
Accreditation	On Ice: ☒ Yes ☐ No	
☐ NELAP ☐ Other	Sample Temperature: 7.4	
☐ EDD (Type)		

☒ **Standard** ☐ **Rush**

GBR Annual Sampling

WR1009

Ashley Ager

Sampler: Devin Henchmann / M. Weber

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.4

[illegible]

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

BTEX + MTBE + TMB's (8021)		X	VOCs (R260)
BTEX + MTBE + TPH (Gas only)		X	Anions / Cations pH / EC / TD
TPH 8015B (GRO / DRO / MRO)		X	Alkalinity / Hardness
TPH (Method 418.1)			Air Bubbles (Y or N)
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)			

Per Devin
Amey OB

Per Devin
Aug 08

Date:	Time:	Relinquished by:	Received by:	Date	Time
5-15	1540		Chet Watt	8/5/15	1540
Date:	Time:	Relinquished by:	Received by:	Date	Time
8/5/15	1827	Christine Walters		08/06/15	0700

Remarks: Please copy Devin Henchmann
DHenchmann@LTEuniv.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.



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

August 31, 2015

Ashley Ager

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (970) 946-1093

FAX

RE: GBR Annual Sampling

OrderNo.: 1508301

Dear Ashley Ager:

Hall Environmental Analysis Laboratory received 4 sample(s) on 8/7/2015 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 qualifiers 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 1508301

Date Reported: 8/31/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-32

Project: GBR Annual Sampling

Collection Date: 8/6/2015 11:00:00 AM

Lab ID: 1508301-001

Matrix: AQUEOUS

Received Date: 8/7/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS							Analyst: DBD
Antimony	ND	0.0010		mg/L	1	8/20/2015 8:37:31 AM	20859
Arsenic	ND	0.0050		mg/L	5	8/20/2015 9:34:49 AM	20859
Copper	0.0053	0.0010		mg/L	1	8/20/2015 8:37:31 AM	20859
Lead	ND	0.00050		mg/L	1	8/20/2015 8:37:31 AM	20859
Selenium	0.020	0.0010		mg/L	1	8/20/2015 8:37:31 AM	20859
Thallium	ND	0.00050		mg/L	1	8/20/2015 8:37:31 AM	20859
SM2340B: HARDNESS							Analyst: ELS
Hardness (As CaCO3)	1400	6.6		mg/L	1	8/21/2015 10:30:00 AM	R28363
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	0.49	0.10		mg/L	1	8/7/2015 10:47:28 PM	R28072
Chloride	370	10	*	mg/L	20	8/7/2015 10:59:53 PM	R28072
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	8/7/2015 10:47:28 PM	R28072
Bromide	0.99	0.10		mg/L	1	8/7/2015 10:47:28 PM	R28072
Nitrogen, Nitrate (As N)	3.1	2.0		mg/L	20	8/7/2015 10:59:53 PM	R28072
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	8/7/2015 10:59:53 PM	R28072
Sulfate	2000	50	*	mg/L	100	8/21/2015 1:11:31 AM	R28365
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	4600	0.010		µmhos/cm	1	8/18/2015 1:38:23 PM	R28306
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO3)	279.0	20.00		mg/L CaCO3	1	8/18/2015 1:38:23 PM	R28306
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	8/18/2015 1:38:23 PM	R28306
Total Alkalinity (as CaCO3)	279.0	20.00		mg/L CaCO3	1	8/18/2015 1:38:23 PM	R28306
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	3830	20.0	*	mg/L	1	8/14/2015 2:45:00 PM	20761
SM4500-H+B: PH							Analyst: JRR
pH	7.48	1.68	H	pH units	1	8/18/2015 1:38:23 PM	R28306
EPA METHOD 200.7: METALS							Analyst: ELS
Barium	0.011	0.0020		mg/L	1	8/21/2015 12:25:22 PM	20859
Beryllium	ND	0.0020		mg/L	1	8/21/2015 12:25:22 PM	20859
Cadmium	ND	0.0020		mg/L	1	8/21/2015 12:25:22 PM	20859
Calcium	470	5.0		mg/L	5	8/21/2015 12:27:16 PM	20859
Chromium	0.020	0.0060		mg/L	1	8/21/2015 12:25:22 PM	20859
Iron	0.26	0.020		mg/L	1	8/21/2015 12:25:22 PM	20859
Magnesium	53	1.0		mg/L	1	8/21/2015 12:25:22 PM	20859
Manganese	0.56	0.0020	*	mg/L	1	8/21/2015 12:25:22 PM	20859
Nickel	0.30	0.010	*	mg/L	1	8/21/2015 12:25:22 PM	20859

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508301

Date Reported: 8/31/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-2

Project: GBR Annual Sampling

Collection Date: 8/6/2015 11:00:00 AM

Lab ID: 1508301-001

Matrix: AQUEOUS

Received Date: 8/7/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: METALS							Analyst: ELS
Potassium	3.4	1.0		mg/L	1	8/21/2015 12:25:22 PM	20859
Silver	ND	0.0050		mg/L	1	8/21/2015 12:25:22 PM	20859
Sodium	640	10		mg/L	10	8/25/2015 4:27:40 PM	20859
Zinc	ND	0.010		mg/L	1	8/21/2015 12:25:22 PM	20859
EPA METHOD 245.1: MERCURY							Analyst: JLF
Mercury	ND	0.00020		mg/L	1	8/20/2015 11:32:59 AM	20876
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Toluene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Ethylbenzene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Naphthalene	ND	2.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
1-Methylnaphthalene	ND	4.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
2-Methylnaphthalene	ND	4.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Acetone	ND	10		µg/L	1	8/10/2015 8:35:16 PM	R28085
Bromobenzene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Bromodichloromethane	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Bromoform	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Bromomethane	ND	3.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
2-Butanone	ND	10		µg/L	1	8/10/2015 8:35:16 PM	R28085
Carbon disulfide	ND	10		µg/L	1	8/10/2015 8:35:16 PM	R28085
Carbon Tetrachloride	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Chlorobenzene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Chloroethane	ND	2.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Chloroform	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Chloromethane	ND	3.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
2-Chlorotoluene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
4-Chlorotoluene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
cis-1,2-DCE	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Dibromochloromethane	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Dibromomethane	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order 1508301

Date Reported: 8/31/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-32

Project: GBR Annual Sampling

Collection Date: 8/6/2015 11:00:00 AM

Lab ID: 1508301-001

Matrix: AQUEOUS

Received Date: 8/7/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
1,1-Dichloroethane	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
1,1-Dichloroethene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
1,2-Dichloropropane	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
1,3-Dichloropropane	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
2,2-Dichloropropane	ND	2.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
1,1-Dichloropropene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Hexachlorobutadiene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
2-Hexanone	ND	10		µg/L	1	8/10/2015 8:35:16 PM	R28085
Isopropylbenzene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
4-Isopropyltoluene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
4-Methyl-2-pentanone	ND	10		µg/L	1	8/10/2015 8:35:16 PM	R28085
Methylene Chloride	ND	3.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
n-Butylbenzene	ND	3.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
n-Propylbenzene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
sec-Butylbenzene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Styrene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
tert-Butylbenzene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Tetrachloroethene (PCE)	1.2	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
trans-1,2-DCE	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Trichlorofluoromethane	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Vinyl chloride	ND	1.0		µg/L	1	8/10/2015 8:35:16 PM	R28085
Xylenes, Total	ND	1.5		µg/L	1	8/10/2015 8:35:16 PM	R28085
Surr: 1,2-Dichloroethane-d4	100	70-130		%REC	1	8/10/2015 8:35:16 PM	R28085
Surr: 4-Bromofluorobenzene	98.3	70-130		%REC	1	8/10/2015 8:35:16 PM	R28085
Surr: Dibromofluoromethane	105	70-130		%REC	1	8/10/2015 8:35:16 PM	R28085
Surr: Toluene-d8	98.1	70-130		%REC	1	8/10/2015 8:35:16 PM	R28085

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508301

Date Reported: 8/31/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-48

Project: GBR Annual Sampling

Collection Date: 8/6/2015 10:11:00 AM

Lab ID: 1508301-002

Matrix: AQUEOUS

Received Date: 8/7/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS							Analyst: DBD
Antimony	ND	0.010		mg/L	10	8/20/2015 10:00:40 AM	20859
Arsenic	ND	0.050	*	mg/L	50	8/20/2015 3:28:47 PM	20859
Copper	0.22	0.010		mg/L	10	8/20/2015 10:00:40 AM	20859
Lead	0.11	0.0050	*	mg/L	10	8/20/2015 10:00:40 AM	20859
Selenium	0.089	0.050	*	mg/L	50	8/20/2015 3:28:47 PM	20859
Thallium	0.0023	0.00050	*	mg/L	1	8/20/2015 8:53:00 AM	20859
SM2340B: HARDNESS							Analyst: JLF
Hardness (As CaCO3)	2300	6.6		mg/L	1	8/25/2015 2:02:00 PM	R28449
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	0.45	0.10		mg/L	1	8/7/2015 11:12:18 PM	R28072
Chloride	370	50	*	mg/L	100	8/21/2015 1:23:55 AM	R28365
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	8/7/2015 11:12:18 PM	R28072
Bromide	1.3	0.10		mg/L	1	8/7/2015 11:12:18 PM	R28072
Nitrogen, Nitrate (As N)	7.3	0.10		mg/L	1	8/7/2015 11:12:18 PM	R28072
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	8/7/2015 11:24:43 PM	R28072
Sulfate	2100	50	*	mg/L	100	8/21/2015 1:23:55 AM	R28365
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	4800	0.010		µmhos/cm	1	8/18/2015 1:56:10 PM	R28306
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO3)	271.5	20.00		mg/L CaCO3	1	8/18/2015 1:56:10 PM	R28306
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	8/18/2015 1:56:10 PM	R28306
Total Alkalinity (as CaCO3)	271.5	20.00		mg/L CaCO3	1	8/18/2015 1:56:10 PM	R28306
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	3730	200	*D	mg/L	1	8/14/2015 2:45:00 PM	20761
SM4500-H+B: PH							Analyst: JRR
pH	7.38	1.68	H	pH units	1	8/18/2015 1:56:10 PM	R28306
EPA METHOD 200.7: METALS							Analyst: ELS
Barium	0.67	0.0020		mg/L	1	8/21/2015 12:29:03 PM	20859
Beryllium	0.011	0.0020	*	mg/L	1	8/21/2015 12:29:03 PM	20859
Cadmium	ND	0.0020		mg/L	1	8/21/2015 12:29:03 PM	20859
Calcium	810	20		mg/L	20	8/25/2015 4:29:46 PM	20859
Chromium	0.95	0.0060	*	mg/L	1	8/21/2015 12:29:03 PM	20859
Iron	170	4.0	*	mg/L	200	8/25/2015 4:31:43 PM	20859
Magnesium	77	1.0		mg/L	1	8/21/2015 12:29:03 PM	20859
Manganese	6.4	0.040	*	mg/L	20	8/25/2015 4:29:46 PM	20859
Nickel	0.28	0.010	*	mg/L	1	8/21/2015 12:29:03 PM	20859

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508301

Date Reported: 8/31/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-48

Project: GBR Annual Sampling

Collection Date: 8/6/2015 10:11:00 AM

Lab ID: 1508301-002

Matrix: AQUEOUS

Received Date: 8/7/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: METALS							Analyst: ELS
Potassium	19	1.0		mg/L	1	8/21/2015 12:29:03 PM	20859
Silver	ND	0.0050		mg/L	1	8/21/2015 12:29:03 PM	20859
Sodium	610	20		mg/L	20	8/25/2015 4:29:46 PM	20859
Zinc	0.32	0.010		mg/L	1	8/21/2015 12:29:03 PM	20859
EPA METHOD 245.1: MERCURY							Analyst: JLF
Mercury	0.00046	0.00020		mg/L	1	8/20/2015 11:35:04 AM	20876
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Toluene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Ethylbenzene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Methyl tert-butyl ether (MTBE)	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
1,2,4-Trimethylbenzene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
1,3,5-Trimethylbenzene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
1,2-Dichloroethane (EDC)	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
1,2-Dibromoethane (EDB)	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Naphthalene	ND	4.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
1-Methylnaphthalene	ND	8.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
2-Methylnaphthalene	ND	8.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Acetone	ND	20	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Bromobenzene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Bromodichloromethane	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Bromoform	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Bromomethane	ND	6.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
2-Butanone	ND	20	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Carbon disulfide	ND	20	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Carbon Tetrachloride	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Chlorobenzene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Chloroethane	ND	4.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Chloroform	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Chloromethane	ND	6.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
2-Chlorotoluene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
4-Chlorotoluene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
cis-1,2-DCE	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
cis-1,3-Dichloropropene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
1,2-Dibromo-3-chloropropane	ND	4.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Dibromochloromethane	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Dibromomethane	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
1,2-Dichlorobenzene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508301

Date Reported: 8/31/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-48

Project: GBR Annual Sampling

Collection Date: 8/6/2015 10:11:00 AM

Lab ID: 1508301-002

Matrix: AQUEOUS

Received Date: 8/7/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,3-Dichlorobenzene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
1,4-Dichlorobenzene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Dichlorodifluoromethane	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
1,1-Dichloroethane	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
1,1-Dichloroethene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
1,2-Dichloropropane	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
1,3-Dichloropropane	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
2,2-Dichloropropane	ND	4.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
1,1-Dichloropropene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Hexachlorobutadiene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
2-Hexanone	ND	20	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Isopropylbenzene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
4-Isopropyltoluene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
4-Methyl-2-pentanone	ND	20	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Methylene Chloride	ND	6.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
n-Butylbenzene	ND	6.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
n-Propylbenzene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
sec-Butylbenzene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Styrene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
tert-Butylbenzene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
1,1,1,2-Tetrachloroethane	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
1,1,2,2-Tetrachloroethane	ND	4.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Tetrachloroethene (PCE)	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
trans-1,2-DCE	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
trans-1,3-Dichloropropene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
1,2,3-Trichlorobenzene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
1,2,4-Trichlorobenzene	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
1,1,1-Trichloroethane	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
1,1,2-Trichloroethane	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Trichloroethene (TCE)	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Trichlorofluoromethane	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
1,2,3-Trichloropropane	ND	4.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Vinyl chloride	ND	2.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Xylenes, Total	ND	3.0	D	µg/L	2	8/10/2015 9:02:40 PM	R28085
Surr: 1,2-Dichloroethane-d4	96.2	70-130	D	%REC	2	8/10/2015 9:02:40 PM	R28085
Surr: 4-Bromofluorobenzene	103	70-130	D	%REC	2	8/10/2015 9:02:40 PM	R28085
Surr: Dibromofluoromethane	103	70-130	D	%REC	2	8/10/2015 9:02:40 PM	R28085
Surr: Toluene-d8	96.7	70-130	D	%REC	2	8/10/2015 9:02:40 PM	R28085

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order 1508301

Date Reported: 8/31/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-49

Project: GBR Annual Sampling

Collection Date: 8/6/2015 11:21:00 AM

Lab ID: 1508301-003

Matrix: AQUEOUS

Received Date: 8/7/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS							Analyst: DBD
Antimony	ND	0.0010		mg/L	1	8/20/2015 8:58:09 AM	20859
Arsenic	0.0057	0.0010		mg/L	1	8/20/2015 8:58:09 AM	20859
Copper	0.019	0.0010		mg/L	1	8/20/2015 8:58:09 AM	20859
Lead	0.0038	0.00050		mg/L	1	8/20/2015 8:58:09 AM	20859
Selenium	0.0069	0.0010		mg/L	1	8/20/2015 8:58:09 AM	20859
Thallium	ND	0.00050		mg/L	1	8/20/2015 8:58:09 AM	20859
SM2340B: HARDNESS							Analyst: ELS
Hardness (As CaCO ₃)	1100	6.6		mg/L	1	8/21/2015 10:30:00 AM	R28363
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	0.62	0.10		mg/L	1	8/8/2015 12:01:58 AM	R28072
Chloride	180	10		mg/L	20	8/8/2015 12:14:22 AM	R28072
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	8/8/2015 12:01:58 AM	R28072
Bromide	0.54	0.10		mg/L	1	8/8/2015 12:01:58 AM	R28072
Nitrogen, Nitrate (As N)	0.64	0.10		mg/L	1	8/8/2015 12:01:58 AM	R28072
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	8/8/2015 12:14:22 AM	R28072
Sulfate	1500	25	*	mg/L	50	8/21/2015 1:36:19 AM	R28365
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	3400	0.010		µmhos/cm	1	8/18/2015 2:09:21 PM	R28306
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	248.5	20.00		mg/L CaCO ₃	1	8/18/2015 2:09:21 PM	R28306
Carbonate (As CaCO ₃)	ND	2.000		mg/L CaCO ₃	1	8/18/2015 2:09:21 PM	R28306
Total Alkalinity (as CaCO ₃)	248.5	20.00		mg/L CaCO ₃	1	8/18/2015 2:09:21 PM	R28306
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	2840	100	*D	mg/L	1	8/14/2015 2:45:00 PM	20761
SM4500-H+B: PH							Analyst: JRR
pH	7.51	1.68	H	pH units	1	8/18/2015 2:09:21 PM	R28306
EPA METHOD 200.7: METALS							Analyst: ELS
Barium	0.058	0.0020		mg/L	1	8/21/2015 12:38:23 PM	20859
Beryllium	ND	0.0020		mg/L	1	8/21/2015 12:38:23 PM	20859
Cadmium	ND	0.0020		mg/L	1	8/21/2015 12:38:23 PM	20859
Calcium	360	5.0		mg/L	5	8/21/2015 12:40:03 PM	20859
Chromium	0.38	0.0060	*	mg/L	1	8/21/2015 12:38:23 PM	20859
Iron	7.1	0.20	*	mg/L	10	8/25/2015 4:40:09 PM	20859
Magnesium	38	1.0		mg/L	1	8/21/2015 12:38:23 PM	20859
Manganese	0.54	0.0020	*	mg/L	1	8/21/2015 12:38:23 PM	20859
Nickel	0.11	0.010	*	mg/L	1	8/21/2015 12:38:23 PM	20859

