AP – 121

2015 AGWMR

09 / 01 / 2015

Annual Groundwater Monitoring Report

Western Refining

Western Refining Southwest, Inc.
Wingate Plant
Gallup, New Mexico
Abatement Plan Number – AP-121

SEPTEMBER 2015

DiSorbo
Environmental Consulting Firm

8501 North Mopac Expy | Suite 300 | Austin, TX 78759
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Western Refining
GALLUP

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2015 SEP -4 P 1:34

September 1, 2015

Mr. Glenn von Gonten
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: 2015 Annual Groundwater Monitoring Report
Western Refining Southwest, Inc. – Wingate Plant – Gallup, New Mexico
New Mexico Oil Conservation Division Abatement Plan No. 121

Dear Mr. von Gonten:

Western Refining Southwest, Inc. (Western) purchased the ConocoPhillips Wingate Fractionator Gas Plant on September 15, 2014. This *Annual Groundwater Monitoring Report – September 2015* is submitted in accordance with the former owner's Abatement Plan dated April 30, 2014. This report summarizes the groundwater monitoring activities on July 21st and July 22nd, 2015.

If there are any questions regarding the enclosed Investigation Work Plan, please contact Mr. Ed Riege at (505) 722-0217.

Sincerely,

William Carl McClain

Mr. William Carl McClain
Refinery Manager
Western Refining Southwest, Inc. – Gallup Refinery

cc: Ed Riege, Western Refining – Gallup Refinery
Allen Hains, Western Refining - El Paso

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Section 1
Introduction

This *Annual Groundwater Monitoring Report – September 2015* is submitted in accordance with the technical specifications of Abatement Plan No. 117 (AP-117) dated April 30, 2014. On May 14, 2015 ConocoPhillips submitted correspondence to the New Mexico Oil Conservation Division (NMOCD) requesting the Rescission of Abatement Plan AP-117. The request was based on Western Refining Southwest, Inc. (Western Refining) purchasing the ConocoPhillips Wingate Fractionator Gas Plant, which is located two miles east of Gallup, New Mexico (Figure 1). On June 12, 2015, Western Refining requested a separate Abatement Plan number for the remediation activities at the Wingate Plant. The new Abatement Plan number (AP-121) was assigned to Western by NMOCD on August 31, 2015. Copies of the above referenced correspondence are submitted with this report as Appendix A – Correspondence. A copy of former Abatement Plan AP-117 is also included in Appendix A.

This report summarizes the groundwater monitoring activities conducted at the Western Refining Wingate Plant in Gallup, New Mexico on July 21st and July 22nd, 2015. In accordance with Section 7 of the AP-117 Abatement Plan, this report provides the following information:

- A description of the monitoring and remediation activities that occurred during the year, including conclusions and recommendations;
- Summary table listing laboratory analytical results of all water quality sampling for each monitoring point (any WQCC constituent found to exceed the groundwater standard is highlighted and noted);
- Plots of concentration versus time for contaminants of concern from each monitoring point;
- Copies of the most recent years laboratory analytical data sheets;
- An annual water table potentiometric elevation map using the water table elevation of the groundwater in all facility monitoring wells;
- A corrected water table elevation for all wells containing phase-separated hydrocarbons (PSH);
- A map showing monitoring well locations, pertinent site features, and the direction and magnitude of hydraulic gradient; and
- Plots of the water table elevation versus time for each groundwater monitoring point.

Section 2 of this report summarizes the fluid level gauging event, Section 3 summarizes the groundwater sampling event, Section 4 discusses the analytical results, and Section 5 presents a summary of the July 2015 event with conclusions and recommendations.

Section 2
Fluid Level Gauging

Figure 2 depicts the location of the monitor wells at the Western Refining – Wingate Plant. The groundwater well system at the plant during the July 2015 fluid level measuring event consisted of eight monitor wells. There are six wells located onsite (WMW-1R, WMW-2, WMW-4, WMW-5, WMW-6, and WMW-7) and two wells located offsite (WMW-3 and WMW-8).

On July 21 and July 22, 2015, fluid levels were gauged in the eight wells. An oil/water interface probe was used to measure groundwater depths and check for the presence of PSH in each of the monitor wells. Before and after each use, the oil/water interface probe was cleaned with an Alconox /distilled water solution, then triple rinsed with distilled water.

Groundwater elevations in reference to mean sea level were calculated from the July 2015 fluid level data and are presented in Table 1. The groundwater elevations were used to develop the groundwater gradient map presented as Figure 3. As shown by Figure 3, the groundwater flow direction is generally west-northwest. PSH was not detected in the eight wells that were gauged during the July 2015 event.

Graphs 1 and 2 present groundwater elevations versus time for each monitor well.

Section 3
Groundwater Sampling

In accordance with Abatement Plan AP-117, groundwater samples were collected from the eight monitor wells on July 21 and July 22, 2015. Samples were collected utilizing low flow sampling with a peristaltic pump and disposable tubing set within the well screen. Disposable nitrile gloves were worn by sampling personnel and changed at each well location. The tubing used at each well location was discarded after sample collection and was not reused.

Water was slowly pumped from the well thru a flow thru cell that hosted a YSI multi-parameter sonde. The readings were recorded at three minute intervals. The groundwater was slowly pumped until the parameters temperature, pH and conductivity had stabilized. Additional parameters monitored and recorded included oxidation reduction potential and dissolved oxygen.

Following purging and stabilization of the groundwater parameters, the flow of the groundwater was diverted from the flow-thru cell and directed into the laboratory prepared sample containers. The sample containers were filled in the following order based on volatilization sensitivity:

- Volatile organic compounds – Three 40-ml glass vials with Teflon septa were used.
- Semi-volatile organic compounds – One, 1-liter amber glass container with Teflon-lined lids was used to collect the sample.
- Total Metals – One, 500-ml plastic container. The sample was field preserved with HNO3.
- Dissolved Metals – One 100-ml plastic container. The sample was field filtered and field preserved with HNO3.
- Inorganic Parameters – The containers for the inorganic parameters were filled at the end and varied in size and preservation method.

Once filled and sealed, the sample containers were labelled with the well number, date, time, and facility name. Glass containers were wrapped in bubble wrap. All containers were placed in sealable plastic bags. The containers were placed on ice in coolers provided by the laboratory. Trip blanks were also included with each cooler. Water was periodically drained from the coolers and additional ice was added until the coolers were hand delivered to the laboratory.

Chain-of-custody forms were filled out at the site and samples were not relinquished to the laboratory without the sampler's and receiving laboratory personnel's signatures. The sampler retained a copy of the custody forms. At a minimum the forms provided the following information:

- Sample ID No:
- Type and number of sample containers;
- Media sampled;
- Date and time the sample was collected;
- Analytical parameters;
- Sampler's name;
- Date and time samples are release to laboratory; and
- Date and time samples are received at laboratory.

All fluids generated during the field activities, including decontamination fluids and purge water, were collected and placed in an open top 55-gallon drum. The drum was sealed, labelled and placed on the drum containment pad. The water was sampled for waste characterization to support off-site disposal.

Section 4
Analytical Results

The groundwater samples collected on July 21 and July 22, 2015 were hand delivered to Hall Environmental Laboratory, which is located in Albuquerque, New Mexico. The samples were analyzed for the following constituents:

- Volatile Organic Compounds – Method 8260;
- Semi-Volatile Organic Compounds – Method 8270;
- Dissolved Metals – Method 3010/6010
    1. Arsenic
    2. Barium
    3. Cadmium
    4. Calcium
    5. Chromium
    6. Lead
    7. Selenium
    8. Silver
    9. Sodium
- Mercury – Method 7470;
- Alkalinity, Total as CaCO3 – Method SM2320B;
- Total Dissolved Solids – Method SM2540C;
- pH – EPA Method 9040;
- Chloride, Nitrogen, Nitrate and Sulfate – EPA Method 300.0; and
- Total Uranium – EPA Method 200.8.

The July 2015 groundwater analytical results are presented in Table 2. Table 3 presents the historical groundwater analytical data. Graph 3 depicts sulfate concentrations versus time for the monitor wells. Graph 4 depicts Total Dissolved Solids concentrations versus time for the monitor wells. Graph 5 depicts benzene concentrations versus time for monitor well WMW-2. Graph 6 depicts total xylenes concentrations versus time for monitor well WMW-2. The laboratory analytical reports are presented

in Appendix B. Figure 4 is a map that depicts the analytical results for some of the commonly noted constituents of concern that have historically occurred over the regulatory standards.

Analytical results were compared to the NMWQCC groundwater quality standards contained in Title 20, Chapter 6, Part 2, Section 3103 of the New Mexico Administrative Code (20.6.2.3103 NMAC). Applicable groundwater quality standards are found in Subsection A, *Human Health Standards, and Subsection B, Other Standards for Domestic Water Supply.*

Quality assurance samples were collected during the collection of groundwater samples. The following samples were collected:

- Duplicate Sample – A duplicate groundwater sample was collected from monitor well WMW-05. The duplicate sample, DUP01, was analyzed for the full analytical suite. The analytical results were consistent with the results for the primary sample.

- Trip Blank – A trip blank was provided by the laboratory for each cooler and was maintained in the cooler at all times. Trip blanks were not opened. The trip blanks for each cooler consisted of two distilled water-filled 40-ml glass vials with Teflon-lined septum caps and hydrochloric acid preservative (VOA vials). A total of four trips blanks were analyzed for volatile organic compounds. The analytical results indicated no detection of volatile organic compounds.

- Equipment Blank – One equipment blank was collected on the first day of groundwater sampling and analyzed for the full analytical suite. The equipment blank was collected using new tubing inserted into a gallon of distilled water. The water was pumped from the container and directed to the sample containers. The analytical results for the equipment blank, EB01, indicated no detection of the constituents of concern.

As seen in Table 2, the groundwater analytical results indicated the following listed constituents exceeded the NMWQCC Standards in the respective wells:

- Benzene – WMW-2;
- Uranium – WMW-3, WMW-5, and WMW-7;
- Chloride – WMW-2, WMW-3, and WMW-5;
- Sulfate – WMW-1R, WMW-3, WMW-5 and WMW-7; and
- Total Dissolved Solids – WMW-1R, WMW-2, WMW-3, WMW-4, WMW-5 and WMW-7.

Section 5
Summary

The July 2015 analytical results were compared to the NMWQCC groundwater quality standards contained in Title 20, Chapter 6, Part 2, Section 3103 of the New Mexico Administrative Code (20.6.2.3103 NMAC). The concentrations of benzene, uranium, chloride, sulfate and total dissolved solids were found above NMWQCC groundwater quality standards in groundwater samples collected in July 2015.

The concentration of benzene in monitor well WMW-2 (26 mg/L) continues to exceed the groundwater quality standard (0.01 mg/L). Benzene was not detected in a down-gradient sample collected from WMW-4. The area of impacted groundwater appears to be centralized around WMW-2. Historical analytical data indicates that benzene has never been detected in groundwater samples collected from WMW-4.

In Section 5 of the 2014 *Annual Groundwater Monitoring Report* the detection of Bis (2-ethylhexyl) phthalate in monitor wells WMW-2, WMW-5 and WMW-7 was discussed. The reported concentrations were above the Environmental Protection Agency's groundwater quality standard of 0.006 mg/L. Bis (2-ethylhexyl) phthalate was not detected in the groundwater samples collected during the July 2015 sampling event. The presence of Bis (2-ethylhexyl) phthalate in the 2014 groundwater analytical results appears to be the result of analytical laboratory contaminants. Bis (2-ethylhexyl) phthalate is not considered to be a constituent of concern.