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508301

Date Reported: 8/31/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-49

Project: GBR Annual Sampling

Collection Date: 8/6/2015 11:21:00 AM

Lab ID: 1508301-003

Matrix: AQUEOUS

Received Date: 8/7/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: METALS							Analyst: ELS
Potassium	3.0	1.0		mg/L	1	8/21/2015 12:38:23 PM	20859
Silver	ND	0.0050		mg/L	1	8/21/2015 12:38:23 PM	20859
Sodium	440	5.0		mg/L	5	8/21/2015 12:40:03 PM	20859
Zinc	0.044	0.010		mg/L	1	8/21/2015 12:38:23 PM	20859
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Toluene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Ethylbenzene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Naphthalene	ND	2.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
1-Methylnaphthalene	ND	4.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
2-Methylnaphthalene	ND	4.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Acetone	ND	10		µg/L	1	8/10/2015 9:30:02 PM	R28085
Bromobenzene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Bromodichloromethane	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Bromoform	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Bromomethane	ND	3.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
2-Butanone	ND	10		µg/L	1	8/10/2015 9:30:02 PM	R28085
Carbon disulfide	ND	10		µg/L	1	8/10/2015 9:30:02 PM	R28085
Carbon Tetrachloride	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Chlorobenzene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Chloroethane	ND	2.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Chloroform	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Chloromethane	ND	3.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
2-Chlorotoluene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
4-Chlorotoluene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
cis-1,2-DCE	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Dibromochloromethane	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Dibromomethane	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order 1508301

Date Reported: 8/31/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-49

Project: GBR Annual Sampling

Collection Date: 8/6/2015 11:21:00 AM

Lab ID: 1508301-003

Matrix: AQUEOUS

Received Date: 8/7/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloroethane	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
1,1-Dichloroethene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
1,2-Dichloropropane	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
1,3-Dichloropropane	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
2,2-Dichloropropane	ND	2.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
1,1-Dichloropropene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Hexachlorobutadiene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
2-Hexanone	ND	10		µg/L	1	8/10/2015 9:30:02 PM	R28085
Isopropylbenzene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
4-Isopropyltoluene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
4-Methyl-2-pentanone	ND	10		µg/L	1	8/10/2015 9:30:02 PM	R28085
Methylene Chloride	ND	3.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
n-Butylbenzene	ND	3.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
n-Propylbenzene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
sec-Butylbenzene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Styrene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
tert-Butylbenzene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Tetrachloroethene (PCE)	1.2	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
trans-1,2-DCE	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Trichlorofluoromethane	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Vinyl chloride	ND	1.0		µg/L	1	8/10/2015 9:30:02 PM	R28085
Xylenes, Total	ND	1.5		µg/L	1	8/10/2015 9:30:02 PM	R28085
Surr: 1,2-Dichloroethane-d4	97.2	70-130		%REC	1	8/10/2015 9:30:02 PM	R28085
Surr: 4-Bromofluorobenzene	102	70-130		%REC	1	8/10/2015 9:30:02 PM	R28085
Surr: Dibromofluoromethane	102	70-130		%REC	1	8/10/2015 9:30:02 PM	R28085
Surr: Toluene-d8	98.5	70-130		%REC	1	8/10/2015 9:30:02 PM	R28085

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508301

Date Reported: 8/31/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-50

Project: GBR Annual Sampling

Collection Date: 8/6/2015 9:35:00 AM

Lab ID: 1508301-004

Matrix: AQUEOUS

Received Date: 8/7/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2340B: HARDNESS							Analyst: ELS
Hardness (As CaCO ₃)	1200	6.6		mg/L	1	8/21/2015 10:30:00 AM	R28363
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	0.83	0.10		mg/L	1	8/8/2015 12:26:47 AM	R28072
Chloride	44	10		mg/L	20	8/8/2015 12:39:12 AM	R28072
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	8/8/2015 12:26:47 AM	R28072
Bromide	0.28	0.10		mg/L	1	8/8/2015 12:26:47 AM	R28072
Nitrogen, Nitrate (As N)	5.0	2.0		mg/L	20	8/8/2015 12:39:12 AM	R28072
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	8/8/2015 12:39:12 AM	R28072
Sulfate	1700	25	*	mg/L	50	8/21/2015 1:48:44 AM	R28365
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	3200	0.010		µmhos/cm	1	8/18/2015 2:21:55 PM	R28306
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	202.4	20.00		mg/L CaCO ₃	1	8/18/2015 2:21:55 PM	R28306
Carbonate (As CaCO ₃)	ND	2.000		mg/L CaCO ₃	1	8/18/2015 2:21:55 PM	R28306
Total Alkalinity (as CaCO ₃)	202.4	20.00		mg/L CaCO ₃	1	8/18/2015 2:21:55 PM	R28306
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	2760	40.0	*D	mg/L	1	8/14/2015 2:45:00 PM	20761
SM4500-H+B: PH							Analyst: JRR
pH	7.35	1.68	H	pH units	1	8/18/2015 2:21:55 PM	R28306
EPA METHOD 200.7: METALS							Analyst: ELS
Barium	0.024	0.0020		mg/L	1	8/21/2015 12:41:54 PM	20859
Beryllium	ND	0.0020		mg/L	1	8/21/2015 12:41:54 PM	20859
Cadmium	ND	0.0020		mg/L	1	8/21/2015 12:41:54 PM	20859
Calcium	420	5.0		mg/L	5	8/21/2015 12:43:37 PM	20859
Chromium	0.073	0.0060		mg/L	1	8/21/2015 12:41:54 PM	20859
Iron	2.2	0.10	*	mg/L	5	8/21/2015 12:43:37 PM	20859
Magnesium	34	1.0		mg/L	1	8/21/2015 12:41:54 PM	20859
Manganese	0.19	0.0020	*	mg/L	1	8/21/2015 12:41:54 PM	20859
Nickel	0.036	0.010		mg/L	1	8/21/2015 12:41:54 PM	20859
Potassium	2.6	1.0		mg/L	1	8/21/2015 12:41:54 PM	20859
Silver	ND	0.0050		mg/L	1	8/21/2015 12:41:54 PM	20859
Sodium	360	5.0		mg/L	5	8/21/2015 12:43:37 PM	20859
Zinc	0.016	0.010		mg/L	1	8/21/2015 12:41:54 PM	20859
EPA METHOD 245.1: MERCURY							Analyst: JLF
Mercury	ND	0.00020		mg/L	1	8/20/2015 11:37:10 AM	20876

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order 1508301

Date Reported: 8/31/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-50

Project: GBR Annual Sampling

Collection Date: 8/6/2015 9:35:00 AM

Lab ID: 1508301-004

Matrix: AQUEOUS

Received Date: 8/7/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Toluene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Ethylbenzene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Naphthalene	ND	2.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
1-Methylnaphthalene	ND	4.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
2-Methylnaphthalene	ND	4.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Acetone	ND	10		µg/L	1	8/10/2015 11:47:18 PM	R28085
Bromobenzene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Bromodichloromethane	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Bromoform	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Bromomethane	ND	3.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
2-Butanone	ND	10		µg/L	1	8/10/2015 11:47:18 PM	R28085
Carbon disulfide	ND	10		µg/L	1	8/10/2015 11:47:18 PM	R28085
Carbon Tetrachloride	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Chlorobenzene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Chloroethane	ND	2.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Chloroform	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Chloromethane	ND	3.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
2-Chlorotoluene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
4-Chlorotoluene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
cis-1,2-DCE	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Dibromochloromethane	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Dibromomethane	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
1,1-Dichloroethane	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
1,1-Dichloroethene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
1,2-Dichloropropane	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
1,3-Dichloropropane	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
2,2-Dichloropropane	ND	2.0		µg/L	1	8/10/2015 11:47:18 PM	R28085

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508301

Date Reported: 8/31/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-50

Project: GBR Annual Sampling

Collection Date: 8/6/2015 9:35:00 AM

Lab ID: 1508301-004

Matrix: AQUEOUS

Received Date: 8/7/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Hexachlorobutadiene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
2-Hexanone	ND	10		µg/L	1	8/10/2015 11:47:18 PM	R28085
Isopropylbenzene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
4-Isopropyltoluene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
4-Methyl-2-pentanone	ND	10		µg/L	1	8/10/2015 11:47:18 PM	R28085
Methylene Chloride	ND	3.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
n-Butylbenzene	ND	3.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
n-Propylbenzene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
sec-Butylbenzene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Styrene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
tert-Butylbenzene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
trans-1,2-DCE	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Trichlorofluoromethane	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Vinyl chloride	ND	1.0		µg/L	1	8/10/2015 11:47:18 PM	R28085
Xylenes, Total	ND	1.5		µg/L	1	8/10/2015 11:47:18 PM	R28085
Surr: 1,2-Dichloroethane-d4	99.0	70-130		%REC	1	8/10/2015 11:47:18 PM	R28085
Surr: 4-Bromofluorobenzene	98.0	70-130		%REC	1	8/10/2015 11:47:18 PM	R28085
Surr: Dibromofluoromethane	107	70-130		%REC	1	8/10/2015 11:47:18 PM	R28085
Surr: Toluene-d8	97.8	70-130		%REC	1	8/10/2015 11:47:18 PM	R28085

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508301

31-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	MB-20859		SampType:	MBLK		TestCode:	EPA Method 200.7: Metals				
Client ID:	PBW		Batch ID:	20859		RunNo:	28328				
Prep Date:	8/18/2015		Analysis Date:	8/19/2015		SeqNo:	855184		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Nickel	ND	0.010								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID	LCS-20859		SampType:	LCS		TestCode:	EPA Method 200.7: Metals				
Client ID:	LCSW		Batch ID:	20859		RunNo:	28328				
Prep Date:	8/18/2015		Analysis Date:	8/19/2015		SeqNo:	855185		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Barium	0.54	0.0020	0.5000	0	108	85	115			
Cadmium	0.53	0.0020	0.5000	0	106	85	115			
Calcium	51	1.0	50.00	0	101	85	115			
Chromium	0.52	0.0060	0.5000	0	104	85	115			
Magnesium	53	1.0	50.00	0	105	85	115			
Manganese	0.49	0.0020	0.5000	0	97.7	85	115			
Nickel	0.52	0.010	0.5000	0	104	85	115			
Potassium	52	1.0	50.00	0	104	85	115			
Sodium	51	1.0	50.00	0	102	85	115			

Sample ID	LLLCS-20859		SampType:	LCSLL		TestCode:	EPA Method 200.7: Metals				
Client ID:	BatchQC		Batch ID:	20859		RunNo:	28328				
Prep Date:	8/18/2015		Analysis Date:	8/19/2015		SeqNo:	855186		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Barium	0.0024	0.0020	0.002000	0	120	50	150			
Cadmium	ND	0.0020	0.002000	0	73.0	50	150			
Calcium	ND	1.0	0.5000	0	107	50	150			
Chromium	0.0083	0.0060	0.006000	0	138	50	150			
Magnesium	ND	1.0	0.5000	0	108	50	150			
Manganese	0.0024	0.0020	0.002000	0	118	50	150			
Nickel	ND	0.010	0.005000	0	134	50	150			
Potassium	ND	1.0	0.5000	0	138	50	150			
Sodium	ND	1.0	0.5000	0	109	50	150			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	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 Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508301

31-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	MB-20859	SampType:	MBLK	TestCode:	EPA Method 200.7: Metals					
Client ID:	PBW	Batch ID:	20859	RunNo:	28356					
Prep Date:	8/18/2015	Analysis Date:	8/20/2015	SeqNo:	856205	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	ND	0.0020								
Iron	ND	0.020								
Zinc	ND	0.010								

Sample ID	LCS-20859	SampType:	LCS	TestCode:	EPA Method 200.7: Metals					
Client ID:	LCSW	Batch ID:	20859	RunNo:	28356					
Prep Date:	8/18/2015	Analysis Date:	8/20/2015	SeqNo:	856206	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.50	0.0020	0.5000	0	99.4	85	115			
Iron	0.49	0.020	0.5000	0	98.8	85	115			
Zinc	0.48	0.010	0.5000	0	96.0	85	115			

Sample ID	LLLCS-20859	SampType:	LCSLL	TestCode:	EPA Method 200.7: Metals					
Client ID:	BatchQC	Batch ID:	20859	RunNo:	28356					
Prep Date:	8/18/2015	Analysis Date:	8/20/2015	SeqNo:	856207	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.0022	0.0020	0.002000	0	108	50	150			
Iron	ND	0.020	0.02000	0	94.2	50	150			
Zinc	ND	0.010	0.005000	0	107	50	150			

Sample ID	MB-20859	SampType:	MBLK	TestCode:	EPA Method 200.7: Metals					
Client ID:	PBW	Batch ID:	20859	RunNo:	28363					
Prep Date:	8/18/2015	Analysis Date:	8/21/2015	SeqNo:	857172	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID	LCS-20859	SampType:	LCS	TestCode:	EPA Method 200.7: Metals					
Client ID:	LCSW	Batch ID:	20859	RunNo:	28363					
Prep Date:	8/18/2015	Analysis Date:	8/21/2015	SeqNo:	857173	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	103	85	115			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508301

31-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	LLLCS-20859	SampType:	LCSLL	TestCode:	EPA Method 200.7: Metals					
Client ID:	BatchQC	Batch ID:	20859	RunNo:	28363					
Prep Date:	8/18/2015	Analysis Date:	8/21/2015	SeqNo:	857174	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0052	0.0050	0.005000	0	105	50	150			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508301

31-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	MB-20859		SampType: MBLK		TestCode: EPA 200.8: Metals					
Client ID:	PBW		Batch ID: 20859		RunNo: 28336					
Prep Date:	8/18/2015		Analysis Date: 8/20/2015		SeqNo: 855643		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								
Copper	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								

Sample ID	MSLCS-20859		SampType: LCS		TestCode: EPA 200.8: Metals					
Client ID:	LCSW		Batch ID: 20859		RunNo: 28336					
Prep Date:	8/18/2015		Analysis Date: 8/20/2015		SeqNo: 855644		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.027	0.0010	0.02500	0	106	85	115			
Arsenic	0.024	0.0010	0.02500	0	94.1	85	115			
Copper	0.024	0.0010	0.02500	0	97.6	85	115			
Lead	0.012	0.00050	0.01250	0	96.7	85	115			
Selenium	0.023	0.0010	0.02500	0	92.0	85	115			
Thallium	0.012	0.00050	0.01250	0	96.7	85	115			

Sample ID	MSLLCS-20859		SampType: LCSLL		TestCode: EPA 200.8: Metals					
Client ID:	BatchQC		Batch ID: 20859		RunNo: 28336					
Prep Date:	8/18/2015		Analysis Date: 8/20/2015		SeqNo: 855645		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	RPDLimit	Qual
Antimony	0.0012	0.0010	0.001000	0	116	50	150			
Arsenic	0.0011	0.0010	0.001000	0	111	50	150			
Copper	ND	0.0010	0.001000	0	99.2	50	150			
Lead	0.00051	0.00050	0.0005000	0	102	50	150			
Selenium	ND	0.0010	0.001000	0	90.9	50	150			
Thallium	0.00051	0.00050	0.0005000	0	101	50	150			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508301