Tables

TABLE 1
FLUID LEVEL DATA JULY 2015
WESTERN REFINING SOUTHWEST, INC.
WINGATE PLANT
GALLUP, NEW MEXICO

No.	Well ID	Top of Casing Elevation (feet msl)	Specific Gravity	Depth to Hydrocarbon (feet btoc)	Depth to Groundwater (feet btoc)	Total Well Depth (feet btoc)	Hydrocarbon Thickness (feet)	Corrected Groundwater Depth (feet btoc)	Groundwater Elevation (feet msl)
1	WMW-1R	6603.77	na	nd	8.37	19.18	0.00	8.37	6595.40
2	WMW-2	6594.88	na	nd	5.20	20.20	0.00	5.20	6589.68
3	WMW-3	6594.92	na	nd	5.75	20.20	0.00	5.75	6589.17
4	WMW-4	6595.49	na	nd	6.15	21.10	0.00	6.15	6589.34
5	WMW-5	6597.11	na	nd	5.45	20.15	0.00	5.45	6591.66
6	WMW-6	6603.86	na	nd	9.77	36.95	0.00	9.77	6594.09
7	WMW-7	6594.70	na	nd	6.85	22.80	0.00	6.85	6587.85
8	WMW-8	6594.05	na	nd	6.00	39.00	0.00	6.00	6588.05

Notes:
msl = mean sea level
na = not applicable
nd = not detected
nm = not measured

TABLE 2
GROUNDWATER ANALYTICAL DATA JULY 2015
WESTERN REFINING SOUTHWEST, INC.
WINGATE PLANT
GALLUP, NEW MEXICO

Well	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (total) (mg/L)	Naphthalene (mg/L)	1,2,4-Trimethyl-benzene (mg/L)	1,3,5-Trimethyl-benzene (mg/L)
WMW-1R	07/20/15	<0.001	<0.001	<0.001	<0.0015	<0.002	<0.001	<0.001
WMW-2	07/21/15	26	0.0031	0.068	0.520	0.020	0.017	0.0061
WMW-3	07/21/15	<0.001	<0.001	<0.001	<0.0015	<0.002	<0.001	<0.001
WMW-4	07/21/15	<0.001	<0.001	<0.001	<0.0015	<0.002	<0.001	<0.001
WMW-5	07/20/15	<0.001	<0.001	<0.001	<0.0015	<0.002	<0.001	<0.001
Dup01 (WMW-5)	07/20/15	<0.001	<0.001	<0.001	<0.0015	<0.002	<0.001	<0.001
WMW-6	07/20/15	<0.001	<0.001	<0.001	<0.0015	<0.002	<0.001	<0.001
WMW-7	07/20/15	<0.001	<0.001	<0.001	<0.0015	<0.002	<0.001	<0.001
WMW-8	07/21/15	<0.001	<0.001	<0.001	<0.0015	<0.002	<0.001	<0.001
NMWQCC Groundwater Quality Standards		0.01	0.75	0.75	0.62	0.03	NE	NE

TABLE 2
GROUNDWATER ANALYTICAL DATA JULY 2015
WESTERN REFINING SOUTHWEST, INC.
WINGATE PLANT
GALLUP, NEW MEXICO

Well	Date	1-Methyl-naphthalene (mg/L)	2-Methyl-naphthalene (mg/L)	Isopropyl-benzene (mg/L)	4-Methyl-2-pentanone (mg/L)	n-Propyl-benzene (mg/L)	Bis (2-Ethylhexyl) phthalate	Phenol (mg/L)
WMW-1R	07/20/15	<0.004	<0.004	<0.001	<0.010	<0.001	<0.010	<0.010
WMW-2	07/21/15	0.0074	0.011	0.0029	0.018	0.0024	<0.010	0.010
WMW-3	07/21/15	<0.004	<0.004	<0.001	<0.010	<0.001	<0.010	<0.010
WMW-4	07/21/15	<0.004	<0.004	<0.001	<0.010	<0.001	<0.010	<0.010
WMW-5	07/20/15	<0.004	<0.004	<0.001	<0.010	<0.001	<0.010	<0.010
Dup01 (WMW-5)	07/20/15	<0.004	<0.004	<0.001	<0.010	<0.001	<0.010	<0.010
WMW-6	07/20/15	<0.004	<0.004	<0.001	<0.010	<0.001	<0.010	<0.010
WMW-7	07/20/15	<0.004	<0.004	<0.001	<0.010	<0.001	<0.010	<0.010
WMW-8	07/21/15	<0.004	<0.004	<0.001	<0.010	<0.001	<0.010	<0.010
NMWQCC Groundwater Quality Standards		0.03	0.03	NE	NE	NE	NE	NE

TABLE 2
GROUNDWATER ANALYTICAL DATA JULY 2015
WESTERN REFINING SOUTHWEST, INC.
WINGATE PLANT
GALLUP, NEW MEXICO

Well	Date	Arsenic (dissolved) (mg/L)	Barium (dissolved) (mg/L)	Cadmium (dissolved) (mg/L)	Calcium (dissolved) (mg/L)	Chromium (dissolved) (mg/L)	Lead (dissolved) (mg/L)	Mercury (mg/L)
WMW-1R	07/20/15	0.027	0.046	<0.0020	180	<0.0060	<0.0050	<0.00020
WMW-2	07/21/15	<0.020	0.41	<0.0020	31	<0.0060	<0.0050	<0.00020
WMW-3	07/21/15	<0.020	0.023	<0.0020	110	<0.0060	<0.0050	<0.00020
WMW-4	07/21/15	<0.020	0.063	<0.0020	22	<0.0060	<0.0050	<0.00020
WMW-5	07/20/15	<0.020	<0.020	<0.0020	160	<0.0060	0.0050	<0.00020
Dup01 (WMW-5)	07/20/15	<0.020	<0.020	<0.0020	160	<0.0060	<0.0050	<0.00020
WMW-6	07/20/15	<0.020	0.032	<0.0020	37	<0.0060	<0.0050	<0.00020
WMW-7	07/20/15	<0.020	0.028	<0.0020	47	<0.0060	<0.0050	<0.00020
WMW-8	07/21/15	<0.020	0.15	<0.0020	36	<0.0060	0.0051	<0.00020
NMWQCC Groundwater Quality Standards		0.1	1.0	0.01	NE	0.05	0.05	0.002

TABLE 2
GROUNDWATER ANALYTICAL DATA JULY 2015
WESTERN REFINING SOUTHWEST, INC.
WINGATE PLANT
GALLUP, NEW MEXICO

Well	Date	Selenium (dissolved) (mg/L)	Silver (dissolved) (mg/L)	Sodium (dissolved) (mg/L)	Total Uranium (mg/L)	Alkalinity (mg/L)	Chloride (mg/L)	Nitrate (as N) (mg/L)
WMW-1R	07/20/15	<0.050	<0.0050	280	0.0080	222	170	<0.50
WMW-2	07/21/15	<0.050	<0.0050	1300	<0.00050	2016	**830**	<1.0
WMW-3	07/21/15	<0.050	<0.0050	1700	**0.067**	1081	**1800**	<1.0
WMW-4	07/21/15	<0.050	<0.0050	580	0.0015	813.4	210	<0.10
WMW-5	07/20/15	<0.050	<0.0050	1200	**0.036**	845	**400**	<0.10
Dup01 (WMW-5)	07/20/15	<0.050	<0.0050	1200	**0.037**	844	**320**	0.10
WMW-6	07/20/15	<0.050	<0.0050	300	0.010	458.4	57	0.10
WMW-7	07/20/15	<0.050	<0.0050	800	**0.039**	760	190	<0.50
WMW-8	07/21/15	<0.050	<0.0050	240	0.012	499.8	28	<0.10
NMWQCC Groundwater Quality Standards		0.05	0.05	NE	0.03	NE	250	10

TABLE 2
GROUNDWATER ANALYTICAL DATA JULY 2015
WESTERN REFINING SOUTHWEST, INC.
WINGATE PLANT
GALLUP, NEW MEXICO

Well	Date	pH	Sulfate (mg/L)	Total Dissolved Solids (TDS) (mg/L)
WMW-1R	07/20/15	7.86	**630**	**1610**
WMW-2	07/21/15	7.90	0.50	**3410**
WMW-3	07/21/15	7.77	**1700**	**5180**
WMW-4	07/21/15	7.94	330	**1680**
WMW-5	07/20/15	7.88	**1900**	**4350**
Dup01 (WMW-5)	07/20/15	7.89	**1800**	**4350**
WMW-6	07/20/15	8.23	285	984
WMW-7	07/20/15	8.23	**1000**	**2740**
WMW-8	07/21/15	8.05	160	822
NMWQCC Groundwater Quality Standards		6.00-9.00	600	1000

Notes:

NMWQCC = New Mexico Water Quality Control Commission

Constituents in **BOLD** are in excess of NMWQCC groundwater quality standards

mg/L = milligrams per liter (parts per million)

< 1.0 = Below laboratory detection limit of 1.0 mg/L

– = not analyzed NE - Not established.

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL DATA
WESTERN REFINING SOUTHWEST, INC.
WINGATE PLANT
GALLUP, NEW MEXICO