31-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	MB-20876	SampType:	MBLK	TestCode:	EPA Method 245.1: Mercury					
Client ID:	PBW	Batch ID:	20876	RunNo:	28344					
Prep Date:	8/19/2015	Analysis Date:	8/20/2015	SeqNo:	855946	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-20876	SampType:	LCS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	LCSW	Batch ID:	20876	RunNo:	28344					
Prep Date:	8/19/2015	Analysis Date:	8/20/2015	SeqNo:	855947	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	92.0	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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 Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508301

31-Aug-15

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:	R28072	RunNo:	28072					
Prep Date:		Analysis Date:	8/7/2015	SeqNo:	845566	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	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:	R28072	RunNo:	28072					
Prep Date:		Analysis Date:	8/7/2015	SeqNo:	845567	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	107	90	110			
Chloride	4.9	0.50	5.000	0	98.6	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	96.0	90	110			
Bromide	2.5	0.10	2.500	0	101	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	104	90	110			
Phosphorus, Orthophosphate (As P)	4.9	0.50	5.000	0	98.5	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R28365	RunNo:	28365					
Prep Date:		Analysis Date:	8/20/2015	SeqNo:	856770	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R28365	RunNo:	28365					
Prep Date:		Analysis Date:	8/20/2015	SeqNo:	856771	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	98.1	90	110			
Sulfate	10	0.50	10.00	0	99.9	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508301

31-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R28085	RunNo:	28085					
Prep Date:		Analysis Date:	8/10/2015	SeqNo:	845871	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:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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 Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508301

31-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R28085	RunNo:	28085					
Prep Date:		Analysis Date:	8/10/2015	SeqNo:	845871	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	9.9		10.00		98.7	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	9.6		10.00		96.1	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R28085	RunNo:	28085					
Prep Date:		Analysis Date:	8/10/2015	SeqNo:	845872	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	21	1.0	20.00	0	104	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508301

31-Aug-15

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:	R28085	RunNo:	28085					
Prep Date:		Analysis Date:	8/10/2015	SeqNo:	845872	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	106	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	104	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.3	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	9.9		10.00		98.8	70	130			

Sample ID	rb2	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R28085	RunNo:	28085					
Prep Date:		Analysis Date:	8/10/2015	SeqNo:	845905	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								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508301

31-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	rb2	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R28085	RunNo:	28085					
Prep Date:		Analysis Date:	8/10/2015	SeqNo:	845905	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508301

31-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	rb2	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R28085	RunNo:	28085					
Prep Date:		Analysis Date:	8/10/2015	SeqNo:	845905	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.9		10.00		99.3	70	130			

Sample ID	100ng lcs2	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R28085	RunNo:	28085					
Prep Date:		Analysis Date:	8/10/2015	SeqNo:	845906	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	20	1.0	20.00	0	99.3	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	104	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	99.2	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.1	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	9.7		10.00		97.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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 Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508301

31-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	1508301-001b dup			SampType:	DUP		TestCode:	SM2510B: Specific Conductance			
Client ID:	GBR-32		Batch ID:	R28306		RunNo:	28306				
Prep Date:			Analysis Date:	8/18/2015		SeqNo:	854842		Units:	µmhos/cm	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Conductivity	4600	0.010						0.367	20		

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1508301
31-Aug-15

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

Sample ID	1508301-001b dup			SampType:	DUP		TestCode:	SM4500-H+B: pH			
Client ID:	GBR-32		Batch ID:	R28306		RunNo:	28306				
Prep Date:			Analysis Date:	8/18/2015		SeqNo:	854870		Units:	pH units	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
pH	7.45	1.68								H	

- Qualifiers:
- * Value exceeds Maximum Contaminant Level.
 - D Sample Diluted Due to Matrix
 - H Holding times for preparation or analysis exceeded
 - ND Not Detected at the Reporting Limit
 - R RPD outside accepted recovery limits
 - S % Recovery outside of range due to dilution or matrix
 - B Analyte detected in the associated Method Blank
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - P Sample pH Not In Range
 - RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508301

31-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	mb-1		SampType:	MBLK		TestCode:	SM2320B: Alkalinity				
Client ID:	PBW		Batch ID:	R28306		RunNo:	28306				
Prep Date:			Analysis Date:	8/18/2015		SeqNo:	854428		Units:	mg/L CaCO3	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	RPDLimit	Qual	
Total Alkalinity (as CaCO3)	ND	20.00									

Sample ID	lcs-1			SampType:	LCS		TestCode:	SM2320B: Alkalinity			
Client ID:	LCSW			Batch ID:	R28306		RunNo:	28306			
Prep Date:				Analysis Date:	8/18/2015		SeqNo:	854429		Units:	mg/L CaCO3
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	RPDLimit	Qual	
Total Alkalinity (as CaCO3)	79.44	20.00	80.00	0	99.3	90	110				

Sample ID	mb-2	SampType:	MBLK		TestCode:	SM2320B: Alkalinity				
Client ID:	PBW	Batch ID:	R28306		RunNo:	28306				
Prep Date:		Analysis Date:	8/18/2015		SeqNo:	854452		Units: mg/L CaCO3		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID	lcs-2		SampType:	LCS		TestCode:	SM2320B: Alkalinity				
Client ID:	LCSW		Batch ID:	R28306		RunNo:	28306				
Prep Date:			Analysis Date:	8/18/2015		SeqNo:	854453		Units:	mg/L CaCO3	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	RPDLimit	Qual	
Total Alkalinity (as CaCO3)	80.80	20.00	80.00	0	101	90	110				

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508301

31-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	MB-20761	SampType:	MBLK	TestCode:	SM2540C MOD: Total Dissolved Solids
Client ID:	PBW	Batch ID:	20761	RunNo:	28208
Prep Date:	8/13/2015	Analysis Date:	8/14/2015	SeqNo:	850180 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-20761	SampType:	LCS	TestCode:	SM2540C MOD: Total Dissolved Solids
Client ID:	LCSW	Batch ID:	20761	RunNo:	28208
Prep Date:	8/13/2015	Analysis Date:	8/14/2015	SeqNo:	850181 Units: mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit %RPD RPDLimit Qual
Total Dissolved Solids	1030	20.0	1000	0	103 80 120

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | 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 Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |



Hall Environmental Analysis Laboratory
4901 Hawklas 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: 1508301

RcptNo: 1

Received by/date:

AG

08/07/15

Logged By: Ashley Gallegos

8/7/2015 8:00:00 AM

AG

Completed By: Ashley Gallegos

8/7/2015 1:08:17 PM

AG

Reviewed By:

JA

08/10/15

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? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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: *8*
(<2 or >12 unless noted)
Adjusted? *no*
Checked by: *CS*

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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.7	Good	Yes			

ient: Kelly Robinson
Western Refining
ailing Address: 111 CR 4990
Bloomfield, NM 87413
Phone #: (970) 385-1096
mail or Fax#: AAgcr@LTEnv.com
A/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
ccreditation
☒ NELAP ☐ Other _____
☒ EDD (Type) _____

☒ **Standard** ☐ **Rush**

GBR Annual Sampling

WR1009

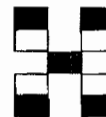
Project Manager:

Ashley Ager
Sampler: Devin Henschmann / Mike Wicker

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.7

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
6-15	12:40	[Signature]	Shawn Laet	8/6/15	1640	
Date:	Time:	Relinquished by:	Received by:	Date	Time	
6/15	2:10	Christopher Wallers	[Signature]	06/07/15	0800	



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

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	
	Air Bubbles (Y or N)	

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

**2015 SAMPLING SCHEDULE
FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.**

	Aug-15
GBR-1	VOCs, GWC
GBR-2	VOCs, GWC, PAHs, Metals
GBR-3	VOCs, GWC, PAHs
GBR-4	VOCs, GWC, PAHs
GBR-5	VOCs, GWC, PAHs
GBR-6	VOCs, GWC, PAHs
GBR-7	VOCs, GWC, PAHs
GBR-8	VOCs, GWC, PAHs
GBR-9	VOCs, GWC, PAHs
GBR-10	VOCs, GWC, PAHs
GBR-11	VOCs, GWC, PAHs
GBR-12	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
GBR-53	VOCs, GWC

Notes:

GWC - ground water chemistry . Ph, electrical conductivity, total dissolved solids, alkalinity, hardness, anions (bromide, chloride, sulfate, fluoride, 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





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

February 23, 2016

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.: 1508356

Dear Ashley Ager:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/8/2015 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued August 27, 2015.

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 1508356

Date Reported: 2/23/2016

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-17

Project: GBR Annual Sampling

Collection Date: 8/7/2015 2:05:00 PM

Lab ID: 1508356-001

Matrix: AQUEOUS

Received Date: 8/8/2015 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SM2340B: HARDNESS							Analyst: ELS
Hardness (As CaCO ₃)	980	6.6		mg/L	1	8/14/2015 7:50:00 AM	R28191
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	0.68	0.10		mg/L	1	8/21/2015 2:01:09 AM	R28365
Chloride	43	10		mg/L	20	8/10/2015 12:25:08 PM	R28099
Bromide	ND	0.10		mg/L	1	8/10/2015 11:47:53 AM	R28099
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	8/10/2015 11:47:53 AM	R28099
Sulfate	1100	25	*	mg/L	50	8/21/2015 2:38:23 AM	R28365
Nitrate+Nitrite as N	5.8	1.0		mg/L	5	8/22/2015 1:47:13 AM	R28406
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	2400	0.010		µmhos/cm	1	8/18/2015 2:33:17 PM	R28306
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	209.0	20.00		mg/L CaCO ₃	1	8/18/2015 2:33:17 PM	R28306
Carbonate (As CaCO ₃)	ND	2.000		mg/L CaCO ₃	1	8/18/2015 2:33:17 PM	R28306
Total Alkalinity (as CaCO ₃)	209.0	20.00		mg/L CaCO ₃	1	8/18/2015 2:33:17 PM	R28306
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	1960	40.0	*D	mg/L	1	8/14/2015 2:45:00 PM	20761
SM4500-H+B: PH							Analyst: JRR
pH	7.51	1.68	H	pH units	1	8/18/2015 2:33:17 PM	R28306
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: ELS
Calcium	350	5.0		mg/L	5	8/14/2015 8:24:37 AM	20768
Iron	3.6	0.25		mg/L	5	8/14/2015 8:24:37 AM	20768
Magnesium	27	1.0		mg/L	1	8/14/2015 8:20:13 AM	20768
Manganese	ND	0.0020		mg/L	1	8/14/2015 8:20:13 AM	20768
Potassium	2.6	1.0		mg/L	1	8/14/2015 8:20:13 AM	20768
Sodium	270	5.0		mg/L	5	8/14/2015 8:24:37 AM	20768
EPA METHOD 8270C: PAHS							Analyst: DAM
Naphthalene	ND	0.50		µg/L	1	8/13/2015 12:30:58 PM	20769
1-Methylnaphthalene	ND	0.50		µg/L	1	8/13/2015 12:30:58 PM	20769
2-Methylnaphthalene	ND	0.50		µg/L	1	8/13/2015 12:30:58 PM	20769
Acenaphthylene	ND	0.50		µg/L	1	8/13/2015 12:30:58 PM	20769
Acenaphthene	ND	0.50		µg/L	1	8/13/2015 12:30:58 PM	20769
Fluorene	ND	0.50		µg/L	1	8/13/2015 12:30:58 PM	20769
Phenanthrene	ND	0.50		µg/L	1	8/13/2015 12:30:58 PM	20769
Anthracene	ND	0.50		µg/L	1	8/13/2015 12:30:58 PM	20769
Fluoranthene	ND	0.50		µg/L	1	8/13/2015 12:30:58 PM	20769
Pyrene	ND	0.50		µg/L	1	8/13/2015 12:30:58 PM	20769

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Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1508356

Date Reported: 2/23/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-17

Project: GBR Annual Sampling

Collection Date: 8/7/2015 2:05:00 PM

Lab ID: 1508356-001

Matrix: AQUEOUS

Received Date: 8/8/2015 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: PAHS							Analyst: DAM
Benz(a)anthracene	ND	0.50		µg/L	1	8/13/2015 12:30:58 PM	20769
Chrysene	ND	0.50		µg/L	1	8/13/2015 12:30:58 PM	20769
Benzo(b)fluoranthene	ND	0.50		µg/L	1	8/13/2015 12:30:58 PM	20769
Benzo(k)fluoranthene	ND	0.50		µg/L	1	8/13/2015 12:30:58 PM	20769
Benzo(a)pyrene	ND	0.50		µg/L	1	8/13/2015 12:30:58 PM	20769
Dibenz(a,h)anthracene	ND	0.50		µg/L	1	8/13/2015 12:30:58 PM	20769
Benzo(g,h,i)perylene	ND	0.50		µg/L	1	8/13/2015 12:30:58 PM	20769
Indeno(1,2,3-cd)pyrene	ND	0.50		µg/L	1	8/13/2015 12:30:58 PM	20769
Surr: N-hexadecane	74.9	26.5-130		%Rec	1	8/13/2015 12:30:58 PM	20769
Surr: Benzo(e)pyrene	70.1	35.5-125		%Rec	1	8/13/2015 12:30:58 PM	20769
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
Toluene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
Ethylbenzene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
Naphthalene	ND	2.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
1-Methylnaphthalene	ND	4.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
2-Methylnaphthalene	ND	4.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
Acetone	ND	10		µg/L	1	8/11/2015 12:14:40 AM	R28085
Bromobenzene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
Bromodichloromethane	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
Bromoform	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
Bromomethane	ND	3.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
2-Butanone	ND	10		µg/L	1	8/11/2015 12:14:40 AM	R28085
Carbon disulfide	ND	10		µg/L	1	8/11/2015 12:14:40 AM	R28085
Carbon Tetrachloride	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
Chlorobenzene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
Chloroethane	ND	2.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
Chloroform	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
Chloromethane	ND	3.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
2-Chlorotoluene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
4-Chlorotoluene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
cis-1,2-DCE	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/11/2015 12:14:40 AM	R28085

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508356

Date Reported: 2/23/2016

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-17

Project: GBR Annual Sampling

Collection Date: 8/7/2015 2:05:00 PM

Lab ID: 1508356-001

Matrix: AQUEOUS

Received Date: 8/8/2015 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Dibromochloromethane	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
Dibromomethane	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
1,1-Dichloroethane	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
1,1-Dichloroethene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
1,2-Dichloropropane	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
1,3-Dichloropropane	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
2,2-Dichloropropane	ND	2.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
1,1-Dichloropropene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
Hexachlorobutadiene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
2-Hexanone	ND	10		µg/L	1	8/11/2015 12:14:40 AM	R28085
Isopropylbenzene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
4-Isopropyltoluene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
4-Methyl-2-pentanone	ND	10		µg/L	1	8/11/2015 12:14:40 AM	R28085
Methylene Chloride	ND	3.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
n-Butylbenzene	ND	3.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
n-Propylbenzene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
sec-Butylbenzene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
Styrene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
tert-Butylbenzene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
trans-1,2-DCE	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
Trichlorofluoromethane	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
Vinyl chloride	ND	1.0		µg/L	1	8/11/2015 12:14:40 AM	R28085
Xylenes, Total	ND	1.5		µg/L	1	8/11/2015 12:14:40 AM	R28085
Surr: 1,2-Dichloroethane-d4	94.6	70-130		%Rec	1	8/11/2015 12:14:40 AM	R28085
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/11/2015 12:14:40 AM	R28085

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1508356

Date Reported: 2/23/2016

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** GBR-17**Project:** GBR Annual Sampling**Collection Date:** 8/7/2015 2:05:00 PM**Lab ID:** 1508356-001**Matrix:** AQUEOUS**Received Date:** 8/8/2015 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Surr: Dibromofluoromethane	107	70-130		%Rec	1	8/11/2015 12:14:40 AM	R28085
Surr: Toluene-d8	96.8	70-130		%Rec	1	8/11/2015 12:14:40 AM	R28085

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508356

23-Feb-16

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:	R28099	RunNo:	28099					
Prep Date:		Analysis Date:	8/10/2015	SeqNo:	846333	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R28099	RunNo:	28099					
Prep Date:		Analysis Date:	8/10/2015	SeqNo:	846334	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	5.1	0.50	5.000	0	103	90	110			
Bromide	2.6	0.10	2.500	0	104	90	110			
Phosphorus, Orthophosphate (As P)	5.1	0.50	5.000	0	101	90	110			

Sample ID	1508356-001CMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	GBR-17	Batch ID:	R28099	RunNo:	28099					
Prep Date:		Analysis Date:	8/10/2015	SeqNo:	846336	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	ND	0.50	5.000	0	0	81.2	116			S
Bromide	2.7	0.10	2.500	0	106	84.6	106			S