Well	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (total) (mg/L)	TPH-GRO (mg/L)	Naphthalene (mg/L)	Bis (2-Ethylhexyl) phthalate	Arsenic (dissolved) (mg/L)	Barium (dissolved) (mg/L)	Cadmium (dissolved) (mg/L)	Calcium (dissolved) (mg/L)	Chromium (dissolved) (mg/L)	Iron (dissolved) (mg/L)	Iron (mg/L)	Lead (dissolved) (mg/L)	Lead (mg/L)	Magnesium (dissolved) (mg/L)	Manganese (dissolved) (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Selenium (dissolved) (mg/L)	Silver (dissolved) (mg/L)	Sodium (dissolved) (mg/L)	Total Uranium (mg/L)	Alkalinity (mg/L)	Chloride (mg/L)	Nitrate (as N) (mg/L)	pH	Sulfate (mg/L)	Total Dissolved Solids (TDS) (mg/L)
WMW-1	05/14/03	<0.0001	<0.001	<0.001	<0.002	–	<0.0098	–	<0.01	<0.2	<0.002	258	<0.005	–	–	<0.003	–	69.7	–	–	–	–	–	1140		1050	648	<0.5	–	1870	5090
	09/24/04	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.0047	0.0256	<0.00076	236	0.0025	–	–	<0.0100	–	63.8	–	–	<0.000028	0.0059	0.002	1370		1030	627	<0.40	7.8	1880	5150
	06/20/05	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.0093	0.0177	<0.00097	224	<0.0048	–	–	<0.0084	–	61.1	–	–	<0.000062	<0.0094	<0.0020	1370		1060	614	<0.40	7.0	1760	5140
	06/21/06	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.01	0.0706	<0.00091	279	0.003	–	–	<0.0069	–	76.8	–	–	<0.000056	<0.0094	<0.0016	1310		1030	609	<0.25	7.1	1940	5150
	06/18/07	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.01	0.0317	<0.00090	287	<0.0023	–	–	<0.0069	–	77.2	–	–	<0.000056	<0.0094	<0.0018	1310		1050	579	<0.25	7.2	1880	5130
	06/30/08	<0.005	<0.005	<0.005	<0.005	–	<0.005	–	<0.005	0.0478	<0.005	228	<0.005	–	1.92	<0.005	–	63.7	–	3.97	<0.0002	<0.005	<0.005	1210		998	566	<0.5	6.78	2010	4640
	06/22/09	<0.005	<0.005	<0.005	<0.005	–	<0.005	–	<0.025	<0.025	<0.025	222	<0.025	0.192	–	<0.025	–	60.9	–	3.94	<0.0002	<0.025	<0.025	1330		845	501	<0.5	7.05	2150	4560
	06/22/10	<0.001	<0.001	<0.001	<0.001	–	<0.0057	–	<0.005	0.0148	<0.005	194	<0.005	<0.02	–	<0.005	–	53.0	3.51	–	<0.002	<0.01	<0.005	1140		215	530	0.993	7.05	1940	4330
	07/01/11	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.005	–	<0.005	<0.2	<0.004	–	<0.01	<0.1	–	<0.003	–	55.4	3.33	–	–	<0.005	<0.01	1180		984	558	<0.50	7.52	2140	4560
	06/20/12	–	–	–	–	–	–	<0.010	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
WMW-1R	06/24/13	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.010	–	<0.010	0.0292	<0.005	254	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	852	0.0479	671	418	<0.10	7.4	1640	3530
	06/12/14	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.010	<0.010	<0.010	0.0392	<0.005	294	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	1150	0.0356	809	–	<0.10	7.2	–	3350
	09/05/14	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	361	–	–	1500	–
	07/20/15	<0.001	<0.001	<0.001	<0.0015	–	<0.002	<0.010	0.027	0.046	<0.0020	180	<0.0060	–	–	<0.0050	–	–	–	–	<0.00020	<0.050	<0.0050	280	0.0080	222	170	<0.50	7.86	630	1610
WMW-2	05/14/03	29	<0.5	<0.5	<1	–	0.024		0.016	0.42	0.0081	47.3	0.0095	–	–	0.0180	–	27.4	–	–	–	–	–	1140	–	1710	628	0.6	–	8.2	3150
	09/24/04	28	0.45	0.11	0.65	–	0.021		<0.0047	0.421	0.0036	57.2	<0.0025	–	–	0.0100	–	33.8	–	–	<0.000028	<0.0059	<0.0020	1510	–	2110	936	<0.40	7.6	<1.5	4220
	06/21/05	29	0.35	0.11	0.57	–	0.017	–	<0.0093	0.442	0.0047	53.6	<0.0048	–	–	<0.0084	–	32.3	–	–	<0.000062	<0.0094	<0.0020	1450	–	2090	962	<0.40	7.5	<1.5	3800
	06/21/05	25	0.062	0.084	0.47	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	06/21/06	5.3	0.015	0.024	0.15	–	0.003	–	<0.01	0.0841	<0.00091	4.04	<0.0023	–	–	<0.0069	–	190	–	–	<0.000056	<0.0094	<0.0016	1050	–	2000	730	<0.25	9.9	74	3400
	06/21/06	5.3	0.015	0.024	0.15	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	06/20/07	7.2	0.09	0.04	0.28	–	0.009	–	0.0138	0.102	0.0065	19.3	0.0064	–	–	<0.0069	–	104	–	–	<0.000056	<0.0094	<0.0016	712	–	1200	468	<0.25	9.9	76.9	1900
	06/20/07	5.2	0.087	0.039	0.27	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	07/02/08	7.7	0.19	0.034	0.201	–	0.006	–	0.00993	0.411	0.131	128	0.029	–	48.8	0.0288	–	110	–	0.476	<0.0002	<0.005	<0.005	852	–	1220	565	<0.5	9.31	25.9	282
	07/02/08	7.9	0.22	0.056	0.346	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	06/24/09	9.8	0.3	0.05	0.313	–	0.0056	–	<0.005	0.11	<0.005	16.2	0.00809	0.482	–	<0.005	–	99.9	<0.25	–	<0.0002	<0.01	<0.005	1000	–	1530	502	<0.5	9.59	15.8	2770
	06/24/09	9.7	0.29	0.049	0.313	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	06/23/10	10	0.26	0.055	0.339	–	0.0058	–	<0.005	0.0720	<0.005	3.20	<0.005	<0.02	–	<0.005	–	64.9	<0.005	–	<0.002	<00.01	<0.005	778	–	296	375	0.588	9.41	<50.0	3100
	06/23/10	9.7	0.25	0.056	0.351	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	07/01/11	18.0	0.425	0.0827	0.543	–	0.0037 J	–	<0.005	<0.2	<0.004	–	<0.01	<0.1	–	<0.003	–	59.4	<0.015	–	–	<0.005	<0.01	934	–	1580	509	0.74	8.78	1.5	2780
	07/01/11	20.3	0.436	0.0923	0.569	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	06/20/12	11.6	0.247	0.134	0.376	–	0.0132	–	<0.010	0.198	<0.005	10.7	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	922	0.0206	657	543	<0.1	8.6	5.5	2680
	06/20/12	14.9	0.319	0.146	0.452	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	06/24/13	17.2	0.155	<0.100	0.466	–	0.0119	–	<0.010	0.278	<0.005	13.6	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	1010	0.0245	1670	561	<0.10	8.2	5.2	2610
	06/24/13	18.1	0.243	<0.200	<0.600	–	<2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	06/12/14	22.2	<0.200	<0.200	<0.600	–	0.014	0.0104	<0.010	0.293	<0.005	19.8	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	1060	0.00205	1750	–	<0.10	8.0	–	2620
	06/12/14	21.0	<0.200	<0.200	<0.600	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	09/05/14	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	685	–	–	3.8	–
	07/21/15	26	0.0031	0.068	0.520	–	<0.002	<0.010	<0.020	0.41	<0.0020	31	<0.0060	–	–	<0.0050	–	–	–	–	<0.00020	<0.050	<0.0050	1300	<0.00050	2016	830	<1.0	7.90	0.50	3410
WMW-3	05/14/03	<0.0001	<0.001	<0.001	<0.002	–	<0.0095	–	0.014	0.62	<0.002	186	0.19	–	–	0.042	–	88.5	–	–	–	–	–	1860	–	1090	1150	1.5	–	1680	5570
	09/25/04	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.01	–	0.0351	1.14	0.0012	470	0.905	–	–	0.250	–	216	–	–	<0.00028	<0.0059	<0.0020	1810	–	1700	985	<0.40	7.5	1410	6030
	06/20/05	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.0093	0.210	<0.00097	112	0.0421	–	–	0.0112	–	48.0	–	–	<0.000062	<0.0094	<0.0020	1700	–	1230	1030	<0.40	7.5	1380	5590
	06/21/06	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.01	0.468	<0.00091	155	0.0996	–	–	0.0339	–	73.8	–	–	0.00012	<0.0094	<0.0016	1850	–	1210	1150	<0.25	7.5	1580	5640
	06/20/07	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.01	–	0.0107	0.320	<0.00090	199	0.0701	–	–	0.0292	–	70.4	–	–	0.000076	<0.0094	<0.0016	2040	–	1520	1540	1.5	7.5	1950	5900
	07/01/08	<0.005	<0.005	<0.005	<0.005	–	<0.0054	–	0.0187	2.05	<0.005	336	0.31	–	230	–	0.158	157	–	4.45	<0.002	<0.005	<0.005	1500	–	964	548	<5	7.54	963	7800
	06/24/09	<0.005	<0.005	<0.005	<0.005	–	<0.005	–	0.0166	0.265	<0.005	400	0.0154	–	4.3	–	0.0568	57.4	–	3.35	<0.0002	<0.01	<0.005	1710	–	1410	677	0.716	7.65	1370	3190
	06/22/10	<0.001	<0.001	<0.001	<0.001	–	<0.011	–	<0.005	0.0351	<0.005	70.1	<0.005	0.927	–	<0.005	–	33.6	0.00920	–	<0.002	<0.01	<0.005	1490	–	238	912	3.06	7.66	1620	5000
	06/30/11	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.0050	–	<0.005	<0.2	<0.004	–	<0.01	<0.1	–	<0.003	–	33.9	<0.015	–	–	<0.005	<0.01	1360	–	1000	900	2.2	7.46	1530	4830
	06/20/12	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.010	–	<0.010	0.0201	<0.005	76.4	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	1650	0.0572	1400	895	1.8	7.7	1550	4320
	06/26/13	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.010	–	<0.010	0.0027	<0.005	87.3	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	1610	0.0429	1070	927	0.92	7.5	1430	3670
	06/11/14	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.010	<0.010	<0.010	0.0203	<0.005	91.6	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	1630	0.0692	1190	–	0.27	7.6	–	4120
	09/05/14	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	756	–	–	1380	–
	07/21/15	<0.001	<0.001	<0.001	<0.0015	–	<0.002	<0.010	<0.020	0.023	<0.0020	110	<0.0060	–	–	<0.0050	–	–	–	–	<0.00020	<0.050	<0.0050	1700	0.067	1081	1800	<1.0	7.77	1700	5180
WMW-4	05/14/03	<0.0001	<0.001	<0.001	<0.002	–	<0.0097	–	<0.01	0.28	<0.002	37.3	0.006	–	–	16.8	–	16.8	–	–	–	–	–	550	–	783	133	<0.5	–	240	3070
	07/30/03	<0.0005	<0.0007	<0.0008	<0.0008	0.053	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	09/23/04	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	0.0077	0.0435	<0.00076	12.5	<0.0025	–	–	<0.0100	–	13.1	–	–	<0.000028	<0.0059	0.0020	553	–	788	149	<0.40	7.8	247	1550
	06/20/05	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.0093	0.0449	<0.00097	11.7	<0.0048	–	–	<0.0084	–	12.5	–	–	<0.000062	<0.0094	<0.0020	529	–	764	152	<0.40	7.8	243	1470
	06/21/06	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.01	0.0414	<0.00091	12	<0.0023	–	–	<0.0069	–	12.8	–	–	<0.000056	<0.0094	<0.0016	532	–	722	163	<0.25	7.8	266	1480
	06/20/07	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.01	0.0782	<0.00090	15	0.0039	–	–	<0.0069	–	13.8	–	–	<0.000056	<0.0094	<0.0016	582	–	765	184	<0.25	8.0	265	1380
	06/30/08	<0.005	<0.005	<0.005	<0.005	–	<0.005	–	<0.005	0.0463	<0.005	12.1	<0.005	0.963	–	<0.005	–	0.248	–	0.248	<0.0002	<0.005	<0.005	526	–	672	186	<0.5	7.54	240	1460
	06/22/09	<0.005	<0.005	<0.005	<0.005	–	<0.005	–	<0.025	0.0627	<0.025	16.5	<0.025	4.13	–	<0.025	–	12.2	–	0.325	<0.0002	<0.025	<0.025	566	–	673	143	<0.5	7.73	228	1470
	06/22/10	<0.001	<0.001	<0.001	<0.001	–	<0.0055	–	<0.005	0.0492	<0.005	13.60	<0.005	<0.02	–	<0.005	–	14.4	0.279	–	<0.002	<0.01	<0.005	548	–	199	171	0.541	7.69	265	1830
	06/30/11	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.0050	–	<0.005	<0.2	<0.004	–	<0.01	<0.1	–	<0.003	–	12.4	0.261	–	–	<0.005	<0.01	442	–	760	157	<0.50	7.72	256	1580
	06/20/12	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.010	–	<0.010	0.0538	<0.005	12.6	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	566	0.0012	798	191	<0.10	7.8	318	1540
	06/24/13	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.010	–	<0.010	0.0541	<0.005	13.8	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	560	0.00255	805	181	<0.10	7.8	307	1690
	06/11/14	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.010	<0.010	<0.010	0.0502	<0.005	15.4	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	590	0.0012	799	–	<0.10	7.8	–	1510
	09/05/14	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	164	–	–	254	–
	07/21/15	<0.001	<0.001	<0.001	<0.0015	–	<0.002	<0.010	<0.020	0.063	<0.0020	22	<0.0060	–	–	<0.0050	–	–	–	–	<0.00020	<0.050	<0.0050	580	0.0015	813.4	210	<0.10	7.94	330	1680