Sample ID	1508356-001CMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	GBR-17	Batch ID:	R28099	RunNo:	28099					
Prep Date:		Analysis Date:	8/10/2015	SeqNo:	846337	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	ND	0.50	5.000	0	0	81.2	116	0	20	S
Bromide	2.6	0.10	2.500	0	104	84.6	106	2.40	20	

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R28365	RunNo:	28365					
Prep Date:		Analysis Date:	8/20/2015	SeqNo:	856770	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								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508356

23-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R28365	RunNo:	28365					
Prep Date:		Analysis Date:	8/20/2015	SeqNo:	856771	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	103	90	110			
Sulfate	10	0.50	10.00	0	99.9	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R28406	RunNo:	28406					
Prep Date:		Analysis Date:	8/21/2015	SeqNo:	858181	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:	R28406	RunNo:	28406					
Prep Date:		Analysis Date:	8/21/2015	SeqNo:	858182	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	101	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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 Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508356

23-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R28085			RunNo: 28085					
Prep Date:		Analysis Date: 8/10/2015			SeqNo: 845871		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R²D	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:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508356

23-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R28085			RunNo: 28085					
Prep Date:		Analysis Date: 8/10/2015			SeqNo: 845871	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	9.9		10.00		98.7	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	9.6		10.00		96.1	70	130			

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: R28085			RunNo: 28085					
Prep Date:		Analysis Date: 8/10/2015			SeqNo: 845872	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	21	1.0	20.00	0	104	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	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 Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508356

23-Feb-16

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:	R28085	RunNo:	28085					
Prep Date:		Analysis Date:	8/10/2015	SeqNo:	845872	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	106	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	104	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.3	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	9.9		10.00		98.8	70	130			

Sample ID	rb2	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R28085			RunNo: 28085					
Prep Date:		Analysis Date: 8/10/2015			SeqNo: 845905		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								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508356

23-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	rb2	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R28085	RunNo:	28085					
Prep Date:		Analysis Date:	8/10/2015	SeqNo:	845905	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508356

23-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	rb2	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	R28085		RunNo:	28085				
Prep Date:		Analysis Date:	8/10/2015		SeqNo:	845905		Units:	µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.9		10.00		99.3	70	130			

Sample ID	100ng lcs2	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R28085	RunNo:	28085					
Prep Date:		Analysis Date:	8/10/2015	SeqNo:	845906	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	20	1.0	20.00	0	99.3	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	104	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	99.2	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.1	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	9.7		10.00		97.5	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508356

23-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	mb-20769		SampType:	MBLK		TestCode:	EPA Method 8270C: PAHs			
Client ID:	PBW		Batch ID:	20769		RunNo:	28181			
Prep Date:	8/11/2015		Analysis Date:	8/13/2015		SeqNo:	849100		Units: µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	0.50								
2-Methylnaphthalene	ND	0.50								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	66		87.60		75.6	26.5	130			
Surr: Benzo(e)pyrene	15		20.00		77.0	35.5	125			

Sample ID	lcs-20769		SampType:	LCS		TestCode:	EPA Method 8270C: PAHs			
Client ID:	LCSW		Batch ID:	20769		RunNo:	28181			
Prep Date:	8/11/2015		Analysis Date:	8/13/2015		SeqNo:	849101		Units: µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	11	0.50	20.00	0	55.7	37.5	104			
1-Methylnaphthalene	12	0.50	20.00	0	58.2	39.4	108			
2-Methylnaphthalene	12	0.50	20.00	0	58.5	40.5	98.2			
Acenaphthylene	13	0.50	20.00	0	63.0	43.6	103			
Acenaphthene	13	0.50	20.00	0	62.6	42.1	104			
Fluorene	13	0.50	20.00	0	63.5	45.7	105			
Phenanthrene	12	0.50	20.00	0	61.5	52.6	104			
Anthracene	12	0.50	20.00	0	60.5	52.8	104			
Fluoranthene	13	0.50	20.00	0	63.7	53.4	109			
Pyrene	13	0.50	20.00	0	65.2	44.9	108			
Benz(a)anthracene	13	0.50	20.00	0	63.9	45.1	110			
Chrysene	11	0.50	20.00	0	55.7	40.1	131			
Benzo(b)fluoranthene	13	0.50	20.00	0	64.9	49.9	105			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | 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 Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508356

23-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	Ics-20769		SampType: LCS		TestCode: EPA Method 8270C: PAHs					
Client ID:	LCSW		Batch ID: 20769		RunNo: 28181					
Prep Date:	8/11/2015		Analysis Date: 8/13/2015		SeqNo: 849101		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ² D	RPDLimit	Qual
Benzo(k)fluoranthene	13	0.50	20.00	0	64.6	49.4	103			
Benzo(a)pyrene	12	0.50	20.00	0	62.4	49	100			
Dibenz(a,h)anthracene	13	0.50	20.00	0	63.4	52.9	115			
Benzo(g,h,i)perylene	14	0.50	20.00	0	67.6	43.6	107			
Indeno(1,2,3-cd)pyrene	13	0.50	20.00	0	66.8	47.6	102			
Surr: N-hexadecane	56		87.60		64.1	26.5	130			
Surr: Benzo(e)pyrene	12		20.00		61.9	35.5	125			

Sample ID	Icsd-20769		SampType: LCSD		TestCode: EPA Method 8270C: PAHs					
Client ID:	LCSS02		Batch ID: 20769		RunNo: 28181					
Prep Date:	8/11/2015		Analysis Date: 8/13/2015		SeqNo: 849102		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R²D	RPDLimit	Qual
Naphthalene	20	0.50	20.00	0	99.1	37.5	104	53.1	20	R
1-Methylnaphthalene	20	0.50	20.00	0	98.7	39.4	108	51.6	26.8	R
2-Methylnaphthalene	19	0.50	20.00	0	96.1	40.5	98.2	43.6	23.8	R
Acenaphthylene	19	0.50	20.00	0	95.8	43.6	103	41.3	28.6	R
Acenaphthene	19	0.50	20.00	0	96.1	42.1	104	42.2	27	R
Fluorene	20	0.50	20.00	0	98.9	45.7	105	43.6	25.7	R
Phenanthrene	19	0.50	20.00	0	93.6	52.6	104	41.4	20	R
Anthracene	18	0.50	20.00	0	91.7	52.8	104	41.0	21.2	R
Fluoranthene	20	0.50	20.00	0	98.5	53.4	109	42.9	21.8	R
Pyrene	20	0.50	20.00	0	102	44.9	108	44.0	31.1	R
Benz(a)anthracene	20	0.50	20.00	0	99.0	45.1	110	43.1	26.6	R
Chrysene	19	0.50	20.00	0	95.4	40.1	131	52.5	21.2	R
Benzo(b)fluoranthene	20	0.50	20.00	0	99.8	49.9	105	42.4	20	R
Benzo(k)fluoranthene	21	0.50	20.00	0	106	49.4	103	43.4	21	RS
Benzo(a)pyrene	20	0.50	20.00	0	98.0	49	100	44.4	24.8	R
Dibenz(a,h)anthracene	20	0.50	20.00	0	98.2	52.9	115	43.1	26	R
Benzo(g,h,i)perylene	20	0.50	20.00	0	102	43.6	107	40.6	20	R
Indeno(1,2,3-cd)pyrene	20	0.50	20.00	0	101	47.6	102	40.3	20	R
Surr: N-hexadecane	80		87.60		91.2	26.5	130	0	0	
Surr: Benzo(e)pyrene	18		20.00		92.2	35.5	125	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	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 Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508356

23-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	MB-20768	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	20768	RunNo:	28191					
Prep Date:	8/13/2015	Analysis Date:	8/14/2015	SeqNo:	849438	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	ND	1.0								
Iron	ND	0.050								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID	LCS-20768	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	20768	RunNo:	28191					
Prep Date:	8/13/2015	Analysis Date:	8/14/2015	SeqNo:	849439	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	51	1.0	50.00	0	102	80	120			
Iron	0.49	0.050	0.5000	0	98.7	80	120			
Magnesium	52	1.0	50.00	0	103	80	120			
Potassium	50	1.0	50.00	0	99.2	80	120			
Sodium	51	1.0	50.00	0	102	80	120			

Sample ID	1508356-001DMS	SampType:	MS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	GBR-17	Batch ID:	20768	RunNo:	28191					
Prep Date:	8/13/2015	Analysis Date:	8/14/2015	SeqNo:	849446	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Magnesium	79	1.0	50.00	27.33	104	75	125			
Potassium	53	1.0	50.00	2.647	102	75	125			

Sample ID	1508356-001DMSD	SampType:	MSD	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	GBR-17	Batch ID:	20768	RunNo:	28191					
Prep Date:	8/13/2015	Analysis Date:	8/14/2015	SeqNo:	849448	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Magnesium	78	1.0	50.00	27.33	102	75	125	1.24	20	
Potassium	53	1.0	50.00	2.647	100	75	125	1.47	20	

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | 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 Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508356

23-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	mb-1		SampType:	MBLK		TestCode:	SM2320B: Alkalinity				
Client ID:	PBW		Batch ID:	R28306		RunNo:	28306				
Prep Date:			Analysis Date:	8/18/2015		SeqNo:	854428		Units:	mg/L CaCO3	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ² D	RPDLimit	Qual	
Total Alkalinity (as CaCO3)	ND	20.00									

Sample ID	lcs-1		SampType: LCS		TestCode: SM2320B: Alkalinity					
Client ID:	LCSW		Batch ID: R28306		RunNo: 28306					
Prep Date:			Analysis Date: 8/18/2015		SeqNo: 854429		Units: mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ² D	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79.44	20.00	80.00	0	99.3	90	110			

Sample ID	mb-2	SampType:	MBLK		TestCode:	SM2320B: Alkalinity				
Client ID:	PBW	Batch ID:	R28306		RunNo:	28306				
Prep Date:		Analysis Date:	8/18/2015		SeqNo:	854452	Units:	mg/L CaCO3		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ² D	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID	lcs-2		SampType: LCS		TestCode: SM2320B: Alkalinity					
Client ID:	LCSW		Batch ID: R28306		RunNo: 28306					
Prep Date:			Analysis Date: 8/18/2015		SeqNo: 854453		Units: mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ² D	RPDLimit	Qual
Total Alkalinity (as CaCO3)	80.80	20.00	80.00	0	101	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508356

23-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Annual Sampling

Sample ID	MB-20761	SampType:	MBLK	TestCode:	SM2540C MOD: Total Dissolved Solids
Client ID:	PBW	Batch ID:	20761	RunNo:	28208
Prep Date:	8/13/2015	Analysis Date:	8/14/2015	SeqNo:	850180 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-20761	SampType:	LCS	TestCode:	SM2540C MOD: Total Dissolved Solids
Client ID:	LCSW	Batch ID:	20761	RunNo:	28208
Prep Date:	8/13/2015	Analysis Date:	8/14/2015	SeqNo:	850181 Units: mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit %RPD RPDLimit Qual
Total Dissolved Solids	1030	20.0	1000	0	103 80 120

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	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 Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



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: 1508356

RcptNo: 1

Received by/date: CM 08/08/15

Logged By: Anne Thorne 8/8/2015 9:45:00 AM

Completed By: **Anne Thorne** 8/10/2015

Reviewed By: CS 08/10/15

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? Courier

Log In

- | | | | |
|--|---|--|---------------------------------------|
| 4. Was an attempt made to cool the samples? | Yes ☒ | No ☐ | NA ☐ |
| 5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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: 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	4.6	Good	Yes			

**GIANT BLOOMFIELD REFINERY
WESTERN REFINING
ATTACHMENT TO COC**

SAMPLING CONDUCTED ON _____ BY _____

Sample ID	QUARTERLY (JULY)
System Influent	VOC
	GWC
System Effluent	VOC
	GWC

Analysis	method	Bottle
VOC	method 8260	3 - HCL VOA

GWC		
pH	SM 4500-H+B	1 - 500ml (non preserved)
EC	SM 2510B	
TDS	SM 2540C MOD	
alkalinity	SM 2320B	
hardness	SM 2340B	
ANIONS	EPA Method 300.0	1 - 250ml H2SO4
	nitrate/nitrite	
	bromide	1 - 500ml HNO3
	chloride	
	sulfate	
	phosphorus	
	fluoride	
CATIONS / METALS	EPA Method 200.7	
	calcium	
	iron	
	magnesium	
	manganese	
	potassium	
	sodium	





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

September 08, 2015

Devin Hencmann

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (970) 403-6023

FAX

RE: GBR Annual

OrderNo.: 1508409

Dear Devin Hencmann:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/11/2015 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 qualifiers 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 1508409

Date Reported: 9/8/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GRW-6

Project: GBR Annual

Collection Date: 8/10/2015 1:50:00 PM

Lab ID: 1508409-001

Matrix: AQUEOUS

Received Date: 8/11/2015 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2340B: HARDNESS							Analyst: ELS
Hardness (As CaCO ₃)	1200	6.6		mg/L	1	8/26/2015 10:30:00 AM	R28465
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	0.55	0.50		mg/L	5	8/11/2015 2:01:32 PM	R28135
Chloride	88	2.5		mg/L	5	8/11/2015 2:01:32 PM	R28135
Bromide	ND	0.50		mg/L	5	8/11/2015 2:01:32 PM	R28135
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	8/11/2015 2:01:32 PM	R28135
Sulfate	1400	50	*	mg/L	100	8/19/2015 2:31:20 AM	R28308
Nitrate+Nitrite as N	ND	1.0		mg/L	5	8/19/2015 2:06:30 AM	R28308
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	3800	0.010		µmhos/cm	1	8/18/2015 2:52:07 PM	R28306
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	488.8	20.00		mg/L CaCO ₃	1	8/18/2015 2:52:07 PM	R28306
Carbonate (As CaCO ₃)	ND	2.000		mg/L CaCO ₃	1	8/18/2015 2:52:07 PM	R28306
Total Alkalinity (as CaCO ₃)	488.8	20.00		mg/L CaCO ₃	1	8/18/2015 2:52:07 PM	R28306
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	3220	100	*D	mg/L	1	8/14/2015 3:16:00 PM	20772
SM4500-H+B: PH							Analyst: JRR
pH	7.25	1.68	H	pH units	1	8/18/2015 2:52:07 PM	R28306
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	420	5.0		mg/L	5	8/26/2015 1:32:57 PM	20907
Iron	15	0.40	*	mg/L	20	9/2/2015 12:40:04 PM	20907
Magnesium	49	1.0		mg/L	1	8/26/2015 1:31:01 PM	20907
Manganese	18	0.040	*	mg/L	20	9/2/2015 12:40:04 PM	20907
Potassium	2.7	1.0		mg/L	1	8/26/2015 1:31:01 PM	20907
Sodium	460	5.0		mg/L	5	8/26/2015 1:32:57 PM	20907
EPA METHOD 8270C: PAHS							Analyst: DAM
Naphthalene	ND	0.50		µg/L	1	8/13/2015 12:54:06 PM	20769
1-Methylnaphthalene	ND	0.50		µg/L	1	8/13/2015 12:54:06 PM	20769
2-Methylnaphthalene	ND	0.50		µg/L	1	8/13/2015 12:54:06 PM	20769
Acenaphthylene	ND	0.50		µg/L	1	8/13/2015 12:54:06 PM	20769
Acenaphthene	ND	0.50		µg/L	1	8/13/2015 12:54:06 PM	20769
Fluorene	ND	0.50		µg/L	1	8/13/2015 12:54:06 PM	20769
Phenanthrene	ND	0.50		µg/L	1	8/13/2015 12:54:06 PM	20769
Anthracene	ND	0.50		µg/L	1	8/13/2015 12:54:06 PM	20769
Fluoranthene	ND	0.50		µg/L	1	8/13/2015 12:54:06 PM	20769
Pyrene	ND	0.50		µg/L	1	8/13/2015 12:54:06 PM	20769