TABLE 3
HISTORICAL GROUNDWATER ANALYTICAL DATA
WESTERN REFINING SOUTHWEST, INC.
WINGATE PLANT
GALLUP, NEW MEXICO

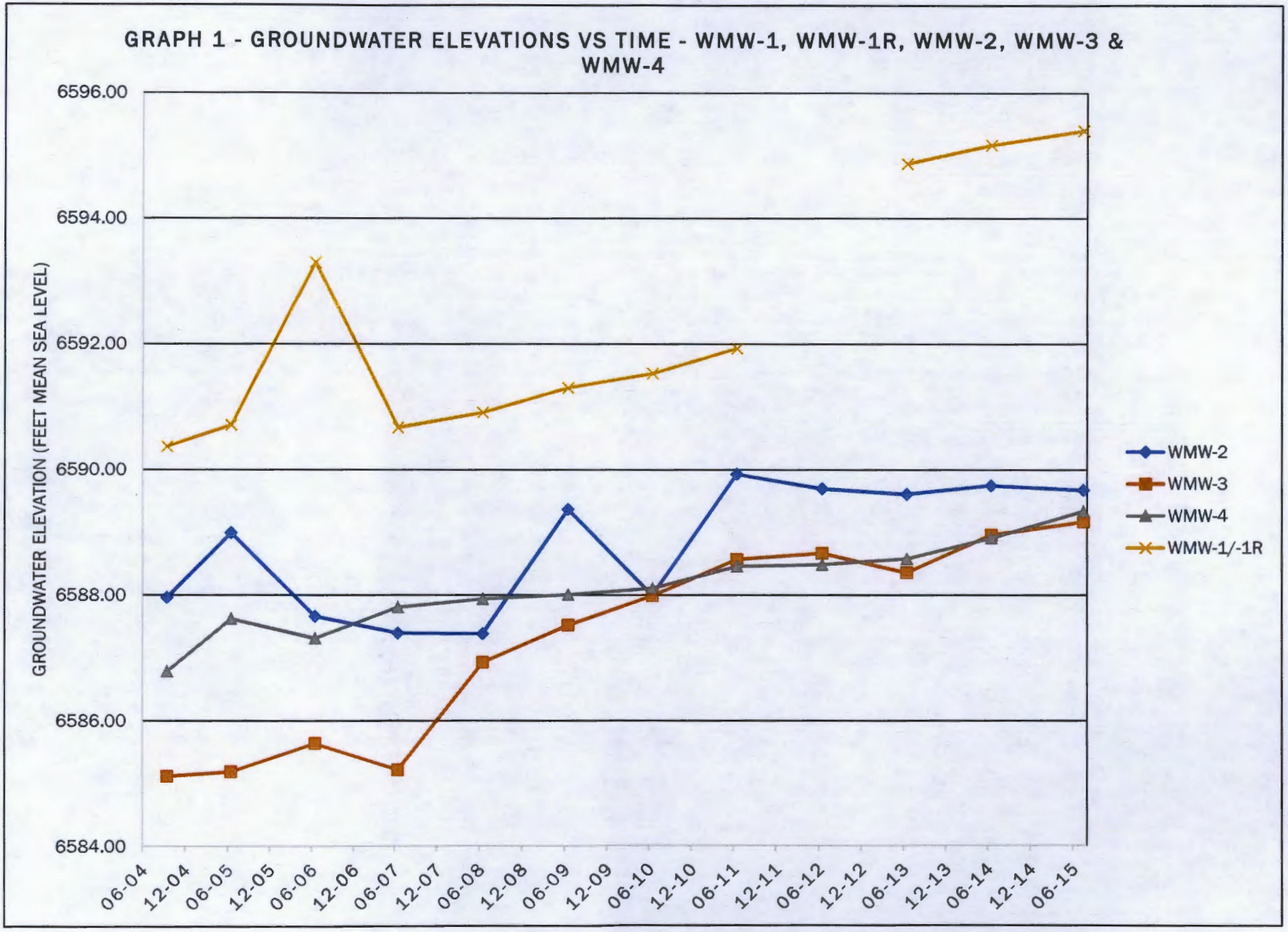
Well	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (total) (mg/L)	TPH-GRO (mg/L)	Naphthalene (mg/L)	Bis (2-Ethylhexyl) phthalate	Arsenic (dissolved) (mg/L)	Barium (dissolved) (mg/L)	Cadmium (dissolved) (mg/L)	Calcium (dissolved) (mg/L)	Chromium (dissolved) (mg/L)	Iron (dissolved) (mg/L)	Iron (mg/L)	Lead (dissolved) (mg/L)	Lead (mg/L)	Magnesium (dissolved) (mg/L)	Manganese (dissolved) (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Selenium (dissolved) (mg/L)	Silver (dissolved) (mg/L)	Sodium (dissolved) (mg/L)	Total Uranium (mg/L)	Alkalinity (mg/L)	Chloride (mg/L)	Nitrate (as N) (mg/L)	pH	Sulfate (mg/L)	Total Dissolved Solids (TDS) (mg/L)
WMW-5	05/14/03	<0.0001	<0.001	<0.001	<0.002	–	<0.0095	–	<0.01	<0.2	<0.002	332	<0.005	–	–	<0.003	–	98	–	–	–	–	–	1310	–	895	598	<0.5	–	2380	5530
	07/30/03	<0.0005	<0.0007	<0.0008	<0.0008	<	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	09/23/04	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.0047	0.0117	<0.00076	186	<0.0025	–	–	<0.0100	–	48.8	–	–	0.000044	<0.0059	<0.0020	915	–	788	307	<0.40	7.1	1330	3410
	06/20/05	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.0093	0.0137	<0.00097	187	<0.0048	–	–	<0.0084	–	50.5	–	–	<0.000062	<0.0094	<0.0020	834	–	693	334	<0.40	7.0	1400	3300
	06/21/06	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.01	0.0076	<0.00091	144	<0.0023	–	–	<0.0069	–	38.7	–	–	<0.000056	<0.0094	<0.0016	730	–	680	224	<0.25	7.1	1210	2380
	06/18/07	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.01	0.0213	<0.00090	253	<0.0023	–	–	<0.0069	–	69	–	–	<0.000056	<0.0094	<0.0016	1170	–	796	383	<0.25	7.2	1730	4380
	06/30/08	<0.0005	<0.0005	<0.0005	<0.0005	–	<0.005	–	<0.005	0.0163	<0.005	137	<0.005	0.562	–	<0.005	–	41.4	–	1.12	<0.0002	<0.005	<0.005	811	–	548	232	<0.5	7.15	1270	3020
	06/22/09	<0.005	<0.005	<0.005	<0.005	–	<0.005	–	<0.025	<0.025	<0.025	172	<0.025	0.346	–	<0.025	–	49.4	–	0.693	<0.0002	<0.025	<0.025	912	–	682	259	<0.5	7.37	1370	3260
	06/22/10	<0.001	<0.001	<0.001	<0.001	–	<0.0056	–	<0.005	0.0098	<0.005	170	<0.005	<0.02	–	<0.005	–	51.3	1.13	–	<0.002	<0.01	<0.005	862	–	165	275	0.608	7.21	1430	3380
	06/30/11	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.0050	–	<0.005	<0.2	<0.004	–	<0.01	<0.1	–	<0.003	–	38.7	0.336	–	–	<0.005	<0.01	752	–	664	238	<0.50	7.22	1270	3130
	06/20/12	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.010	–	<0.010	<0.010	<0.005	104	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	754	0.0116	646	226	<0.10	7.4	1200	2630
	06/24/13	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.010	–	<0.010	<0.010	<0.005	102	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	770	0.0106	654	197	<0.10	7.6	1100	2610
	06/11/14	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.010	0.0489	<0.010	0.0124	<0.005	121	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	958	0.0175	697	–	<0.10	7.2	–	2560
	09/04/14	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	276	–	–	1290	–
	07/20/15	<0.001	<0.001	<0.001	<0.0015	–	<0.002	<0.010	<0.020	<0.020	<0.0020	160	<0.0060	–	–	0.0050	–	–	–	–	<0.00020	<0.050	<0.0050	1200	0.036	845	400	<0.10	7.88	1900	4350
WMW-6	07/20/15	<0.001	<0.001	<0.001	<0.0015	–	<0.002	<0.010	<0.020	<0.020	<0.0020	160	<0.0060	–	–	<0.0050	–	–	–	–	<0.00020	<0.050	<0.0050	1200	0.037	844	320	0.10	7.89	1800	4350
	09/24/04	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.0047	0.0517	<0.00076	34.4	<0.0025	–	–	<0.0100	–	13.2	–	–	<0.000028	<0.0059	<0.0020	315	–	425	57.5	<0.40	7.8	285	1020
	06/21/05	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.0093	0.0490	<0.00097	35.9	<0.0048	–	–	<0.0084	–	13.4	–	–	<0.000062	<0.0094	<0.0020	294	–	428	58.8	<0.40	7.7	290	952
	06/21/06	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.01	0.049	<0.00091	38.1	<0.0023	–	–	<0.0069	–	14.1	–	–	<0.000056	0.0094	<0.0016	300	–	488	58.9	<0.25	7.7	293	966
	06/18/07	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.01	0.0637	<0.00090	44.3	<0.0023	–	–	<0.0069	–	15.5	–	–	<0.000056	0.0094	<0.0016	320	–	449	66.7	<0.25	7.7	280	1070
	07/01/08	<0.005	<0.005	<0.005	<0.005	–	<0.005	–	0.0119	2.34	<0.005	194	0.0863	–	77	–	0.0545	56.3	–	2.76	<0.0002	<0.005	<0.005	317	–	451	76.5	<1	7.82	328	1500
	06/23/09	<0.005	<0.005	<0.005	<0.005	–	<0.005	–	<0.005	0.0679	<0.005	41.1	<0.005	–	0.516	<0.005	–	14.4	0.162	–	<0.0002	<0.005	<0.005	339	–	389	57.2	<0.5	7.87	276	1020
	06/23/10	<0.001	<0.001	<0.001	<0.001	–	<0.0055	–	<0.005	0.0421	<0.005	41.9	<0.005	0.0445	–	<0.005	–	15.5	0.0193	–	<0.002	<0.01	<0.005	304	–	128	62.4	<0.5	7.42	280	1220
	06/29/11	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.0050	–	<0.005	<0.2	<0.004	–	<0.01	0.232	–	<0.003	–	16.2	0.053	–	–	<0.005	<0.01	308	–	446	70.9	<0.50	7.48	374	1060
	06/18/12	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.010	–	<0.010	0.0352	<0.005	33.8	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	–	0.0109	458	62.8	<0.10	7.6	314	946
	06/26/13	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.010	–	<0.010	0.0362	<0.005	35.4	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	300	0.00976	439	54.1	<0.10	7.6	262	930
	06/11/14	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.010	<0.010	<0.010	0.0365	<0.005	34.3	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	288	0.00852	437	–	<0.10	7.8	–	909
	09/04/14	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	54.2	–	–	264	–
	07/20/15	<0.001	<0.001	<0.001	<0.0015	–	<0.002	<0.010	<0.020	0.032	<0.0020	37	<0.0060	–	–	<0.0050	–	–	–	–	<0.00020	<0.050	<0.0050	300	0.010	458.4	57	0.10	8.23	285	984
WMW-7	09/24/04	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.0047	0.179	<0.00076	35.5	0.0074	–	–	<0.0100	–	15.8	–	–	<0.000028	<0.0059	<0.0020	362	–	526	63.7	<0.40	7.7	309	1200
	06/21/05	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.0093	0.0394	<0.00097	48.0	<0.0048	–	–	<0.0084	–	25.4	–	–	<0.000062	<0.0094	<0.0020	803	–	630	170	<0.40	7.7	1120	2590
	06/21/06	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.01	0.0315	<0.00091	42.2	<0.0023	–	–	<0.0069	–	22.2	–	–	<0.000056	<0.0094	<0.0016	776	–	589	234	<0.25	7.6	1080	2360
	06/18/07	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.01	0.0339	<0.00090	42.9	<0.0023	–	–	<0.0069	–	21.8	–	–	<0.000056	<0.0094	<0.0016	773	–	643	152	<0.25	7.7	896	2310
	06/30/08	<0.005	<0.005	<0.005	<0.005	–	<0.005	–	<0.005	0.198	<0.005	50.5	0.0137	–	15.3	0.00946	–	24.9	–	0.511	<0.0002	<0.005	<0.005	478	–	514	92.4	<0.5	7.34	224	1580
	06/22/09	<0.005	<0.005	<0.005	<0.005	–	<0.005	–	<0.025	0.0371	<0.025	41.1	<0.025	0.284	–	<0.025	–	16.9	0.2	–	<0.0002	<0.025	<0.025	509	–	520	80.4	<0.5	7.56	439	1410
	06/23/10	<0.001	<0.001	<0.001	<0.001	–	<0.0057	–	<0.005	0.0312	<0.005	35.6	<0.005	0.0210	–	<0.005	–	15.0	0.122	–	<0.002	<0.025	<0.025	417	–	183	71.5	0.500	7.38	353	1520
	06/30/11	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.0050	–	<0.005	<0.2	<0.004	–	<0.01	<0.1	–	<0.003	–	13.5	0.146	–	–	<0.005	<0.01	296	–	536	67.3	<0.50	7.46	337	1250
	06/18/12	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.010	–	<0.010	0.0325	<0.005	36.3	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	–	0.0152	559	80.4	<0.10	7.6	385	1190
	06/26/13	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.010	–	<0.010	0.0316	<0.005	35.6	<0.005	–	–	<0.005	–	–	–	–	<0.002	<0.015	<0.007	564	0.0253	633	116	<0.10	7.6	639	1710
	06/11/14	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.010	0.0142	<0.010	0.0249	<0.005	33.9	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	789	0.0404	695	–	<0.10	7.8	–	2170
	09/04/14	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	172	–	–	928	–
	07/20/15	<0.001	<0.001	<0.001	<0.0015	–	<0.002	<0.010	<0.020	0.028	<0.0020	47	<0.0060	–	–	<0.0050	–	–	–	–	<0.00020	<0.050	<0.0050	800	0.039	760	190	<0.50	8.23	1000	2740
WMW-8	09/24/04	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.0047	0.213	<0.00076	36.1	<0.0025	–	–	<0.0100	–	17.6	–	–	<0.000028	<0.0059	<0.0020	218	–	440	27.0	<0.40	7.8	130	753
	06/21/05	<0.0005	<0.0007	<0.00008	<0.0008	–	<0.001	–	<0.0093	0.126	<0.00097	29.3	<0.0048	–	–	<0.0084	–	14.7	–	–	<0.000062	<0.0094	<0.0020	279	–	497	42.9	<0.40	7.7	169	882
	06/21/06	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.01	0.151	<0.00091	28.9	<0.0023	–	–	<0.0069	–	14.8	–	–	<0.000056	<0.0094	<0.0016	286	–	506	–	<0.25	–	–	–
	06/19/07	<0.0005	<0.0007	<0.0008	<0.0008	–	<0.001	–	<0.01	0.171	<0.00090	295	<0.0023	–	–	<0.0069	–	186	–	–	<0.000056	<0.0094	<0.0016	186	–	487	28.5	<0.25	7.6	143	795
	07/01/08	<0.005	<0.005	<0.005	<0.005	–	<0.005	–	<0.005	0.185	<0.005	38.5	<0.005	0.083	–	<0.005	–	18.2	–	0.311	<0.002	<0.005	<0.005	214	–	425	21.6	<0.5	7.6	148	816
	06/23/09	<0.005	<0.005	<0.005	<0.005	–	<0.005	–	<0.005	0.215	<0.005	39.6	<0.005	0.0771	–	<0.005	–	18	–	0.278	<0.0002	<0.005	<0.005	220	–	369	21.8	<0.5	7.69	149	718
	06/23/10	<0.001	<0.001	<0.001	<0.001	–	<0.0058	–	<0.005	0.202	<0.005	43.2	<0.005	0.0344	–	<0.005	–	19.4	0.379	–	<0.002	<0.01	<0.005	202	–	135	23.1	<0.5	7.28	134	854
	07/01/11	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.0050	–	<0.005	0.2	<0.004	–	<0.01	<0.1	–	<0.003	–	19.5	0.344	–	–	<0.005	<0.01	217	–	432	23.5	<0.50	7.66	185	735
	06/18/12	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.010	–	<0.010	0.178	<0.005	36.0	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	–	0.0106	452	21.7	<0.10	7.8	143	665
	06/26/13	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.010	–	<0.010	0.168	<0.005	37.5	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	230	0.0131	478	22.8	<0.10	7.6	150	717
	06/11/14	<0.0010	<0.0010	<0.0010	<0.0030	–	<0.010	<0.010	<0.010	0.167	<0.005	37.6	<0.005	–	–	<0.005	–	–	–	–	<0.0002	<0.015	<0.007	224	0.0117	478	–	<0.10	7.7	–	735
	09/04/14	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	26.9	–	–	161	–
	07/21/15	<0.001	<0.001	<0.001	<0.0015	–	<0.002	<0.010	<0.020	0.15	<0.0020	36	<0.0060	–	–	0.0051	–	–	–	–	<0.00020	<0.050	<0.0050	240	0.012	499.8	28	<0.10	8.05	160	822
NMWQCC Groundwater Quality Standards		0.01	0.75	0.75	0.62	NE	0.03	NE	0.1	1.0	0.01	NE	0.05	1.0	NE	0.05	NE	NE	0.2	NE	0.002	0.05	0.05	NE	0.03	NE	250	10	6.00-9.00	600	1000

Notes:
MW = monitoring well
NMWQCC = New Mexico Water Quality Control Commission

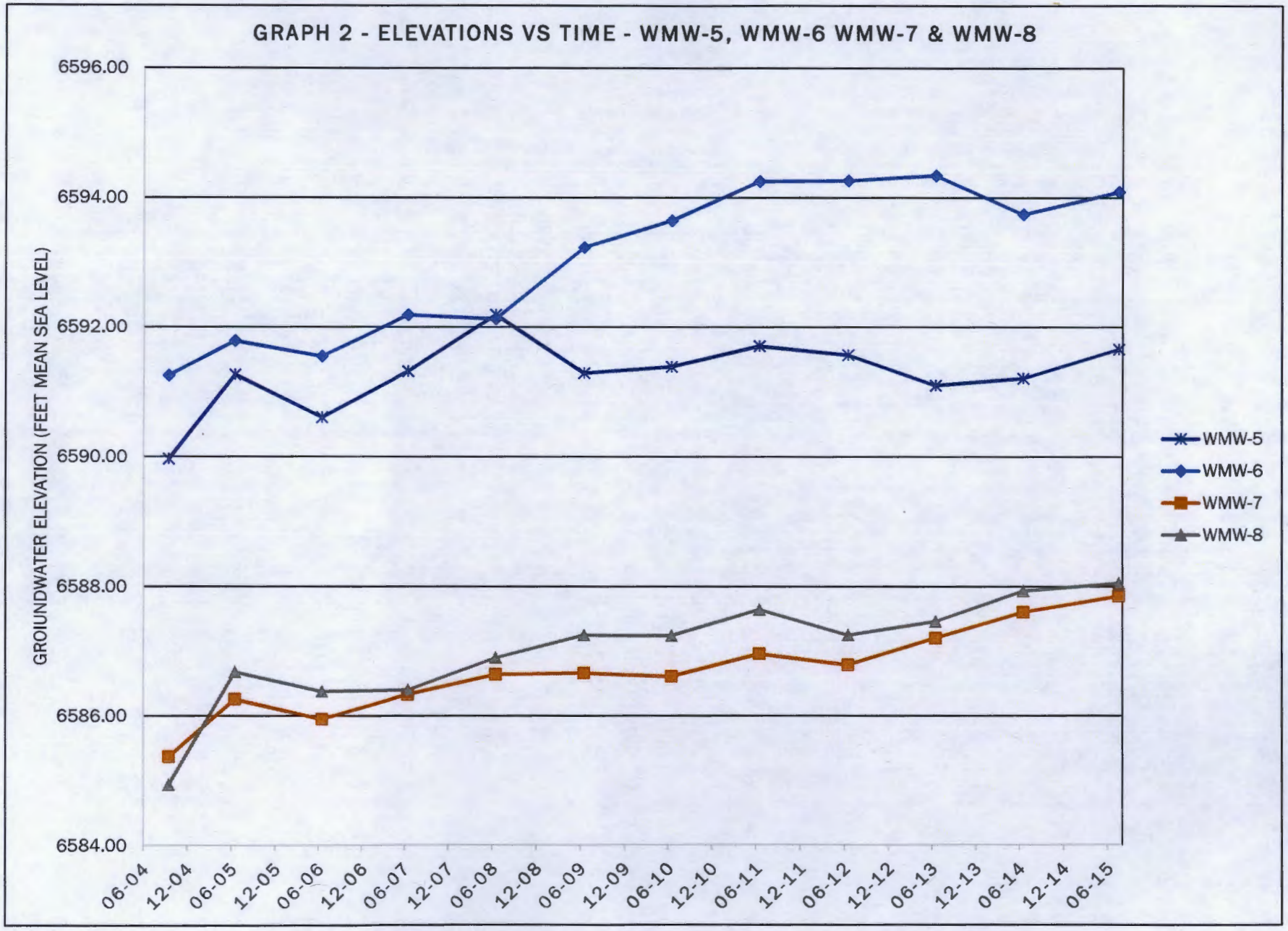
Constituents in **BOLD** are in excess of NMWQCC groundwater quality standards
mg/L = milligrams per liter (parts per million)
< 1.0 = Below laboratory detection limit of 1.0

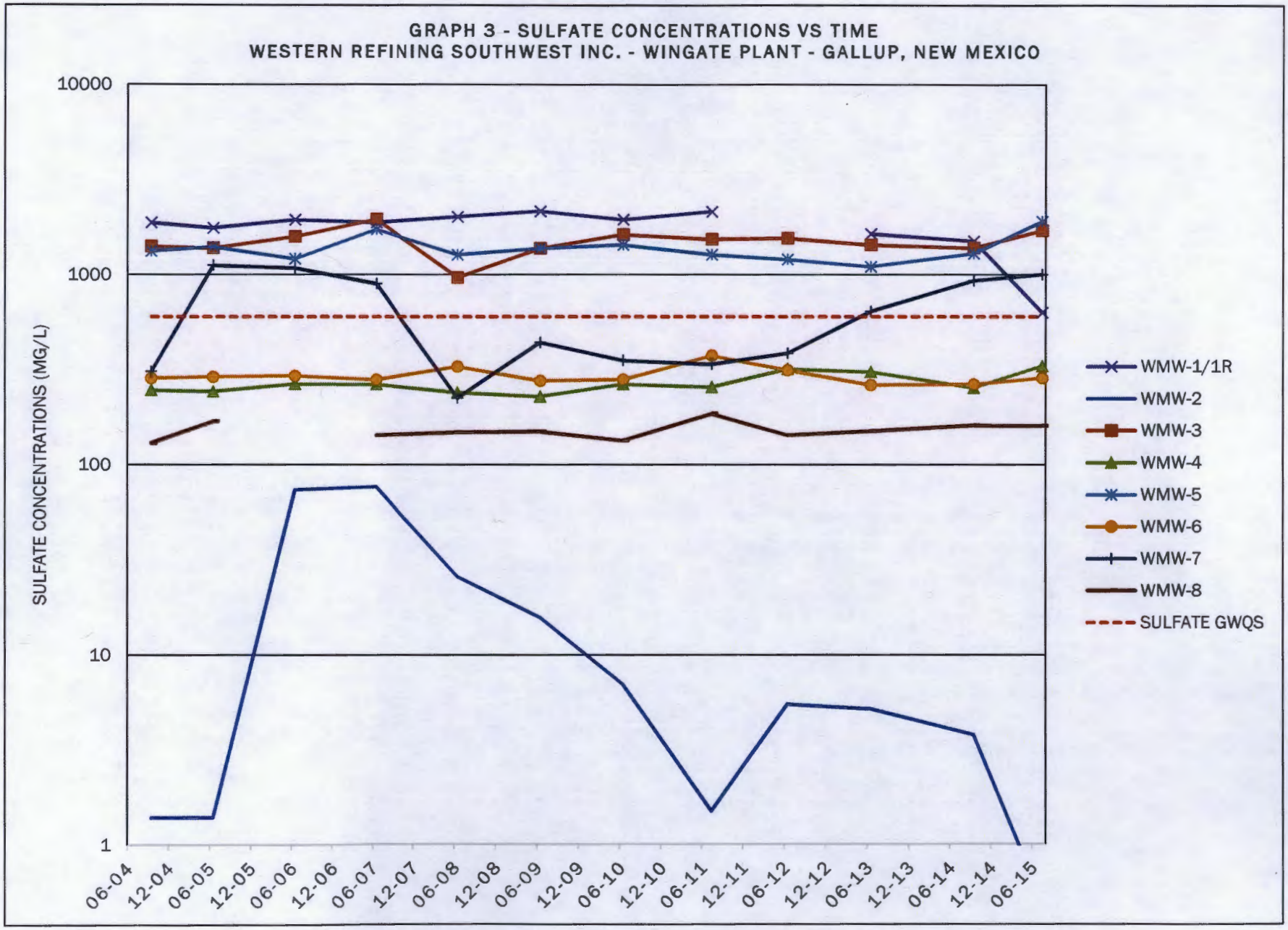
– = not
NE = not
* = Results reported for total metals analysis, results can not be compared to NMWQCC Standards for dissolved metals