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 1508409

Date Reported: 9/8/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GRW-6

Project: GBR Annual

Collection Date: 8/10/2015 1:50:00 PM

Lab ID: 1508409-001

Matrix: AQUEOUS

Received Date: 8/11/2015 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: PAHS							Analyst: DAM
Benz(a)anthracene	ND	0.50		µg/L	1	8/13/2015 12:54:06 PM	20769
Chrysene	ND	0.50		µg/L	1	8/13/2015 12:54:06 PM	20769
Benzo(b)fluoranthene	ND	0.50		µg/L	1	8/13/2015 12:54:06 PM	20769
Benzo(k)fluoranthene	ND	0.50		µg/L	1	8/13/2015 12:54:06 PM	20769
Benzo(a)pyrene	ND	0.50		µg/L	1	8/13/2015 12:54:06 PM	20769
Dibenz(a,h)anthracene	ND	0.50		µg/L	1	8/13/2015 12:54:06 PM	20769
Benzo(g,h,i)perylene	ND	0.50		µg/L	1	8/13/2015 12:54:06 PM	20769
Indeno(1,2,3-cd)pyrene	ND	0.50		µg/L	1	8/13/2015 12:54:06 PM	20769
Surr: N-hexadecane	65.4	26.5-130		%REC	1	8/13/2015 12:54:06 PM	20769
Surr: Benzo(e)pyrene	65.9	35.5-125		%REC	1	8/13/2015 12:54:06 PM	20769
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
Toluene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
Ethylbenzene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
Naphthalene	ND	2.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
1-Methylnaphthalene	ND	4.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
2-Methylnaphthalene	ND	4.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
Acetone	ND	10		µg/L	1	8/12/2015 2:47:40 AM	R28109
Bromobenzene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
Bromodichloromethane	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
Bromoform	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
Bromomethane	ND	3.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
2-Butanone	ND	10		µg/L	1	8/12/2015 2:47:40 AM	R28109
Carbon disulfide	ND	10		µg/L	1	8/12/2015 2:47:40 AM	R28109
Carbon Tetrachloride	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
Chlorobenzene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
Chloroethane	ND	2.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
Chloroform	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
Chloromethane	ND	3.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
2-Chlorotoluene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
4-Chlorotoluene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
cis-1,2-DCE	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/12/2015 2:47:40 AM	R28109

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508409

Date Reported: 9/8/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GRW-6

Project: GBR Annual

Collection Date: 8/10/2015 1:50:00 PM

Lab ID: 1508409-001

Matrix: AQUEOUS

Received Date: 8/11/2015 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Dibromochloromethane	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
Dibromomethane	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
1,1-Dichloroethane	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
1,1-Dichloroethene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
1,2-Dichloropropane	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
1,3-Dichloropropane	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
2,2-Dichloropropane	ND	2.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
1,1-Dichloropropene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
Hexachlorobutadiene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
2-Hexanone	ND	10		µg/L	1	8/12/2015 2:47:40 AM	R28109
Isopropylbenzene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
4-Isopropyltoluene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
4-Methyl-2-pentanone	ND	10		µg/L	1	8/12/2015 2:47:40 AM	R28109
Methylene Chloride	ND	3.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
n-Butylbenzene	ND	3.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
n-Propylbenzene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
sec-Butylbenzene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
Styrene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
tert-Butylbenzene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
trans-1,2-DCE	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
Trichlorofluoromethane	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
Vinyl chloride	ND	1.0		µg/L	1	8/12/2015 2:47:40 AM	R28109
Xylenes, Total	ND	1.5		µg/L	1	8/12/2015 2:47:40 AM	R28109
Surr: 1,2-Dichloroethane-d4	95.3	70-130		%REC	1	8/12/2015 2:47:40 AM	R28109
Surr: 4-Bromofluorobenzene	106	70-130		%REC	1	8/12/2015 2:47:40 AM	R28109

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical ReportLab Order **1508409**

Date Reported: 9/8/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** GRW-6**Project:** GBR Annual**Collection Date:** 8/10/2015 1:50:00 PM**Lab ID:** 1508409-001**Matrix:** AQUEOUS**Received Date:** 8/11/2015 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Surr: Dibromofluoromethane	113	70-130		%REC	1	8/12/2015 2:47:40 AM	R28109
Surr: Toluene-d8	99.9	70-130		%REC	1	8/12/2015 2:47:40 AM	R28109

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508409

08-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual

Sample ID	MB-20907		SampType:	MBLK		TestCode:	EPA Method 200.7: Metals			
Client ID:	PBW		Batch ID:	20907		RunNo:	28465			
Prep Date:	8/21/2015		Analysis Date:	8/26/2015		SeqNo:	860593		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-20907		SampType:	LCS		TestCode:	EPA Method 200.7: Metals			
Client ID:	LCSW		Batch ID:	20907		RunNo:	28465			
Prep Date:	8/21/2015		Analysis Date:	8/26/2015		SeqNo:	860594		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	51	1.0	50.00	0	102	85	115			
Iron	0.53	0.020	0.5000	0	107	85	115			
Magnesium	52	1.0	50.00	0	104	85	115			
Manganese	0.48	0.0020	0.5000	0	96.5	85	115			
Potassium	50	1.0	50.00	0	100	85	115			
Sodium	51	1.0	50.00	0	102	85	115			

Sample ID	LLCS-20907		SampType:	LCSLL		TestCode:	EPA Method 200.7: Metals			
Client ID:	BatchQC		Batch ID:	20907		RunNo:	28465			
Prep Date:	8/21/2015		Analysis Date:	8/26/2015		SeqNo:	860595		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0	0.5000	0	101	50	150			
Iron	0.026	0.020	0.02000	0	132	50	150			
Magnesium	ND	1.0	0.5000	0	106	50	150			
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Potassium	ND	1.0	0.5000	0	109	50	150			
Sodium	ND	1.0	0.5000	0	110	50	150			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | 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 Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508409

08-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R28135	RunNo:	28135					
Prep Date:		Analysis Date:	8/11/2015	SeqNo:	847702	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:	R28135	RunNo:	28135					
Prep Date:		Analysis Date:	8/11/2015	SeqNo:	847703	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	109	90	110			
Chloride	5.0	0.50	5.000	0	99.2	90	110			
Bromide	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.4	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R28135	RunNo:	28135					
Prep Date:		Analysis Date:	8/11/2015	SeqNo:	847758	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R28135	RunNo:	28135					
Prep Date:		Analysis Date:	8/11/2015	SeqNo:	847759	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	5.3	0.50	5.000	0	106	90	110			
Bromide	2.7	0.10	2.500	0	108	90	110			
Phosphorus, Orthophosphate (As P	5.3	0.50	5.000	0	107	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R28308	RunNo:	28308					
Prep Date:		Analysis Date:	8/18/2015	SeqNo:	854478	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | 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 Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508409

08-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R28308	RunNo:	28308					
Prep Date:		Analysis Date:	8/18/2015	SeqNo:	854479	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.9	0.50	10.00	0	99.1	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.1	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508409

08-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual

Sample ID	rb1	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R28109	RunNo:	28109					
Prep Date:		Analysis Date:	8/11/2015	SeqNo:	847128	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:

* Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508409

08-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual

Sample ID	rb1	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R28109	RunNo:	28109					
Prep Date:		Analysis Date:	8/11/2015	SeqNo:	847128	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	9.8		10.00		98.2	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	9.9		10.00		98.8	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R28109	RunNo:	28109					
Prep Date:		Analysis Date:	8/11/2015	SeqNo:	847129	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	109	70	130			
Toluene	21	1.0	20.00	0	103	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508409

08-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: R28109			RunNo: 28109					
Prep Date:		Analysis Date: 8/11/2015			SeqNo: 847129		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	107	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	111	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.1	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	9.5		10.00		95.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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 Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508409

08-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual

Sample ID	mb-20769		SampType: MBLK		TestCode: EPA Method 8270C: PAHs					
Client ID:	PBW		Batch ID: 20769		RunNo: 28181					
Prep Date:	8/11/2015		Analysis Date: 8/13/2015		SeqNo: 849100		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	0.50								
2-Methylnaphthalene	ND	0.50								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benzo(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	66		87.60		75.6	26.5	130			
Surr: Benzo(e)pyrene	15		20.00		77.0	35.5	125			

Sample ID	lcs-20769		SampType: LCS		TestCode: EPA Method 8270C: PAHs					
Client ID:	LCSW		Batch ID: 20769		RunNo: 28181					
Prep Date:	8/11/2015		Analysis Date: 8/13/2015		SeqNo: 849101		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	RPDLimit	Qual
Naphthalene	11	0.50	20.00	0	55.7	37.5	104			
1-Methylnaphthalene	12	0.50	20.00	0	58.2	39.4	108			
2-Methylnaphthalene	12	0.50	20.00	0	58.5	40.5	98.2			
Acenaphthylene	13	0.50	20.00	0	63.0	43.6	103			
Acenaphthene	13	0.50	20.00	0	62.6	42.1	104			
Fluorene	13	0.50	20.00	0	63.5	45.7	105			
Phenanthrene	12	0.50	20.00	0	61.5	52.6	104			
Anthracene	12	0.50	20.00	0	60.5	52.8	104			
Fluoranthene	13	0.50	20.00	0	63.7	53.4	109			
Pyrene	13	0.50	20.00	0	65.2	44.9	108			
Benz(a)anthracene	13	0.50	20.00	0	63.9	45.1	110			
Chrysene	11	0.50	20.00	0	55.7	40.1	131			
Benzo(b)fluoranthene	13	0.50	20.00	0	64.9	49.9	105			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	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 Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508409

08-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual

Sample ID	lcs-20769		SampType: LCS			TestCode: EPA Method 8270C: PAHs				
Client ID:	LCSW		Batch ID: 20769			RunNo: 28181				
Prep Date:	8/11/2015		Analysis Date: 8/13/2015			SeqNo: 849101		Units: µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	13	0.50	20.00	0	64.6	49.4	103			
Benzo(a)pyrene	12	0.50	20.00	0	62.4	49	100			
Dibenz(a,h)anthracene	13	0.50	20.00	0	63.4	52.9	115			
Benzo(g,h,i)perylene	14	0.50	20.00	0	67.6	43.6	107			
Indeno(1,2,3-cd)pyrene	13	0.50	20.00	0	66.8	47.6	102			
Surr: N-hexadecane	56		87.60		64.1	26.5	130			
Surr: Benzo(e)pyrene	12		20.00		61.9	35.5	125			

Sample ID	lcsd-20769		SampType: LCSD			TestCode: EPA Method 8270C: PAHs				
Client ID:	LCSS02		Batch ID: 20769			RunNo: 28181				
Prep Date:	8/11/2015		Analysis Date: 8/13/2015			SeqNo: 849102		Units: µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	20	0.50	20.00	0	99.1	37.5	104	56.1	20	R
1-Methylnaphthalene	20	0.50	20.00	0	98.7	39.4	108	51.6	26.8	R
2-Methylnaphthalene	19	0.50	20.00	0	96.1	40.5	98.2	48.6	23.8	R
Acenaphthylene	19	0.50	20.00	0	95.8	43.6	103	41.3	28.6	R
Acenaphthene	19	0.50	20.00	0	96.1	42.1	104	42.2	27	R
Fluorene	20	0.50	20.00	0	98.9	45.7	105	43.6	25.7	R
Phenanthrene	19	0.50	20.00	0	93.6	52.6	104	41.4	20	R
Anthracene	18	0.50	20.00	0	91.7	52.8	104	41.0	21.2	R
Fluoranthene	20	0.50	20.00	0	98.5	53.4	109	42.9	21.8	R
Pyrene	20	0.50	20.00	0	102	44.9	108	44.0	31.1	R
Benz(a)anthracene	20	0.50	20.00	0	99.0	45.1	110	43.1	26.6	R
Chrysene	19	0.50	20.00	0	95.4	40.1	131	52.5	21.2	R
Benzo(b)fluoranthene	20	0.50	20.00	0	99.8	49.9	105	42.4	20	R
Benzo(k)fluoranthene	21	0.50	20.00	0	106	49.4	103	48.4	21	RS
Benzo(a)pyrene	20	0.50	20.00	0	98.0	49	100	44.4	24.8	R
Dibenz(a,h)anthracene	20	0.50	20.00	0	98.2	52.9	115	43.1	26	R
Benzo(g,h,i)perylene	20	0.50	20.00	0	102	43.6	107	40.6	20	R
Indeno(1,2,3-cd)pyrene	20	0.50	20.00	0	101	47.6	102	40.3	20	R
Surr: N-hexadecane	80		87.60		91.2	26.5	130	0	0	
Surr: Benzo(e)pyrene	18		20.00		92.2	35.5	125	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508409

08-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual

Sample ID	mb-1	SampType:	MBLK	TestCode:	SM2320B: Alkalinity					
Client ID:	PBW	Batch ID:	R28306	RunNo:	28306					
Prep Date:		Analysis Date:	8/18/2015	SeqNo:	854428	Units:	mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID	lcs-1		SampType: LCS		TestCode: SM2320B: Alkalinity					
Client ID:	LCSW		Batch ID: R28306		RunNo: 28306					
Prep Date:			Analysis Date: 8/18/2015		SeqNo: 854429		Units: mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79.44	20.00	80.00	0	99.3	90	110			

Sample ID	mb-2	SampType:	MBLK	TestCode:	SM2320B: Alkalinity					
Client ID:	PBW	Batch ID:	R28306	RunNo:	28306					
Prep Date:		Analysis Date:	8/18/2015	SeqNo:	854452	Units:	mg/L CaCO3			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID	lcs-2		SampType:	LCS		TestCode:	SM2320B: Alkalinity				
Client ID:	LCSW		Batch ID:	R28306		RunNo:	28306				
Prep Date:			Analysis Date:	8/18/2015		SeqNo:	854453		Units: mg/L CaCO3		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%R ^{PD}	RPDLimit	Qual	
Total Alkalinity (as CaCO3)	80.80	20.00	80.00	0	101	90	110				

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508409

08-Sep-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual

Sample ID	MB-20772		SampType:	MBLK		TestCode:	SM2540C MOD: Total Dissolved Solids				
Client ID:	PBW		Batch ID:	20772		RunNo:	28209				
Prep Date:	8/13/2015		Analysis Date:	8/14/2015		SeqNo:	850204		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-20772		SampType: LCS		TestCode: SM2540C MOD: Total Dissolved Solids					
Client ID:	LCSW		Batch ID: 20772		RunNo: 28209					
Prep Date:	8/13/2015		Analysis Date: 8/14/2015		SeqNo: 850205		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. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | 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 Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |



Hall Environmental Analysis Laboratory
1901 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: 1508409

RcptNo: 1

Received by/date:

AG

08/11/15

Logged By: Ashley Gallegos

8/11/2015 7:40:00 AM

AG

Completed By: Ashley Gallegos

8/11/2015 9:13:43 AM

AG

Reviewed By

CS

08/11/15

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? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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: *6* (2 or >12 unless noted)
Adjusted? *Yes*
Checked by *[Signature]*

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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record		Turn-Around Time:
Client: Kelly Robinson Western Refining	☒ Standard ☐ Rush	Project Name: GBR Annual
Mailing Address: 111 CR 4990 Bloomfield NM 87413	Project #: WR1009	
Phone #: 970-385-1076 email or Fax#: dhencmann@henvco.com	Project Manager: Dawn Hencmann	Sampler: On Ice: ☒ Yes ☐ No Sample Temperature: 1.0
QA/QC Package: ☐ Standard ☐ Level 4 (Full Validation)		
Accreditation ☐ NELAP ☐ Other _____ ☐ EDD (Type) _____		

Sample Temperature: 1.0



	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)
	7-VOL, 6-MC, PAH
	Air Bubbles (Y or N)

Date:	Time:	Relinquished by:	Received by:	Date	Time
1/10/15	1517	Alex Crooke	Christine Walters	8/10/15	1517
Date:	Time:	Relinquished by:	Received by:	Date	Time
8/10/15	2030	Christine Walters	#177221110055	08/11/15	0740

Remarks:

Bottle Request for Giant Bloomfield Refinery Annual Sampling:

- A trip blank for each cooler
- 16 sets for Volatile Organic Compounds method 8260
- 8 sets for Polynuclear aromatic hydrocarbons method 8270
- 6 sets for Metals: (includes 1 extra)
 - Barium
 - Beryllium
 - Cadmium
 - Chromium
 - Copper
 - Lead
 - Nickel
 - Silver
 - Zinc
 - Antimony
 - Arsenic
 - Selenium
 - Thallium
 - mercury
- 16 sets for Groundwater Chemistry:
 - pH
 - FC
 - TDS
 - Alkalinity
 - Hardness
 - Anions
 - Bromide
 - Chloride
 - Sulfate
 - Fluoride
 - Nitrate/nitrite
 - Phosphorous
 - Cations
 - Calcium
 - Iron
 - Magnesium
 - Manganese
 - Potassium
 - Sodium



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

August 20, 2015

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

RE: GBR Shutdown Action Plan

OrderNo.: 1508344

Dear Ashley Ager:

Hall Environmental Analysis Laboratory received 4 sample(s) on 8/7/2015 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 qualifiers 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 1508344

Date Reported: 8/20/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-8

Project: GBR Shutdown Action Plan

Collection Date: 8/6/2015 2:00:00 PM

Lab ID: 1508344-001

Matrix: AQUEOUS

Received Date: 8/7/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	86	5.0		mg/L	10	8/4/2015 4:58:44 AM	R28196
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	5.0	D	µg/L	5	8/3/2015 7:56:21 PM	R28180
Toluene	ND	5.0	D	µg/L	5	8/3/2015 7:56:21 PM	R28180
Ethylbenzene	ND	5.0	D	µg/L	5	8/3/2015 7:56:21 PM	R28180
Xylenes, Total	ND	7.5	D	µg/L	5	8/3/2015 7:56:21 PM	R28180
Surr: 1,2-Dichloroethane-d4	101	70-130	D	%REC	5	8/3/2015 7:56:21 PM	R28180
Surr: 4-Bromofluorobenzene	101	70-130	D	%REC	5	8/3/2015 7:56:21 PM	R28180
Surr: Dibromofluoromethane	114	70-130	D	%REC	5	8/3/2015 7:56:21 PM	R28180
Surr: Toluene-d8	99.6	70-130	D	%REC	5	8/3/2015 7:56:21 PM	R28180

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
	D	Sample Diluted Due to Matrix	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 Not In Range:
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical ReportLab Order **1508344**Date Reported: **8/20/2015****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** GBR-11**Project:** GBR Shutdown Action Plan**Collection Date:** 8/6/2015 1:20:00 PM**Lab ID:** 1508344-002**Matrix:** AQUEOUS**Received Date:** 8/7/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	95	5.0		mg/L	10	8/14/2015 5:11:09 AM	R28196
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	1.7	1.0		µg/L	1	8/13/2015 9:18:39 PM	R28180
Toluene	ND	1.0		µg/L	1	8/13/2015 9:18:39 PM	R28180
Ethylbenzene	1.1	1.0		µg/L	1	8/13/2015 9:18:39 PM	R28180
Xylenes, Total	ND	1.5		µg/L	1	8/13/2015 9:18:39 PM	R28180
Surr: 1,2-Dichloroethane-d4	105	70-130		%REC	1	8/13/2015 9:18:39 PM	R28180
Surr: 4-Bromofluorobenzene	104	70-130		%REC	1	8/13/2015 9:18:39 PM	R28180
Surr: Dibromofluoromethane	112	70-130		%REC	1	8/13/2015 9:18:39 PM	R28180
Surr: Toluene-d8	97.4	70-130		%REC	1	8/13/2015 9:18:39 PM	R28180

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508344

Date Reported: 8/20/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-20

Project: GBR Shutdown Action Plan

Collection Date: 8/6/2015 3:20:00 PM

Lab ID: 1508344-003

Matrix: AQUEOUS

Received Date: 8/7/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	96	5.0		mg/L	10	8/14/2015 5:23:34 AM	R28196
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	2.0	D	µg/L	2	8/13/2015 9:46:04 PM	R28180
Toluene	ND	2.0	D	µg/L	2	8/13/2015 9:46:04 PM	R28180
Ethylbenzene	ND	2.0	D	µg/L	2	8/13/2015 9:46:04 PM	R28180
Xylenes, Total	ND	3.0	D	µg/L	2	8/13/2015 9:46:04 PM	R28180
Surr: 1,2-Dichloroethane-d4	100	70-130	D	%REC	2	8/13/2015 9:46:04 PM	R28180
Surr: 4-Bromofluorobenzene	95.2	70-130	D	%REC	2	8/13/2015 9:46:04 PM	R28180
Surr: Dibromofluoromethane	110	70-130	D	%REC	2	8/13/2015 9:46:04 PM	R28180
Surr: Toluene-d8	100	70-130	D	%REC	2	8/13/2015 9:46:04 PM	R28180

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical ReportLab Order **1508344**Date Reported: **8/20/2015****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** Trip Blank**Project:** GBR Shutdown Action Plan**Collection Date:****Lab ID:** 1508344-004**Matrix:** AQUEOUS**Received Date:** 8/7/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/14/2015 12:30:27 AM	R28180
Toluene	ND	1.0		µg/L	1	8/14/2015 12:30:27 AM	R28180
Ethylbenzene	ND	1.0		µg/L	1	8/14/2015 12:30:27 AM	R28180
Xylenes, Total	ND	1.5		µg/L	1	8/14/2015 12:30:27 AM	R28180
Surr: 1,2-Dichloroethane-d4	96.7	70-130		%REC	1	8/14/2015 12:30:27 AM	R28180
Surr: 4-Bromofluorobenzene	100	70-130		%REC	1	8/14/2015 12:30:27 AM	R28180
Surr: Dibromofluoromethane	108	70-130		%REC	1	8/14/2015 12:30:27 AM	R28180
Surr: Toluene-d8	104	70-130		%REC	1	8/14/2015 12:30:27 AM	R28180

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508344

20-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Shutdown Action Plan

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R28196	RunNo:	28196					
Prep Date:		Analysis Date:	8/13/2015	SeqNo:	849656	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R28196	RunNo:	28196					
Prep Date:		Analysis Date:	8/13/2015	SeqNo:	849657	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	5.1	0.50	5.000	0	103	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R28196	RunNo:	28196					
Prep Date:		Analysis Date:	8/13/2015	SeqNo:	849716	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R28196	RunNo:	28196					
Prep Date:		Analysis Date:	8/13/2015	SeqNo:	849717	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	5.1	0.50	5.000	0	101	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | 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 Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508344

20-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Shutdown Action Plan

Sample ID	rb1	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R28180	RunNo:	28180					
Prep Date:		Analysis Date:	8/13/2015	SeqNo:	849535	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								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.5		10.00		94.9	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.7	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	9.8		10.00		97.7	70	130			

Sample ID	100ng lcs2	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R28180	RunNo:	28180					
Prep Date:		Analysis Date:	8/13/2015	SeqNo:	849536	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	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		99.6	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID	1508344-001a ms	SampType:	MS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	GBR-8	Batch ID:	R28180	RunNo:	28180					
Prep Date:		Analysis Date:	8/13/2015	SeqNo:	849538	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	100	5.0	100.0	0	103	70	130			D
Toluene	100	5.0	100.0	0	101	70	130			D
Surr: 1,2-Dichloroethane-d4	50		50.00		99.7	70	130			D
Surr: 4-Bromofluorobenzene	52		50.00		105	70	130			D
Surr: Dibromofluoromethane	55		50.00		110	70	130			D
Surr: Toluene-d8	48		50.00		96.1	70	130			D

Sample ID	1508344-001a msd	SampType:	MSD	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	GBR-8	Batch ID:	R28180	RunNo:	28180					
Prep Date:		Analysis Date:	8/13/2015	SeqNo:	849539	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	110	5.0	100.0	0	106	70	130	2.69	20	D
Toluene	110	5.0	100.0	0	106	70	130	4.64	20	D

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508344

20-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Shutdown Action Plan

Sample ID	1508344-001a msd	SampType:	MSD	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	GBR-8	Batch ID:	R28180	RunNo:	28180					
Prep Date:		Analysis Date:	8/13/2015	SeqNo:	849539	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	51		50.00		103	70	130	0	0	D
Surr: 4-Bromofluorobenzene	50		50.00		101	70	130	0	0	D
Surr: Dibromofluoromethane	55		50.00		110	70	130	0	0	D
Surr: Toluene-d8	50		50.00		100	70	130	0	0	D

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | 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 Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |



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: 1508344

RcptNo: 1

Received by/date:

AS

08/07/15

Logged By: Lindsay Mangin

8/7/2015 8:00:00 AM

Judy H. Hays

Completed By: Lindsay Mangin

8/8/2015 10:51:57 AM

Judy H. Hays

Reviewed By:

JA

08/10/15

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?

Courier

Log In

4. Was an attempt made to cool the samples?

Yes ☒

No ☐

NA ☐

5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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 ☒

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

12. Does paperwork match bottle labels?

Yes ☒

No ☐

(Note discrepancies on chain of custody)

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?

Yes ☒

No ☐

Checked by:

(If no, notify customer for authorization.)

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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.7	Good	Yes			

Chain-of-Custody Record		Turn-Around Time:
Client: Kelly Robinson	☒ Standard ☐ Rush _____	
Western Refining	Project Name:	
Mailing Address: 111 CR 4990	GBR Shutdown Action Plan	
Bloomfield, NM	Project #:	
Phone #: (970) 305-1096	WR1009	
email or Fax#: AAgere@LTEnv.com	Project Manager:	
QA/QC Package:	Ashley Ager	
☒ Standard ☐ Level 4 (Full Validation)	Sampler: Devin Hennemann / Michael Wicker	
Accreditation	On Ice: ☒ Yes ☐ No	
☐ NELAP ☐ Other _____	Sample Temperature: 8.7	
☐ EDD (Type) _____		

☒ **Standard** ☐ **Rush**

GBR Shutdown Actions Plan

WR1009

Ashley Ager

Sampler: Devin Henkman/Michael Wicker

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.7



www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

[illegible]

Date:	Time:	Relinquished by:	Received by:	Date	Time
-6-15	1640			8/6/15	1640
Date:	Time:	Relinquished by:	Received by:	Date	Time
7/6/15	2110			08/07/15	0800

Remarks: Please copy DHencmann@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.



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

August 15, 2015

Ashley Ager

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (970) 946-1093

FAX (505) 632-3911

RE: GBR Shutdown Action Plan

OrderNo.: 1508345

Dear Ashley Ager:

Hall Environmental Analysis Laboratory received 4 sample(s) on 8/7/2015 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 qualifiers 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
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Workorder Sample Summary

WO#: 1508345
15-Aug-15

CLIENT: Western Refining Southwest, Inc.
Project: GBR Shutdown Action Plan

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1508345-001	GBR-8		8/6/2015 2:00:00 PM	8/7/2015 8:00:00 AM	Aqueous
1508345-001	GBR-8		8/6/2015 2:00:00 PM	8/7/2015 8:00:00 AM	Aqueous
1508345-002	GBR-11		8/6/2015 1:20:00 PM	8/7/2015 8:00:00 AM	Aqueous
1508345-002	GBR-11		8/6/2015 1:20:00 PM	8/7/2015 8:00:00 AM	Aqueous
1508345-003	GBR-20		8/6/2015 3:20:00 PM	8/7/2015 8:00:00 AM	Aqueous
1508345-003	GBR-20		8/6/2015 3:20:00 PM	8/7/2015 8:00:00 AM	Aqueous
1508345-004	Trip Blank			8/7/2015 8:00:00 AM	Trip Blank

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-8
Project: GBR Shutdown Action Plan **Collection Date:** 8/6/2015 2:00:00 PM
Lab ID: 1508345-001 **Matrix:** AQUEOUS **Received Date:** 8/7/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: KJH
Diesel Range Organics (DRO)	16	1.0		mg/L	1	8/10/2015 8:57:22 PM	20682
Surr: DNOP	106	72-136		%REC	1	8/10/2015 8:57:22 PM	20682
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.20	D	mg/L	4	8/12/2015 4:56:12 PM	R28140
Surr: BFB	101	57.8-137	D	%REC	4	8/12/2015 4:56:12 PM	R28140

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508345

Date Reported: 8/15/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-11

Project: GBR Shutdown Action Plan

Collection Date: 8/6/2015 1:20:00 PM

Lab ID: 1508345-002

Matrix: AQUEOUS

Received Date: 8/7/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: KJH
Diesel Range Organics (DRO)	1.9	1.0		mg/L	1	8/10/2015 9:24:42 PM	20682
Surr: DNOP	100	72-136		%REC	1	8/10/2015 9:24:42 PM	20682
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.20	D	mg/L	4	8/12/2015 5:21:00 PM	R28140
Surr: BFB	104	57.8-137	D	%REC	4	8/12/2015 5:21:00 PM	R28140

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** GBR-20
Project: GBR Shutdown Action Plan **Collection Date:** 8/6/2015 3:20:00 PM
Lab ID: 1508345-003 **Matrix:** AQUEOUS **Received Date:** 8/7/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: KJH
Diesel Range Organics (DRO)	56	1.0		mg/L	1	8/10/2015 9:51:57 PM	20682
Surr: DNOP	115	72-136		%REC	1	8/10/2015 9:51:57 PM	20682
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	0.39	0.25	D	mg/L	5	8/12/2015 5:45:49 PM	R28140
Surr: BFB	118	57.8-137	D	%REC	5	8/12/2015 5:45:49 PM	R28140

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508345

Date Reported: 8/15/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: Trip Blank

Project: GBR Shutdown Action Plan

Collection Date:

Lab ID: 1508345-004

Matrix: TRIP BLANK

Received Date: 8/7/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	8/12/2015 6:10:37 PM	R28140
Surr: BFB	93.2	57.8-137		%REC	1	8/12/2015 6:10:37 PM	R28140

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508345

15-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Shutdown Action Plan

Sample ID	MB-20682		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range				
Client ID:	PBW		Batch ID:	20682		RunNo:	28064				
Prep Date:	8/10/2015		Analysis Date:	8/10/2015		SeqNo:	845825		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	1.0									
Surr: DNOP	0.98		1.000		98.1	72	136				

Sample ID	LCS-20682		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range					
Client ID:	LCSW		Batch ID: 20682		RunNo: 28064					
Prep Date:	8/10/2015		Analysis Date: 8/10/2015		SeqNo: 845826		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.4	1.0	5.000	0	127	60.1	156			
Surr: DNOP	0.55		0.5000		110	72	136			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	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 Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508345

15-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Shutdown Action Plan

Sample ID	B30	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBW	Batch ID:	R28140	RunNo:	28140					
Prep Date:		Analysis Date:	8/12/2015	SeqNo:	848357	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		92.1	57.8	137			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSW	Batch ID:	R28140	RunNo:	28140					
Prep Date:		Analysis Date:	8/12/2015	SeqNo:	848358	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.44	0.050	0.5000	0	87.1	80	120			
Surr: BFB	19		20.00		95.3	57.8	137			

Sample ID	1508345-003AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	GBR-20	Batch ID:	R28140	RunNo:	28140					
Prep Date:		Analysis Date:	8/12/2015	SeqNo:	848370	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	2.9	0.25	2.500	0.3900	99.4	51	131			
Surr: BFB	120		100.0		119	57.8	137			

Sample ID	1508345-003AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	GBR-20	Batch ID:	R28140	RunNo:	28140					
Prep Date:		Analysis Date:	8/12/2015	SeqNo:	848371	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	2.5	0.25	2.500	0.3900	84.3	51	131	14.0	20	
Surr: BFB	110		100.0		107	57.8	137	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit



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: 1508345

RcptNo: 1

Received by/date:

AG

08/10/15

Logged By: Lindsay Mangin

8/7/2015 8:00:00 AM

Judy Hagg

Completed By: Lindsay Mangin

8/8/2015 10:55:44 AM

Judy Hagg

Reviewed By:

JA

08/10/15

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? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.7	Good	Yes			

Chain-of-Custody Record		Turn-Around Time:
Client: Kelly Robinson		☒ Standard ☐ Rush _____
Western Refining		Project Name:
Mailing Address: 111 CR 4990		GBR Shutdown Action Plan
Bloomfield, NM		Project #:
Phone #: (970) 385-1096		WR1009
email or Fax#: A.Ager@LTEEnv.com		Project Manager:
QA/QC Package:		Ashley Ager
☒ Standard ☐ Level 4 (Full Validation)		Sampler: Devin Hensmann / Michael Wicker
Accreditation		On Site: ☒ Yes ☐ No
☐ NELAP ☐ Other _____		Sample Temperature: 27
☐ EDD (Type) _____		

☒ **Standard** ☐ **Rush**

GBR Shutdown Action Plan

WR1009

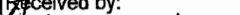
Ashley Ager

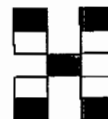
Sampler: Devin Henemann/Michael Wicker

Office: ☒ Yes ☐ No

Sample Temperature: 27

[illegible]

Date:	Time:	Relinquished by:	Received by:	Date	Time
-6-15	1640			8/6/15	1640
Date:	Time:	Relinquished by:	Received by:	Date	Time
8/6/15	2110			08/07/15	0800



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

[illegible]

Remarks: Please copy DHeinemann@LTEnv.com



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

August 24, 2015

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

RE: GBR Shutdown Action Plan

OrderNo.: 1508346

Dear Ashley Ager:

Hall Environmental Analysis Laboratory received 8 sample(s) on 8/8/2015 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 qualifiers 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 1508346