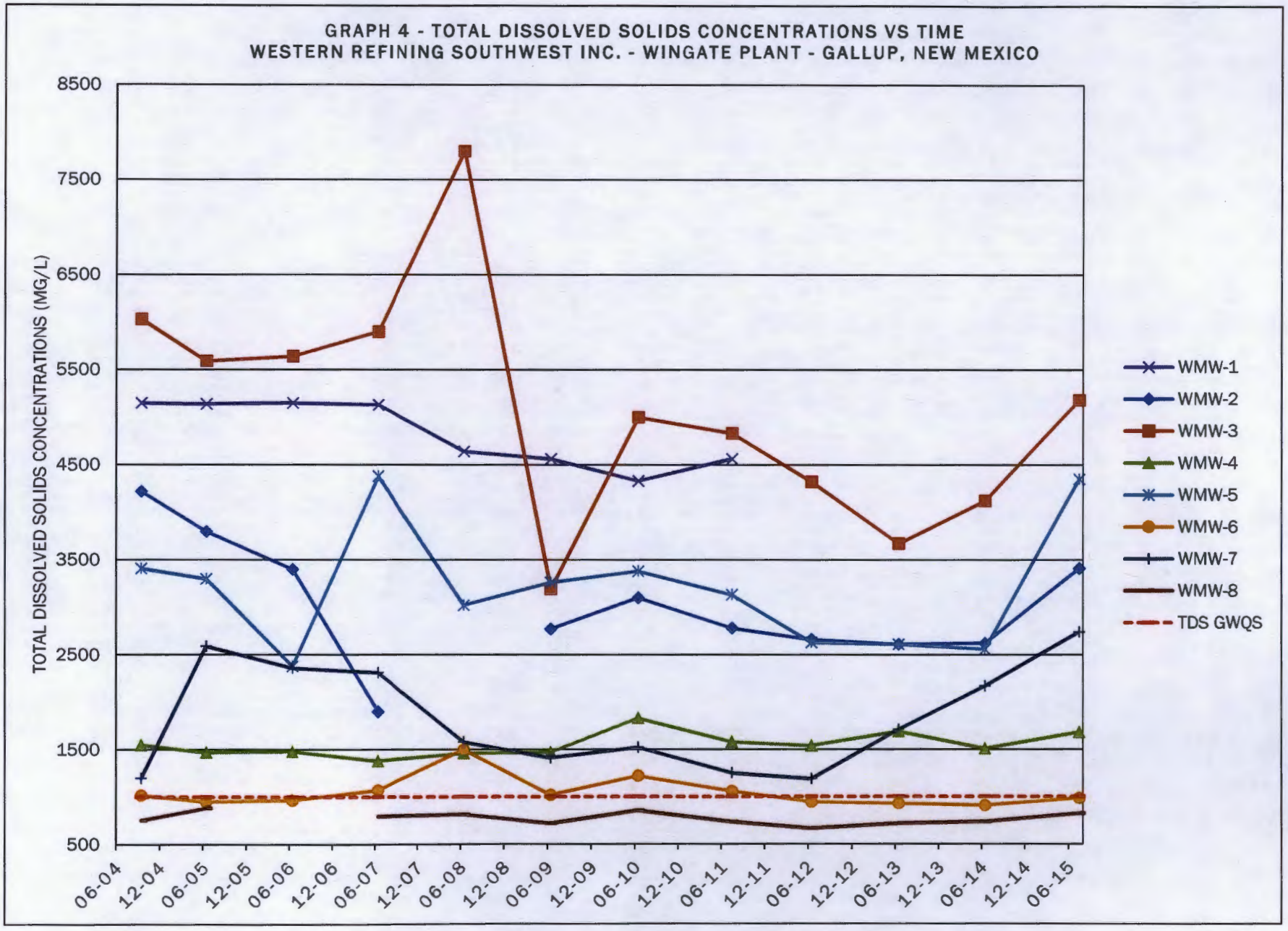
Graphs

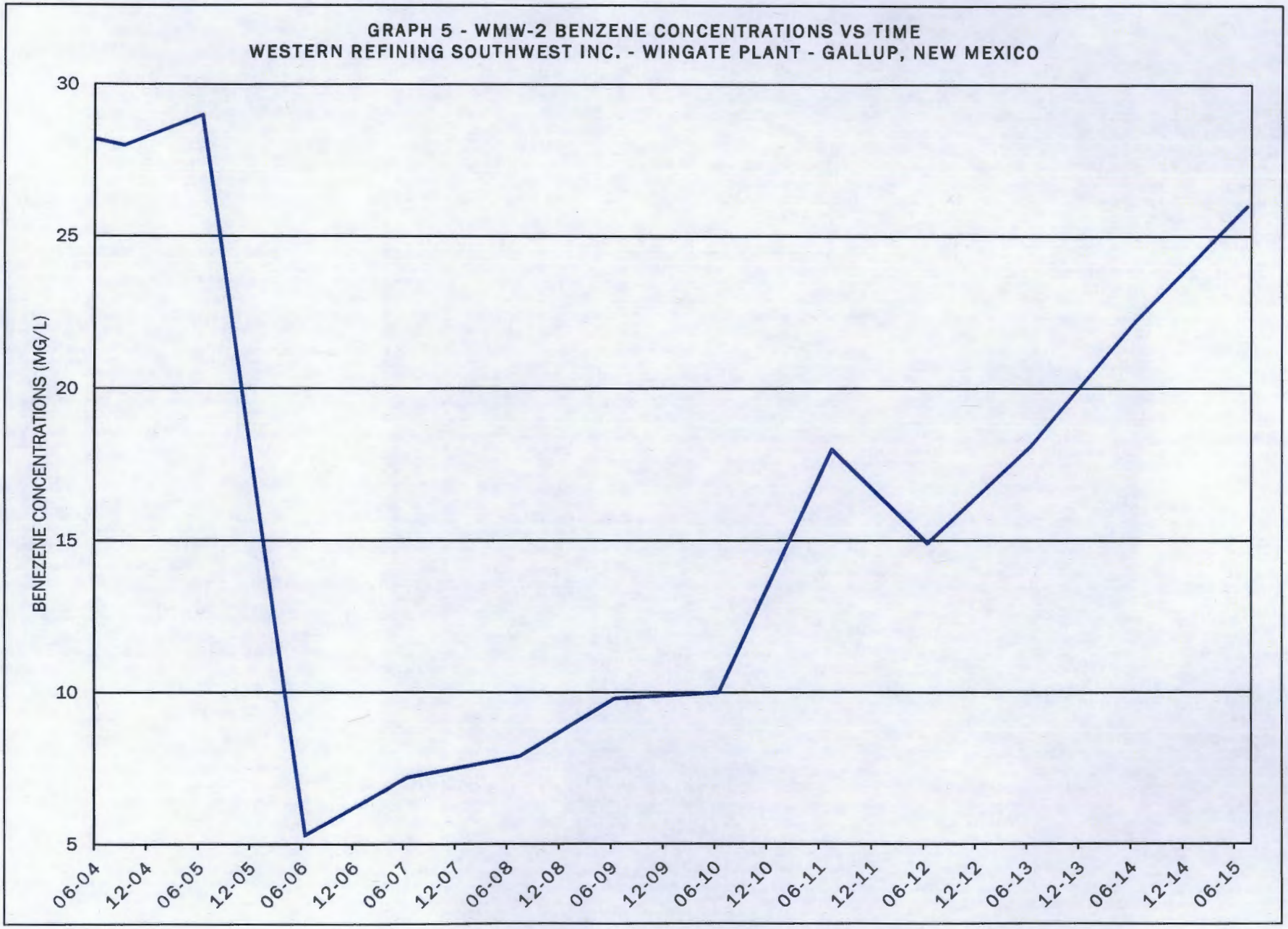

GRAPH 1 - GROUNDWATER ELEVATIONS VS TIME - WMW-1, WMW-1R, WMW-2, WMW-3 & WMW-4
GROUNDWATER ELEVATION (FEET MEAN SEA LEVEL)
6596.00
6594.00
6592.00
6590.00
6588.00
6586.00
6584.00
06-04
12-04
06-05
12-05
06-06
12-06
06-07
12-07
06-08
12-08
06-09
12-09
06-10
12-10
06-11
12-11
06-12
12-12
06-13
12-13
06-14
12-14
06-15
WMW-2
WMW-3
WMW-4
WMW-1/-1R

GRAPH 2 - ELEVATIONS VS TIME - WMW-5, WMW-6 WMW-7 & WMW-8

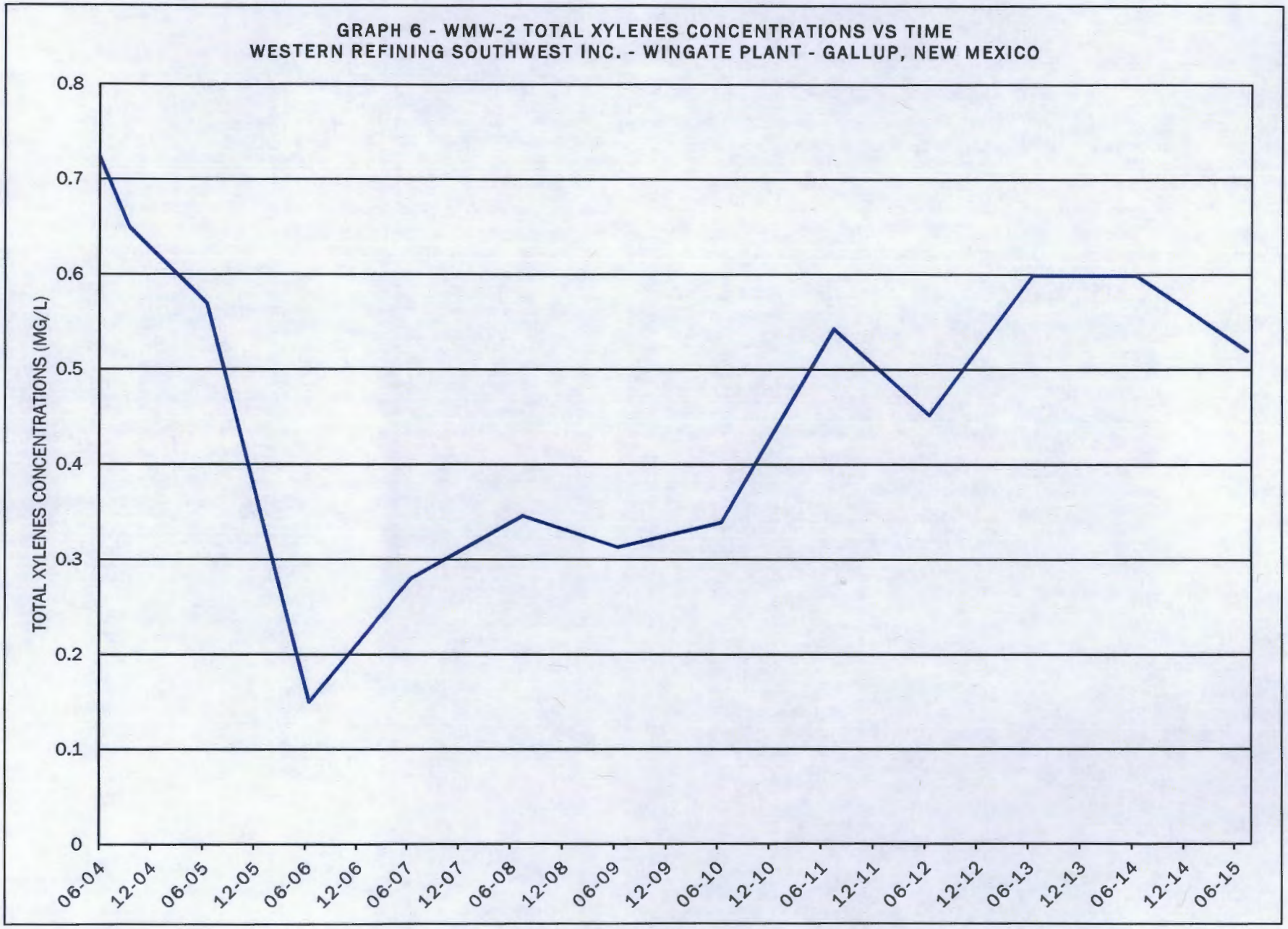



GRAPH 3 - SULFATE CONCENTRATIONS VS TIME
WESTERN REFINING SOUTHWEST INC. - WINGATE PLANT - GALLUP, NEW MEXICO
SULFATE CONCENTRATIONS (MG/L)
10000
1000
100
10
1
06-04
12-04
06-05
12-05
06-06
12-06
06-07
12-07
06-08
12-08
06-09
12-09
06-10
12-10
06-11
12-11
06-12
12-12
06-13
12-13
06-14
12-14
06-15
WMW-1/1R
WMW-2
WMW-3
WMW-4
WMW-5
WMW-6
WMW-7
WMW-8
SULFATE GWQS

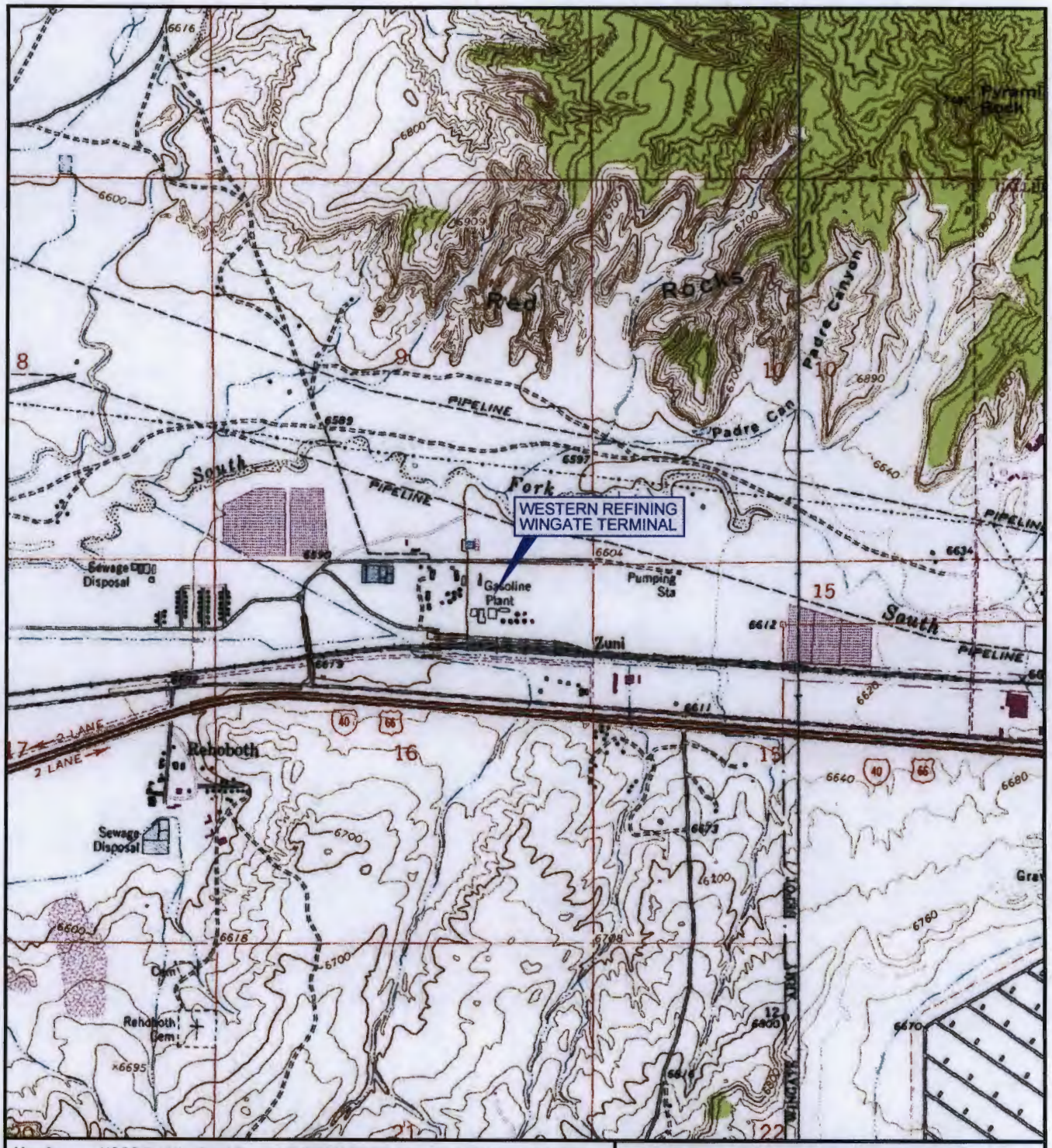

GRAPH 4 - TOTAL DISSOLVED SOLIDS CONCENTRATIONS VS TIME
WESTERN REFINING SOUTHWEST INC. - WINGATE PLANT - GALLUP, NEW MEXICO
TOTAL DISSOLVED SOLIDS CONCENTRATIONS (MG/L)
8500
7500
6500
5500
4500
3500
2500
1500
500
06-04
12-04
06-05
12-05
06-06
12-06
06-07
12-07
06-08
12-08
06-09
12-09
06-10
12-10
06-11
12-11
06-12
12-12
06-13
12-13
06-14
12-14
06-15
WMW-1
WMW-2
WMW-3
WMW-4
WMW-5
WMW-6
WMW-7
WMW-8
TDS GWQS


GRAPH 5 - WMW-2 BENZENE CONCENTRATIONS VS TIME
WESTERN REFINING SOUTHWEST INC. - WINGATE PLANT - GALLUP, NEW MEXICO
BENEZENE CONCENTRATIONS (MG/L)
30
25
20
15
10
5
06-04
12-04
06-05
12-05
06-06
12-06
06-07
12-07
06-08
12-08
06-09
12-09
06-10
12-10
06-11
12-11
06-12
12-12
06-13
12-13
06-14
12-14
06-15

GRAPH 6 - WMW-2 TOTAL XYLENES CONCENTRATIONS VS TIME
WESTERN REFINING SOUTHWEST INC. - WINGATE PLANT - GALLUP, NEW MEXICO



Figures



Map Source: USGS 7.5 Min. Quad Sheets CHURCH ROCK, NM., 1963, Photorevised 1979; GALLUP EAST, NM., 1963, Photorevised 1979.

0 2000
SCALE IN FEET

NEW MEXICO
QUADRANGLE LOCATION

Western Refining
WINGATE TERMINAL

PROJ. NO.:Western Refining | DATE:08/06/15 | FILE:WestRef-dA31

FIGURE 1
SITE LOCATION MAP
WINGATE TERMINAL

DiSorbo
Environmental Consulting Firm
8501 N. MoPac Expy.
Suite 300
Austin, Texas 78759

Aerial Map Source: Google Map, 02/19/2014.

0 300
SCALE IN FEET

LEGEND

WMW-2 ● MONITOR WELL LOCATION AND IDENTIFICATION NUMBER

WMW-1R ⊕ RE-DRILLED MONITOR WELL LOCATION AND IDENTIFICATION NUMBER

QUADRANGLE LOCATION

Western Refining
WINGATE TERMINAL

PROJ. NO.:Western Refining | DATE:08/06/15 | FILE:WestRef-dB46

FIGURE 2
WELL LOCATION MAP
WINGATE TERMINAL

DiSorbo
Environmental Consulting Firm
8501 N. MoPac Expy.
Suite 300
Austin, Texas 78759

Aerial Map Source: Google Map, 02/19/2014.

LEGEND

WMW-2 ●	MONITOR WELL LOCATION AND IDENTIFICATION NUMBER
WMW-1R ⊕	RE-DRILLED MONITOR WELL LOCATION AND IDENTIFICATION NUMBER
6589.68	GROUNDWATER ELEVATION (FEET MSL)
6589	CONTOUR OF GROUNDWATER ELEVATION (FEET MSL)
←	GROUNDWATER FLOW DIRECTION

N

0 300
SCALE IN FEET

NEW MEXICO
QUADRANGLE LOCATION

Western Refining
WINGATE TERMINAL

PROJ. NO.:Western Refining | DATE:08/18/15 | FILE:WestRef-dB47

FIGURE 3
GROUNDWATER POTENTIOMETRIC SURFACE MAP
JULY 2015

DiSorbo
Environmental Consulting Firm
8501 N. MoPac Expy.
Suite 300
Austin, Texas 78759

Aerial Map Source: Google Map, 02/19/2014.

N

0 300
SCALE IN FEET

LEGEND

WMW-2 ● MONITOR WELL LOCATION AND IDENTIFICATION NUMBER

WMW-1R ⊕ RE-DRILLED MONITOR WELL LOCATION AND IDENTIFICATION NUMBER

SAMPLE ID	
CONSTITUENT	CONCENTRATION (mg/L)

Note: Values in **BOLD** indicate an exceedance of NMWQCC groundwater standard.

QUADRANGLE LOCATION

Western Refining
WINGATE TERMINAL

PROJ. NO.:Western Refining | DATE:08/18/15 | FILE:WestRef-dB48

FIGURE 4
COC CONCENTRATIONS IN GROUNDWATER JULY 2015

DiSorbo
Environmental Consulting Firm

8501 N. MoPac Expy.
Suite 300
Austin, Texas 78759

Appendix A

Correspondence

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

David Catanach, Division Director
Oil Conservation Division

AUGUST 31, 2015

Mr. William Carl McClain
Refinery Manager
Western Refining Southwest, Inc.
92 Giant Crossing Road
Gallup, NM 87301-3833

RE: AP-121 - FORMER CONOCOPHILLIPS WINGATE FRACTIONATOR GAS PLANT

Mr. McClain:

On May 14, 2015, Ms. Clara Cardoza submitted a letter to the Oil Conservation Division (OCD) informing OCD that Western Refining Southwest, Inc. (Western Refining) had purchased the ConocoPhillips (CoP) Wingate Fractionator Gas Plant located in McKinley County, New Mexico. You informed OCD on that Western Refining had assumed responsibility for the remediation and/or monitoring activities at the Plant (including the groundwater remedial activities under AP-117), with the exception of two evaporation ponds that are located on Navajo Nation Tribal Trust land. CoP is pursuing closure with the Navajo Nation. OCD requested that CoP provide it with a copy of any closure and/or remediation plans.

On June 12, 2015, you submitted a letter that also stated that Western Refining is responsible for environmental issues at the former ConocoPhillips (CoP) Wingate Fractionator Gas Plant. Accordingly, OCD has closed CoP's AP-117 and hereby assigns AP-121 to Western. Please submit any appropriate revisions to all remediation and/or monitoring plans by October 1, 2015.

If your have any questions, please contact Glenn von Gonten at 505-476-3488.

Sincerely,

Jim Griswold
Environmental Bureau Chief

JG/gvg

Cc: Clara Cardoza, ConocoPhillips

Western Refining
GALLUP

WNR LISTED NYSE

June 12, 2015

Mr. Glenn von Gonten
Environmental Bureau
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: REQUEST FOR ABATEMENT PLAN NUMBER
WESTERN REFINING SOUTHWEST, INC.
WINGATE PLANT
GALLUP, NEW MEXICO

Dear Mr. von Gonten:

Western Refining Southwest, Inc. (Western) purchased the Wingate Plant from ConocoPhillips Company (ConocoPhillips) on October 1, 2014. As part of the Purchase and Sales Agreement (PSA), Western is responsible for remediation/monitoring activities for the transferred assets.

Western requests a separate Abatement Plan (AP) number for the remediation activities at the Wingate Plant. Western will adopt portions of the Abate Plan (AP-117) dated April 30, 2014 that pertain to the transferred assets. Under the new AP number, Western will report remediation/monitoring activities in the "Annual Groundwater Monitoring Report".

If you have any questions, please contact Ed Riege at (505) 722-0217.

Sincerely,

William Carl McClain

William Carl McClain

Refinery Manager

Western Refining Southwest, Inc.

ConocoPhillips

San Juan Business Unit
3401 E. 30th Street
Farmington, NM 87402-4289
(505) 326-9700

May 14, 2015

Mr. Glenn von Gonten
Environmental Bureau
Oil Conservation Division
Energy, Minerals and natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

Re: **Wingate Fractionator Disposition to Western Refining and Rescission of Abatement Plan No. 117 (AP-117)**

Dear Mr. Glenn von Gonten,

ConocoPhillips Company (COPC) would like to inform the New Mexico Oil Conservation Division (NMOCD) that in October 2014 Western Refining Southwest, Inc. (Western Refining) purchased the ConocoPhillips Wingate Fractionator Gas Plant (Plant) which is located in McKinley County, New Mexico.

During COPC's ownership, the Plant consisted of fractionator equipment, product storage tanks and vessels, truck and rail loading facilities, two evaporation ponds, a candlestick flare, and associated piping.

The Plant was previously covered under NMOCD Groundwater Discharge permit (GW-054). In 2012, NMOCD determined that the Plant does not require a Groundwater Discharge permit and allowed the permit to expire on August 17, 2012 (see attached April 2, 2012 NMOCD letter to COPC). Due to groundwater contamination and ongoing groundwater remedial activities at the Plant, NMOCD's April 2, 2012 letter instructed COPC to continue to abate pollution of groundwater at the Plant, and assigned the Plant abatement plan case number AP-117.

Under the Purchase and Sales Agreement (PSA), Western Refining assumed responsibility for the remediation and/or monitoring activities at the Plant (including the aforementioned groundwater remedial activities under AP-117), with the exception of certain assets excluded from the October 2014 sale. Specifically, the two aforementioned evaporation ponds previously associated with the Plant were excluded in the sale to Western Refining. These two ponds are located on a separate parcel of land in relation to the rest of the Plant, and they are no longer connected to the Plant nor part its current operations. The now stand-alone evaporation ponds are completely located on Navajo Nation Tribal Trust lands and COPC is working with the Navajo Nation on the appropriate, sampling, reporting and closure requirements for the evaporation ponds.

Since COPC no longer owns or operates the Plant and is diligently working with the Navajo Nation on the appropriate closure of the Plant's former evaporation ponds, ConocoPhillips Company requests that NMOCD rescind or otherwise close AP-117. Western Refining will apply for a separate NMOCD Abatement Plan number under Western's name concerning the remedial activities and responsibilities for assets transferred to Western Refining. Finally, please note that COPC will no longer submit annual groundwater monitoring reports or evaporation pond monitoring reports to NMOCD as previously reported under AP-117.

If you have any questions or need additional information from ConocoPhillips, please contact Mr. Rick Greiner at 281-293-3264. Please also feel free to contact Mr. Allen S. Hains, Western Refining; as needed. I have provided his contact information below.

Allen S. Hains
Manager
Remediation Projects

Western Refining
123 W. Mills Ave.
El Paso, Texas 79901
915 534-1483
915 490-1594 (cell)

Sincerely,

John F. Greiner

ConocoPhillips Company

Attachment:
1) NMOCD GW-054 letter

Cc: Allen S. Hains – Western Refining
Clara Cardoza, ConocoPhillips Company

ConocoPhillips

Ground and Surface Water Monitoring and Remediation

AP-117
Abatement Plan

Wingate Fractionator Plant
68 El Paso Circle, Gallup, NM, 87301

This Abatement Plan satisfies
19.15.30 NMAC

TABLE OF CONTENTS

1. INTRODUCTION

In a letter dated 02 April 2012, the New Mexico (NM) Oil Conservation Division (OCD) notified ConocoPhillips Company (COP) Wingate Fractionator Plant (Plant) of plans to allow the expiration of Water Quality Control Commission (WQCC) Ground Water Discharge Plan (GW-054).

In this letter, the OCD assigned *Abatement Plan*[1] case number *AP-117* for future correspondence regarding known Vadose Zone and Water Pollution monitoring and remediation activities, which continues pursuant to 19.15.30 NMAC, Natural Resources and Wildlife, Oil and Gas, Remediation.