Date Reported: 8/24/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-21D

Project: GBR Shutdown Action Plan

Collection Date: 8/7/2015 12:30:00 PM

Lab ID: 1508346-001

Matrix: AQUEOUS

Received Date: 8/8/2015 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	330	50	*	mg/L	100	8/11/2015 10:55:23 AM	R28135
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	2.0	D	µg/L	2	8/14/2015 12:57:48 AM	R28180
Toluene	ND	2.0	D	µg/L	2	8/14/2015 12:57:48 AM	R28180
Ethylbenzene	ND	2.0	D	µg/L	2	8/14/2015 12:57:48 AM	R28180
Xylenes, Total	ND	3.0	D	µg/L	2	8/14/2015 12:57:48 AM	R28180
Surr: 1,2-Dichloroethane-d4	99.4	70-130	D	%REC	2	8/14/2015 12:57:48 AM	R28180
Surr: 4-Bromofluorobenzene	90.5	70-130	D	%REC	2	8/14/2015 12:57:48 AM	R28180
Surr: Dibromofluoromethane	104	70-130	D	%REC	2	8/14/2015 12:57:48 AM	R28180
Surr: Toluene-d8	97.6	70-130	D	%REC	2	8/14/2015 12:57:48 AM	R28180

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical ReportLab Order **1508346**Date Reported: **8/24/2015****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** GBR-22**Project:** GBR Shutdown Action Plan**Collection Date:** 8/7/2015 11:35:00 AM**Lab ID:** 1508346-002**Matrix:** AQUEOUS**Received Date:** 8/8/2015 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	470	50	*	mg/L	100	8/21/2015 10:28:39 PM	R28406
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	1.7	1.0	D	µg/L	2	8/14/2015 1:25:14 AM	R28180
Toluene	ND	2.0	D	µg/L	2	8/14/2015 1:25:14 AM	R28180
Ethylbenzene	16	2.0	D	µg/L	2	8/14/2015 1:25:14 AM	R28180
Xylenes, Total	6.3	3.0	D	µg/L	2	8/14/2015 1:25:14 AM	R28180
Surr: 1,2-Dichloroethane-d4	98.1	70-130	D	%REC	2	8/14/2015 1:25:14 AM	R28180
Surr: 4-Bromofluorobenzene	95.7	70-130	D	%REC	2	8/14/2015 1:25:14 AM	R28180
Surr: Dibromofluoromethane	107	70-130	D	%REC	2	8/14/2015 1:25:14 AM	R28180
Surr: Toluene-d8	99.2	70-130	D	%REC	2	8/14/2015 1:25:14 AM	R28180

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508346

Date Reported: 8/24/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-25

Project: GBR Shutdown Action Plan

Collection Date: 8/7/2015 12:25:00 PM

Lab ID: 1508346-003

Matrix: AQUEOUS

Received Date: 8/8/2015 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	520	50	*	mg/L	100	8/11/2015 11:45:01 AM	R28135
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	5.0	DP	µg/L	5	8/14/2015 1:52:44 AM	R28180
Toluene	ND	5.0	DP	µg/L	5	8/14/2015 1:52:44 AM	R28180
Ethylbenzene	15	5.0	DP	µg/L	5	8/14/2015 1:52:44 AM	R28180
Xylenes, Total	ND	7.5	DP	µg/L	5	8/14/2015 1:52:44 AM	R28180
Surr: 1,2-Dichloroethane-d4	99.8	70-130	DP	%REC	5	8/14/2015 1:52:44 AM	R28180
Surr: 4-Bromofluorobenzene	93.9	70-130	DP	%REC	5	8/14/2015 1:52:44 AM	R28180
Surr: Dibromofluoromethane	104	70-130	DP	%REC	5	8/14/2015 1:52:44 AM	R28180
Surr: Toluene-d8	104	70-130	DP	%REC	5	8/14/2015 1:52:44 AM	R28180

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order 1508346

Date Reported: 8/24/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** GBR-26**Project:** GBR Shutdown Action Plan**Collection Date:** 8/7/2015 1:25:00 PM**Lab ID:** 1508346-004**Matrix:** AQUEOUS**Received Date:** 8/8/2015 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	170	5.0		mg/L	10	8/11/2015 12:22:14 PM	R28135
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	2.0	DP	µg/L	2	8/14/2015 2:20:16 AM	R28180
Toluene	ND	2.0	DP	µg/L	2	8/14/2015 2:20:16 AM	R28180
Ethylbenzene	ND	2.0	DP	µg/L	2	8/14/2015 2:20:16 AM	R28180
Xylenes, Total	ND	3.0	DP	µg/L	2	8/14/2015 2:20:16 AM	R28180
Surr: 1,2-Dichloroethane-d4	96.7	70-130	DP	%REC	2	8/14/2015 2:20:16 AM	R28180
Surr: 4-Bromofluorobenzene	99.4	70-130	DP	%REC	2	8/14/2015 2:20:16 AM	R28180
Surr: Dibromofluoromethane	108	70-130	DP	%REC	2	8/14/2015 2:20:16 AM	R28180
Surr: Toluene-d8	96.9	70-130	DP	%REC	2	8/14/2015 2:20:16 AM	R28180

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508346

Date Reported: 8/24/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-34

Project: GBR Shutdown Action Plan

Collection Date: 8/7/2015 11:30:00 AM

Lab ID: 1508346-005

Matrix: AQUEOUS

Received Date: 8/8/2015 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	280	50	*	mg/L	100	8/11/2015 12:59:29 PM	R28135
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	5.2	5.0	DP	µg/L	5	8/14/2015 2:47:49 AM	R28180
Toluene	ND	5.0	DP	µg/L	5	8/14/2015 2:47:49 AM	R28180
Ethylbenzene	51	5.0	DP	µg/L	5	8/14/2015 2:47:49 AM	R28180
Xylenes, Total	49	7.5	DP	µg/L	5	8/14/2015 2:47:49 AM	R28180
Surr: 1,2-Dichloroethane-d4	103	70-130	DP	%REC	5	8/14/2015 2:47:49 AM	R28180
Surr: 4-Bromofluorobenzene	51.0	70-130	SDP	%REC	5	8/14/2015 2:47:49 AM	R28180
Surr: Dibromofluoromethane	100	70-130	DP	%REC	5	8/14/2015 2:47:49 AM	R28180
Surr: Toluene-d8	98.0	70-130	DP	%REC	5	8/14/2015 2:47:49 AM	R28180

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508346

Date Reported: 8/24/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SHS-8

Project: GBR Shutdown Action Plan

Collection Date: 8/7/2015 3:10:00 PM

Lab ID: 1508346-006

Matrix: AQUEOUS

Received Date: 8/8/2015 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	120	5.0		mg/L	10	8/11/2015 1:11:53 PM	R28135
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/14/2015 3:15:27 AM	R28180
Toluene	ND	1.0		µg/L	1	8/14/2015 3:15:27 AM	R28180
Ethylbenzene	14	1.0		µg/L	1	8/14/2015 3:15:27 AM	R28180
Xylenes, Total	ND	1.5		µg/L	1	8/14/2015 3:15:27 AM	R28180
Surr: 1,2-Dichloroethane-d4	103	70-130		%REC	1	8/14/2015 3:15:27 AM	R28180
Surr: 4-Bromofluorobenzene	94.0	70-130		%REC	1	8/14/2015 3:15:27 AM	R28180
Surr: Dibromofluoromethane	111	70-130		%REC	1	8/14/2015 3:15:27 AM	R28180
Surr: Toluene-d8	101	70-130		%REC	1	8/14/2015 3:15:27 AM	R28180

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508346

Date Reported: 8/24/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SHS-9

Project: GBR Shutdown Action Plan

Collection Date: 8/7/2015 3:00:00 PM

Lab ID: 1508346-007

Matrix: AQUEOUS

Received Date: 8/8/2015 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	96	50		mg/L	100	8/11/2015 1:49:08 PM	R28135
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	5.0	D	µg/L	5	8/14/2015 3:42:53 AM	R28180
Toluene	ND	5.0	D	µg/L	5	8/14/2015 3:42:53 AM	R28180
Ethylbenzene	21	5.0	D	µg/L	5	8/14/2015 3:42:53 AM	R28180
Xylenes, Total	ND	7.5	D	µg/L	5	8/14/2015 3:42:53 AM	R28180
Surr: 1,2-Dichloroethane-d4	101	70-130	D	%REC	5	8/14/2015 3:42:53 AM	R28180
Surr: 4-Bromofluorobenzene	94.4	70-130	D	%REC	5	8/14/2015 3:42:53 AM	R28180
Surr: Dibromofluoromethane	109	70-130	D	%REC	5	8/14/2015 3:42:53 AM	R28180
Surr: Toluene-d8	101	70-130	D	%REC	5	8/14/2015 3:42:53 AM	R28180

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order 1508346

Date Reported: 8/24/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** Trip Blank**Project:** GBR Shutdown Action Plan**Collection Date:****Lab ID:** 1508346-008**Matrix:** TRIP BLANK**Received Date:** 8/8/2015 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/14/2015 4:37:39 AM	R28180
Toluene	ND	1.0		µg/L	1	8/14/2015 4:37:39 AM	R28180
Ethylbenzene	ND	1.0		µg/L	1	8/14/2015 4:37:39 AM	R28180
Xylenes, Total	ND	1.5		µg/L	1	8/14/2015 4:37:39 AM	R28180
Surr: 1,2-Dichloroethane-d4	103	70-130		%REC	1	8/14/2015 4:37:39 AM	R28180
Surr: 4-Bromofluorobenzene	110	70-130		%REC	1	8/14/2015 4:37:39 AM	R28180
Surr: Dibromofluoromethane	107	70-130		%REC	1	8/14/2015 4:37:39 AM	R28180
Surr: Toluene-d8	99.4	70-130		%REC	1	8/14/2015 4:37:39 AM	R28180

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508346

24-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Shutdown Action Plan

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R28135	RunNo:	28135					
Prep Date:		Analysis Date:	8/11/2015	SeqNo:	847702	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R28135	RunNo:	28135					
Prep Date:		Analysis Date:	8/11/2015	SeqNo:	847703	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	5.0	0.50	5.000	0	99.2	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R28135	RunNo:	28135					
Prep Date:		Analysis Date:	8/11/2015	SeqNo:	847758	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R28135	RunNo:	28135					
Prep Date:		Analysis Date:	8/11/2015	SeqNo:	847759	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	5.3	0.50	5.000	0	106	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R28406	RunNo:	28406					
Prep Date:		Analysis Date:	8/21/2015	SeqNo:	858181	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R28406	RunNo:	28406					
Prep Date:		Analysis Date:	8/21/2015	SeqNo:	858182	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	96.6	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | 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 Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508346

24-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Shutdown Action Plan

Sample ID	rb1	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R28180	RunNo:	28180					
Prep Date:		Analysis Date:	8/13/2015	SeqNo:	849535	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								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.5		10.00		94.9	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.7	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	9.8		10.00		97.7	70	130			

Sample ID	100ng lcs2	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R28180	RunNo:	28180					
Prep Date:		Analysis Date:	8/13/2015	SeqNo:	849536	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	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		99.6	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	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 Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	



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: 1508346

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

08/08/15
8/8/2015 9:45:00 AM

Completed By: Lindsay Mangin

8/8/2015 10:59:38 AM

Reviewed By:

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? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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:

CS 08/10/15

Sample -003A (bo
Vials) have bubble
CS 08/10/15

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:

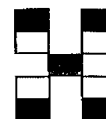
18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.6	Good	Yes			

Chain-of-Custody Record

Client: Kelly Robinson
Western Refining
Mailing Address: 111 CL 4990
Bloomfield, NM 87413
Phone #: 970-385-1096
email or Fax#: adger@henv.com
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other _____
☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush
Project Name:
GBK Annual Sampling
Project #:
WR1009
Project Manager:
Ashley Aguer
Sampler: Deyn Hennemann
☐ No Ice ☒ Yes ☐ No
Sample Temperature: 4.6



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)	Chloride & BTEX	Air Bubbles (Y or N)
7/2/15	1230	GN	GBR-21D	Various/5	Cool/HCl	-001													
	1135		GBR-22		Cool/HCl	-002													
	1225		GBR-25		Cool only	-003													
	1325		GBR-26		Cool only	-004													
	1130		GBR-34		Cool only	-005													
	1610		SHS-8		Cool/HCl	-006													
	1500		SHS-9		Cool/HCl	-007													
			Trip Blank	1-VOA	HCl	-008													

Date: 7/7/15 Time: 1550 Relinquished by: Alex Cordero
Date: 7/15 Time: 1807 Relinquished by: Christine Walter
Received by: Christine Walter Date: 8/7/15 Time: 1550
Received by: [Signature] Date: 08/08/15 Time: 0945

Remarks:
cc: dhennemann@henv.com



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

August 15, 2015

Ashley Ager

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (970) 946-1093

FAX (505) 632-3911

RE: GBR Shutdown Action Plan

OrderNo.: 1508343

Dear Ashley Ager:

Hall Environmental Analysis Laboratory received 8 sample(s) on 8/8/2015 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 qualifiers 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
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Workorder Sample Summary

WO#: 1508343

15-Aug-15

CLIENT: Western Refining Southwest, Inc.

Project: GBR Shutdown Action Plan

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1508343-001	GBR-21D		8/7/2015 12:30:00 PM	8/8/2015 9:45:00 AM	Aqueous
1508343-001	GBR-21D		8/7/2015 12:30:00 PM	8/8/2015 9:45:00 AM	Aqueous
1508343-002	GBR-22		8/7/2015 11:35:00 AM	8/8/2015 9:45:00 AM	Aqueous
1508343-002	GBR-22		8/7/2015 11:35:00 AM	8/8/2015 9:45:00 AM	Aqueous
1508343-003	GBR-25		8/7/2015 12:23:00 PM	8/8/2015 9:45:00 AM	Aqueous
1508343-003	GBR-25		8/7/2015 12:23:00 PM	8/8/2015 9:45:00 AM	Aqueous
1508343-004	GBR-26		8/7/2015 1:25:00 PM	8/8/2015 9:45:00 AM	Aqueous
1508343-004	GBR-26		8/7/2015 1:25:00 PM	8/8/2015 9:45:00 AM	Aqueous
1508343-005	GBR-34		8/7/2015 11:30:00 AM	8/8/2015 9:45:00 AM	Aqueous
1508343-005	GBR-34		8/7/2015 11:30:00 AM	8/8/2015 9:45:00 AM	Aqueous
1508343-006	SHS-8		8/7/2015 3:10:00 PM	8/8/2015 9:45:00 AM	Aqueous
1508343-006	SHS-8		8/7/2015 3:10:00 PM	8/8/2015 9:45:00 AM	Aqueous
1508343-007	SHS-9		8/7/2015 3:00:00 PM	8/8/2015 9:45:00 AM	Aqueous
1508343-007	SHS-9		8/7/2015 3:00:00 PM	8/8/2015 9:45:00 AM	Aqueous
1508343-008	Trip Blank			8/8/2015 9:45:00 AM	Trip Blank

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508343

Date Reported: 8/15/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-21D

Project: GBR Shutdown Action Plan

Collection Date: 8/7/2015 12:30:00 PM

Lab ID: 1508343-001

Matrix: AQUEOUS

Received Date: 8/8/2015 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: KJH
Diesel Range Organics (DRO)	350	10		mg/L	10	8/11/2015 8:48:31 PM	20682
Surr: DNOP	0	72-136	S	%REC	10	8/11/2015 8:48:31 PM	20682
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	1.0	D	mg/L	20	8/12/2015 2:51:54 PM	R28140
Surr: BFB	89.0	57.8-137	D	%REC	20	8/12/2015 2:51:54 PM	R28140

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical ReportLab Order **1508343**

Date Reported: 8/15/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** GBR-22**Project:** GBR Shutdown Action Plan**Collection Date:** 8/7/2015 11:35:00 AM**Lab ID:** 1508343-002**Matrix:** AQUEOUS**Received Date:** 8/8/2015 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: KJH
Diesel Range Organics (DRO)	110	10		mg/L	10	8/12/2015 9:02:49 AM	20682
Surr: DNOP	0	72-136	S	%REC	10	8/12/2015 9:02:49 AM	20682
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	0.34	0.25	D	mg/L	5	8/12/2015 3:16:43 PM	R28140
Surr: BFB	96.9	57.8-137	D	%REC	5	8/12/2015 3:16:43 PM	R28140

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508343

Date Reported: 8/15/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-25

Project: GBR Shutdown Action Plan

Collection Date: 8/7/2015 12:23:00 PM

Lab ID: 1508343-003

Matrix: AQUEOUS

Received Date: 8/8/2015 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: KJH
Diesel Range Organics (DRO)	92	1.0		mg/L	1	8/11/2015 10:14:44 PM	20682
Surr: DNOP	85.4	72-136		%REC	1	8/11/2015 10:14:44 PM	20682
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	0.98	0.25	P D	mg/L	5	8/12/2015 3:41:37 PM	R28140
Surr: BFB	155	57.8-137	SP D	%REC	5	8/12/2015 3:41:37 PM	R28140

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
	D Sample Diluted Due to Matrix	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 Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical ReportLab Order **1508343**Date Reported: **8/15/2015****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** GBR-26**Project:** GBR Shutdown Action Plan**Collection Date:** 8/7/2015 1:25:00 PM**Lab ID:** 1508343-004**Matrix:** AQUEOUS**Received Date:** 8/8/2015 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: KJH
Diesel Range Organics (DRO)	1.8	1.0		mg/L	1	8/11/2015 10:57:52 PM	20682
Surr: DNOP	89.4	72-136		%REC	1	8/11/2015 10:57:52 PM	20682
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.20	D	mg/L	4	8/12/2015 4:06:29 PM	R28140
Surr: BFB	98.6	57.8-137	D	%REC	4	8/12/2015 4:06:29 PM	R28140

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508343

Date Reported: 8/15/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: GBR-34

Project: GBR Shutdown Action Plan

Collection Date: 8/7/2015 11:30:00 AM

Lab ID: 1508343-005

Matrix: AQUEOUS

Received Date: 8/8/2015 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: KJH
Diesel Range Organics (DRO)	400	10		mg/L	10	8/12/2015 9:24:16 AM	20682
Surr: DNOP	0	72-136	S	%REC	10	8/12/2015 9:24:16 AM	20682
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	13	2.5	P	mg/L	50	8/11/2015 4:17:36 AM	R28068
Surr: BFB	125	57.8-137	P	%REC	50	8/11/2015 4:17:36 AM	R28068

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical ReportLab Order **1508343**Date Reported: **8/15/2015****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** SHS-8**Project:** GBR Shutdown Action Plan**Collection Date:** 8/7/2015 3:10:00 PM**Lab ID:** 1508343-006**Matrix:** AQUEOUS**Received Date:** 8/8/2015 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: KJH
Diesel Range Organics (DRO)	23	1.0		mg/L	1	8/12/2015 12:24:05 AM	20682
Surr: DNOP	98.4	72-136		%REC	1	8/12/2015 12:24:05 AM	20682
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	0.18	0.10	P	mg/L	2	8/11/2015 4:42:23 AM	R28068
Surr: BFB	126	57.8-137	P	%REC	2	8/11/2015 4:42:23 AM	R28068

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508343

Date Reported: 8/15/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SHS-9

Project: GBR Shutdown Action Plan

Collection Date: 8/7/2015 3:00:00 PM

Lab ID: 1508343-007

Matrix: AQUEOUS

Received Date: 8/8/2015 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: KJH
Diesel Range Organics (DRO)	29	1.0		mg/L	1	8/12/2015 1:07:09 AM	20682
Surr: DNOP	91.7	72-136		%REC	1	8/12/2015 1:07:09 AM	20682
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.20	D	mg/L	4	8/12/2015 4:31:22 PM	R28140
Surr: BFB	108	57.8-137	D	%REC	4	8/12/2015 4:31:22 PM	R28140

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical ReportLab Order **1508343**Date Reported: **8/15/2015****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Western Refining Southwest, Inc.**Client Sample ID:** Trip Blank**Project:** GBR Shutdown Action Plan**Collection Date:****Lab ID:** 1508343-008**Matrix:** TRIP BLANK**Received Date:** 8/8/2015 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	8/11/2015 5:31:52 AM	R28068
Surr: BFB	90.3	57.8-137		%REC	1	8/11/2015 5:31:52 AM	R28068

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508343

15-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Shutdown Action Plan

Sample ID	MB-20682	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range					
Client ID:	PBW	Batch ID:	20682	RunNo:	28064					
Prep Date:	8/10/2015	Analysis Date:	8/10/2015	SeqNo:	845825	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Surr: DNOP	0.98		1.000		98.1	72	136			

Sample ID	LCS-20682	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range					
Client ID:	LCSW	Batch ID:	20682	RunNo:	28064					
Prep Date:	8/10/2015	Analysis Date:	8/10/2015	SeqNo:	845826	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.4	1.0	5.000	0	127	60.1	156			
Surr: DNOP	0.55		0.5000		110	72	136			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508343

15-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Shutdown Action Plan

Sample ID	5ML-RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBW	Batch ID:	R28068	RunNo:	28068					
Prep Date:		Analysis Date:	8/10/2015	SeqNo:	845770	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		91.4	57.8	137			

Sample ID	2.5UG LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSW	Batch ID:	R28068	RunNo:	28068					
Prep Date:		Analysis Date:	8/10/2015	SeqNo:	845771	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	92.2	80	120			
Surr: BFB	20		20.00		97.7	57.8	137			

Sample ID	B30	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBW	Batch ID:	R28140	RunNo:	28140					
Prep Date:		Analysis Date:	8/12/2015	SeqNo:	848357	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		92.1	57.8	137			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSW	Batch ID:	R28140	RunNo:	28140					
Prep Date:		Analysis Date:	8/12/2015	SeqNo:	848358	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.44	0.050	0.5000	0	87.1	80	120			
Surr: BFB	19		20.00		95.3	57.8	137			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	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 Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	



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: **1508343**

RcptNo: **1**

Received by/date:

Logged By: **Lindsay Mangin**

08/08/15
8/8/2015 9:45:00 AM

Completed By: **Lindsay Mangin**

8/8/2015 10:37:54 AM

Reviewed By:

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?

Courier

Log In

4. Was an attempt made to cool the samples?

Yes ☒

No ☐

NA ☐

5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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 ☒

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

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 ☐

Adjusted?

14. Is it clear what analyses were requested?

Yes ☒

No ☐

15. Were all holding times able to be met?

Yes ☒

No ☐

Checked by:

(If no, notify customer for authorization.)

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	4.6	Good	Yes			

Chain-of-Custody Record

Client: Kelly Robinson, Western ReBar

III CR 4990

Mailing Address: Bloomfield, NM

Phone #: (970) 385-1096

email or Fax#: AAger@LTFEnv.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

GBR Shutdown Action Plan

Project #:

WR1009

Project Manager:

Ashley Ager

Sampler: Alex Crooks / Michael Wickert

On Ice: ☒ Yes ☐ No

Sample Temperature: 4.6



**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 150834	BTEX + MTBE	BTEX + MTBE	TPH 8015B	TPH (Metho)	EDB (Metho)	PAH's (8310)	RCRA 8 Me	Anions (F, Cl)	8081 Pesticide	8260B (VOA)	8270 (Semi-				Air Bubbles
7-15	1230	GLW	GBR-21D	Cool/HCl	1 / Amber	-001			↓												
	1135	↓	GBR-22	Cool/HCl	↓	-002															
	1223	↓	GBR-25	Cool ONLY	↓	-003															
	1323	↓	GBR-26	Cool ONLY	↓	-004															
	1130	↓	GBR-34	Cool ONLY	↓	-005															
	1510	↓	SHS-8	Cool/HCl	↓	-006															
	1500	↓	SHS-9	Cool/HCl	↓	-007			↓												
✓	1405	✓	Trip Blank	1 VOA	HCl	-008															
			using 08/10/15																		
																		</			

Date: 7-15 Time: 1533 Relinquished by: [Signature] Received by: [Signature] Date: 8/7/15 Time: 1553

Date: 7/15 Time: 1807 Relinquished by: [Signature] Received by: [Signature] Date: 08/08/15 Time: 0945

Remarks: Copy DHenemann@LTFEnv.com



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

August 15, 2015

Devin Hencmann

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (970) 403-6023

FAX

RE: GBR Annual

OrderNo.: 1508412

Dear Devin Hencmann:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/11/2015 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 qualifiers 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
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Workorder Sample Summary

WO#: 1508412

15-Aug-15

CLIENT: Western Refining Southwest, Inc.

Project: GBR Annual

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1508412-001	SHS-2		8/10/2015 11:50:00 AM	8/11/2015 7:40:00 AM	Aqueous
1508412-001	SHS-2		8/10/2015 11:50:00 AM	8/11/2015 7:40:00 AM	Aqueous

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508412

Date Reported: 8/15/2015

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SHS-2

Project: GBR Annual

Collection Date: 8/10/2015 11:50:00 AM

Lab ID: 1508412-001

Matrix: AQUEOUS

Received Date: 8/11/2015 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	280	50	*	mg/L	100	8/11/2015 7:11:47 PM	R28135
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	5.0	D	µg/L	5	8/14/2015 5:05:18 AM	R28180
Toluene	ND	5.0	D	µg/L	5	8/14/2015 5:05:18 AM	R28180
Ethylbenzene	ND	5.0	D	µg/L	5	8/14/2015 5:05:18 AM	R28180
Xylenes, Total	ND	7.5	D	µg/L	5	8/14/2015 5:05:18 AM	R28180
Surr: 1,2-Dichloroethane-d4	98.2	70-130	D	%REC	5	8/14/2015 5:05:18 AM	R28180
Surr: 4-Bromofluorobenzene	110	70-130	D	%REC	5	8/14/2015 5:05:18 AM	R28180
Surr: Dibromofluoromethane	105	70-130	D	%REC	5	8/14/2015 5:05:18 AM	R28180
Surr: Toluene-d8	101	70-130	D	%REC	5	8/14/2015 5:05:18 AM	R28180

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	Page 2 of 4
	D	Sample Diluted Due to Matrix	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 Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508412

15-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R28135	RunNo:	28135					
Prep Date:		Analysis Date:	8/11/2015	SeqNo:	847702	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R28135	RunNo:	28135					
Prep Date:		Analysis Date:	8/11/2015	SeqNo:	847703	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	5.0	0.50	5.000	0	99.2	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R28135	RunNo:	28135					
Prep Date:		Analysis Date:	8/11/2015	SeqNo:	847758	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R28135	RunNo:	28135					
Prep Date:		Analysis Date:	8/11/2015	SeqNo:	847759	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	5.3	0.50	5.000	0	106	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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 Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508412

15-Aug-15

Client: Western Refining Southwest, Inc.

Project: GBR Annual

Sample ID	rb1	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R28180	RunNo:	28180					
Prep Date:		Analysis Date:	8/13/2015	SeqNo:	849535	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								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.5		10.00		94.9	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.7	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	9.8		10.00		97.7	70	130			

Sample ID	100ng lcs2	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R28180	RunNo:	28180					
Prep Date:		Analysis Date:	8/13/2015	SeqNo:	849536	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	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		99.6	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit



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 150B412

RcptNo: 1

Received by/date:

AG

08/11/15

Logged By: Ashley Gallegos

8/11/2015 7:40:00 AM

Completed By: Ashley Gallegos

8/11/2015 9:50:03 AM

Reviewed By:

CS

08/11/15

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?

Courier

Log In

4. Was an attempt made to cool the samples?

Yes ☒

No ☐

NA ☐

5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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 ☒

of preserved
bottles checked
for pH:

[<2 or >12 unless noted]

12. Does paperwork match bottle labels?

Yes ☒

No ☐

(Note discrepancies on chain of custody)

Adjusted?

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?

Yes ☒

No ☐

Checked by

(If no, notify customer for authorization.)

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		Turn-Around Time:
Client: Kelly Robinson	☒ Standard	☐ Rush
Western Refining	Project Name:	
Mailing Address: 111 CR 4990	GBR Annual	
Bloomfield, NM, 87413	Project #:	
Phone #: 970-385-1096	WR 1009	
Email or Fax#: dhencmann@western	Project Manager:	
QA/QC Package:	Darin Hencmann	
☒ Standard	☐ Level 4 (Full Validation)	
Accreditation	Sampler:	
☐ NELAP	☐ Other	
☐ EDD (Type)	On Ice: ☒ Yes ☐ No	
	Sample Temperature: 1.0	

☒ Standard ☐ Rush

Project Name:

Project #:

Project Manager:

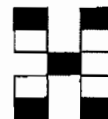
Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

[illegible]

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/10/15	1517	Alex Crookes	Christine Walters	8/10/15	1517
Date:	Time:	Relinquished by:	Received by:	Date	Time
8/10/15	2030	Christine Walters	Tim Halliday	08/11/15	0740



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

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^{3-} , SO_4^{2-})
	8081 Pesticides / 8082 PCB's
	8260B (VOA)
	8270 (Semi-VOA)
	X Chloride + BTEX
	Air Bubbles (Y or N)

Remarks:



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

February 12, 2016

Devin Hencmann

Western Refining Southwest, Inc.

#50 CR 4990

Bloomfield, NM 87413

TEL: (970) 403-6023

FAX (505) 632-3911

RE: GBR Shutdown

OrderNo.: 1508411

Dear Devin Hencmann:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/11/2015 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 qualifiers 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 1508411

Date Reported: 2/12/2016

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: SHS-2

Project: GBR Shutdown

Collection Date: 8/10/2015 11:50:00 AM

Lab ID: 1508411-001

Matrix: AQUEOUS

Received Date: 8/11/2015 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: KJH
Diesel Range Organics (DRO)	19	1.0		mg/L	1	8/13/2015 6:28:44 PM	20760
Surr: DNOP	125	72-136		%Rec	1	8/13/2015 6:28:44 PM	20760
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	1.0	P D	mg/L	20	8/19/2015 11:50:32 AM	A28329
Surr: BFB	87.3	57.8-137	P D	%Rec	20	8/19/2015 11:50:32 AM	A28329

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
	D	Sample Diluted Due to Matrix	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 Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508411

12-Feb-16

Client: Western Refining Southwest, Inc.

Project: GBR Shutdown

Sample ID	MB-20760		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range			
Client ID:	PBW		Batch ID:	20760		RunNo:	28159			
Prep Date:	8/13/2015		Analysis Date:	8/13/2015		SeqNo:	849273		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Surr: DNOP	1.2		1.000		121	72	136			

Sample ID	LCS-20760		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range			
Client ID:	LCSW		Batch ID:	20760		RunNo:	28159			
Prep Date:	8/13/2015		Analysis Date:	8/13/2015		SeqNo:	849274		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.5	1.0	5.000	0	111	60.1	156			
Surr: DNOP	0.59		0.5000		119	72	136			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	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 Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508411
12-Feb-16

Client: Western Refining Southwest, Inc.
Project: GBR Shutdown

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBW	Batch ID:	A28329	RunNo:	28329					
Prep Date:		Analysis Date:	8/19/2015	SeqNo:	855363	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	16		20.00		80.9	57.8	137			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSW	Batch ID:	A28329	RunNo:	28329					
Prep Date:		Analysis Date:	8/19/2015	SeqNo:	855364	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	92.0	80	120			
Surr: BFB	17		20.00		85.3	57.8	137			

Sample ID	1508411-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	SHS-2	Batch ID:	A28329	RunNo:	28329					
Prep Date:		Analysis Date:	8/19/2015	SeqNo:	855369	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	9.5	1.0	10.00	0.2840	92.6	70	130			
Surr: BFB	360		400.0		89.2	57.8	137			

Sample ID	1508411-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	SHS-2	Batch ID:	A28329	RunNo:	28329					
Prep Date:		Analysis Date:	8/19/2015	SeqNo:	855370	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	9.2	1.0	10.00	0.2840	89.3	70	130	3.54	20	
Surr: BFB	370		400.0		92.0	57.8	137	0	0	

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | 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 Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |



Hall Environmental Analysis Laboratory
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Albuquerque, NM 87109
TEL: 505-343-3975 FAX: 505-343-4107
Website: www.halleenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Southw

Work Order Number: 1508411

ReptNo: 1

Received by/date:

AG

08/11/15

Logged By: Ashley Gallegos

8/11/2015 7:40:00 AM

AG

Completed By: Ashley Gallegos

8/11/2015 9:48:50 AM

AG

Reviewed By:

CS

08/11/15

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? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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		Turn-Around Time:	
Client: Kelly Robinson Western Refining		☒ Standard ☐ Rush	
Mailing Address: 111 CR 4770 Bloomfield NM, 87413		Project Name: Shutdown 6BR Annual Sampling per Alex.	
Phone #: 970-385-1096		Project #: WR1009 08/20	
email or Fax#: dhencmann@tenv.com		Project Manager:	
QA/QC Package:		Devin Hencmann	
☒ Standard ☐ Level 4 (Full Validation)			
Accreditation		Sampler:	
☐ NELAP ☐ Other		On Ice: ☒ Yes ☐ No	
☐ EDD (Type)		Sample Temperature: 10	

Project Name: Shutdown
BBR Annual Sampling
pen Alex.
Project #: WRL009 mgos/20

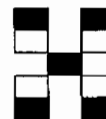
Devin Hencmann

On Ice: ☒ Yes ☐ No

Sample Temperature: 10

[illegible]

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/10/15	1517	Celestina	Christine Wacker	8/10/15	1517
Date:	Time:	Relinquished by:	Received by:	Date	Time
8/10/15	2030	Christine Wacker	Angela	08/11/15	0740



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

[illegible]

Remarks:

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