This *Abatement Plan* addresses the following previously required and approved GW-054 conditions:

- Condition 17 Storm Water
- Condition 19 Vadose Zone and Water Pollution
- Condition 20, Additional Site Specific Conditions
  - Section 16 Waste Water Evaporation Ponds
  - Section 17 Vadose Zone and Water Pollution
  - Section 18 Annual Report

2. RESPONSIBILITIES

Within the COP L48 Business Unit, Risk Management and Remediation (RM&R) is accountable and responsible for managing all long-term environmental liabilities. This includes the remediation of groundwater contamination that typically requires more than one year. An Environmental Liability Accrual (i.e., reserve account), charged to the Plant and managed by RM&R, has been established to fund the remediation activity.

The Plant has documented groundwater contamination, as well as, monitoring wells used solely for release detection (evaporation ponds). As such, the cost for any groundwater monitoring necessary or required to monitor groundwater contamination is the

[1] 19.15.2.7 NMAC: "Abatement plan" means a description of operational, monitoring, contingency and closure requirements and conditions for water pollution's prevention, investigation and abatement.

responsibility of RM&R and paid for through the Environmental Liability Accrual. The cost of release detection monitoring is the responsibility of the Plant.

3. MONITORING WELLS

The Plant consists of fractionator equipment, product storage tanks and vessels, truck and rail loading facilities, two evaporation ponds, a candlestick flare, and associated piping.

Monitoring wells located to the north of the Plant are located on Navajo Nation land covered by long-term leases with either the Navajo Nation (MWR-1, MW-2, and WMW-3) or El Paso Natural Gas (WMW-8). All other monitoring wells are located on COP-owned property. Refer to Figure 1 for an overall site plan with monitoring well locations identified.

3.1 *Plant Perimeter*

WMW-6 – Installed in 2003 to evaluate potential up-gradient background ground water to determine the potential location of chloride concentrations entering the site from off-site sources from the southeast. This monitoring well is located at the southeast corner of the property.

WMW-7 – Installed in 2003 to evaluate potential down-gradient (west) ground water impact from WMW-2 contaminated area. This monitoring well was installed as a condition of the 2004 Ground Water Discharge Permit approval, and is located at the southwest corner of the property.

3.2 *Loading and Storage*

3.2.1 Tank Farm Area

WMW-1R – Installed in 2012 to continue evaluation potential tank or pipeline leaks in the area. This monitoring well is installed at the east end of the property, northwest of the Tank Farm Area, and is used to evaluate down-gradient ground water from the Tank Farm Area. This monitoring well replaced **WMW-1**, installed in 1990, which was plugged and abandoned in 2012 due to damage subsequent to pad work in the area.

3.2.2 Truck Loading Area

WMW-5 – Installed in 1993-1994 to evaluate contamination from a closed brine pit, located to the north, and underground gasoline lines from a decommissioned gasoline truck loading rack, located to the south, do not leach or migrate from Plant property. This monitoring well is located within the Main Plant Area, north of the Truck Loading Area.

Figure 1 -- Wingate Fractionator Plant Site Plan with Monitoring Well Locations

3.2.3 Railroad Car Loading Area

WMW-2 – Installed in 1990 to evaluate potential railroad car spillage. Hydrocarbon contamination was detected in the form of odors in soil samples beginning at a depth of three feet.[2]

WMW-4 – Installed in 1990 to evaluate the potential for down-gradient ground water impact from the hydrocarbon contamination detected at the WMW-2 location. In addition, this monitoring well is used to evaluate up-gradient ground water from the Evaporation Pond Area.

3.3 *Candlestick Flare Area*

WMW-3 – Installed in 1990 to evaluate previously detected hydrocarbons in surface water samples. This monitoring well is located in the northwest corner of the Candlestick Flare Area approximately 250 feet north of the Main Plant perimeter fence. This area was once was a flare pit area and is enclosed by a fence.

WMW-8 – Installed in 2003 to evaluate the potential for down-gradient and side-gradient ground water impact from WMW-3 area; and potential down-gradient ground water impact from the center of the Plant. This monitoring well was installed as a condition of the 2004 Ground Water Discharge Permit approval, and is located northwest of the Flare Pit Area.

3.4 *Evaporation Pond Area*

MWR-1 – Installed in 2003 to continue evaluation of high salinity of the surface water ponds. This monitoring well replaced **MW-1**, installed in 1990, which was plugged and abandoned in 2003 due to a broken screen/casing.

MW-2 – Installed in 1990 to evaluate high salinity of the surface water ponds.

MW-3 -- Installed in 1990 to evaluate high salinity of the surface water ponds.

MWS-1 – Installed in 2003 to monitor potential evaporation pond seepage. This shallow, vadose zone monitoring well, is installed to a depth of 15 feet and screened from five to 15 feet.

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[2] It is believed this contamination is the result of a rail rack fire that occurred during the 1979/1980 time frame. The monitoring well allows for long-term evaluation in lieu of active remediation.

MWS-2 -- Installed in 2003 to monitor potential evaporation pond seepage. This shallow, vadose zone monitoring well, is installed to a depth of 15 feet and screened from five to 15 feet.

4. INSPECTIONS AND MONITORING

4.1 *Monthly and Post Major Storm*

The Evaporation Ponds are used to collect Resource Conservation and Recovery Act (RCRA) non-hazardous[3] waste and waste water drainage from the Plant as identified in Figure 2.

The **Evaporation Pond Area** is inspected ***monthly*** and ***after any major storm event*** to ensure:

- A minimum freeboard of three feet is maintained in the ponds so no over topping of waste water occurs.
- The area remains non-hazardous to wildlife, including migratory birds.[4]

Records are maintained to document fluid levels, freeboard, seepage, flow channels, pipes, valves, and dike integrity.

Any significant events that provide evidence the evaporation ponds may be hazardous to any wildlife, including migratory birds is reported to the OCD.

4.2 *Quarterly*

MWS-1 and **MWS-2**, the shallow wells used to monitor potential evaporation pond leakage; are inspected ***quarterly*** for the presence of fluids.

If fluids are discovered in volumes sufficient for sampling, a chemical stoichiometric comparison is performed to determine whether the fluids are from the ponds. Composite pond samples are collected. Due to the raw untreated sewage going into the evaporation ponds, the following analysis[5] is performed in addition that required for annual monitoring:

- Bio-chemical Oxygen Demand (BOD)

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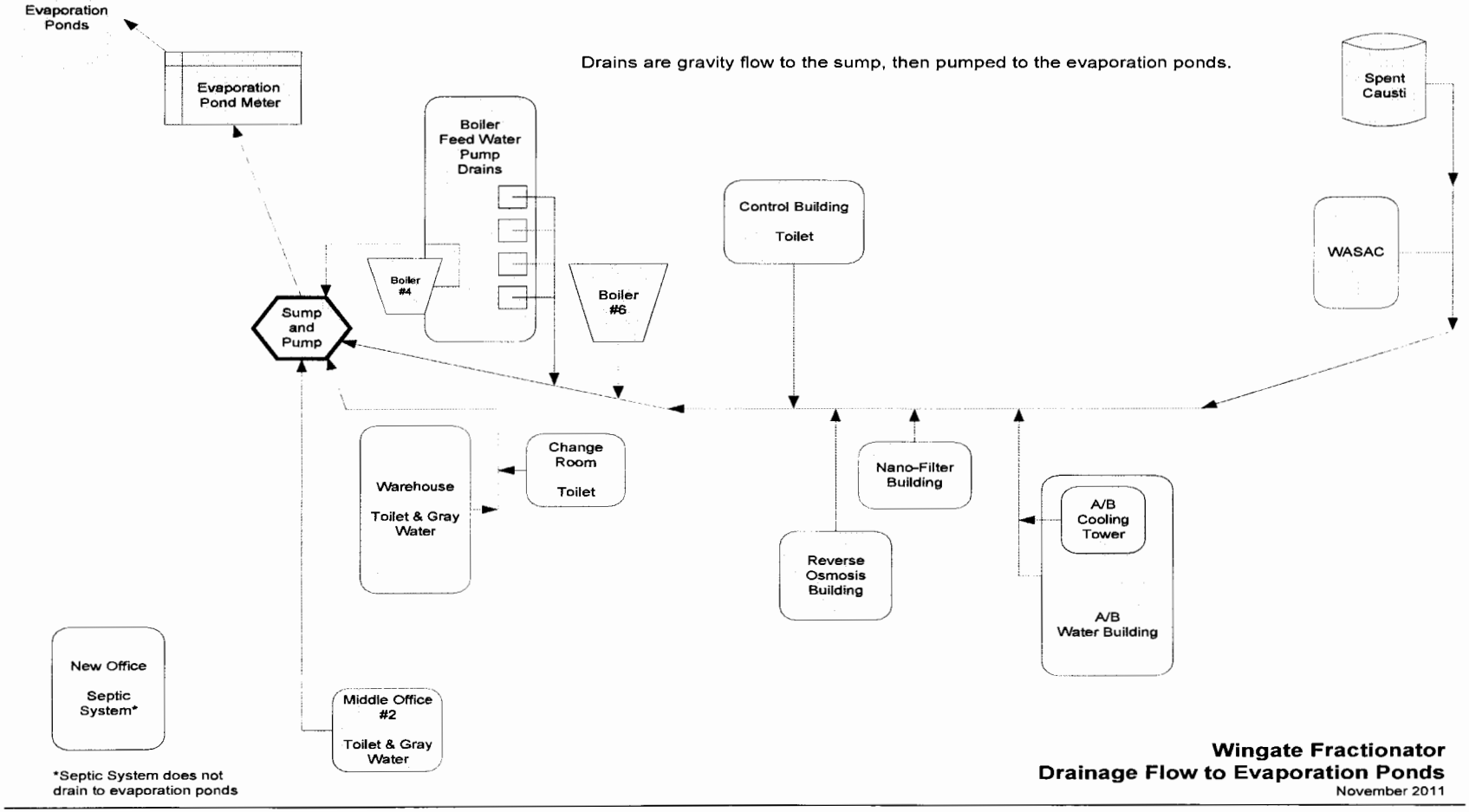
[3] As defined in 40 CFR Part 261

[4] COP is not required to net the evaporation ponds as long as the ponds are rendered non-hazardous to wildlife, including migratory birds.

[5] Refer to WQCC regulations 20.6.2.2101

Figure 2 – Wingate Fractionator Drainage Flow to Evaporation Ponds



- Chemical Oxygen Demand (COD)
- Total Coliform Bacteria
- pH

Sampling and analytical work are performed pursuant to the Environmental Protection Agency (EPA) approved methods and quality assurance and quality control (QA/QC) procedures.

Based on the analytical results, an action plan and sampling schedule is established and submitted to OCD.

- If results of initial sampling suggest pond leakage (based on chemical similarities to pond water), then quarterly sampling of these two wells will be considered.
- If the results of initial sampling suggest the fluids contained in the wells are the result of infiltration by surface water (from precipitation), then sampling and analysis is performed on an annual schedule or once per year when inspections indicate fluids are present in the wells.

4.3 *Annually*

All monitoring wells are purged and sampled ***annually***. Samples collected are analyzed for the following:

- Volatile organics (Method 8260)
- Semi-volatile organics (Method 8270)
- NM WQCC metals
- General chemistry including cations and anions

Sampling and analytical work are performed pursuant to the EPA approved methods and QA / QC procedures.

5. STORM WATER DISCHARGES

Personnel control storm water runoff pursuant to the Plant-specific Integrated Contingency Plan (ICP), which includes the Spill Prevention, Control, and Countermeasures (SPCC) Plan.

6. AGENCY NOTIFICATIONS

6.1 *Discharges and Contamination*

If as a result of operations, a discharged in any storm water run-off is found or any water contaminant discovered in a monitoring device or the groundwater that exceeds WQCC standards specified in 20.6.2.3101 NMAC, Environmental Protection, Water Quality, Ground and Surface Water Protection, or 20.6.4 NMAC, Environmental Protection, Water Quality, Standards for Interstate and Intrastate Surface Waters; Plant personnel take immediate action to mitigate the effects, notify OCD Santa Fe and local district offices ***within 24 hours*** of discovery, and file a report ***within 15 days***.

Corrective action is conducted pursuant to WQCC regulations 20.6.2.1203 NMAC and 19.15.29 NMAC, Natural Resources and Wildlife, Oil and Gas, Release Notification; and may include modifications to the ICP and SPCC to prevent recurrence.

6.2 *Exceedance*

Plant personnel notify the OCD ***within 15 days*** of the discovery of separated-phase hydrocarbons or the exceedance of a WQCC standard in any down gradient monitoring well where separate-phase hydrocarbons were not present or where contaminant concentrations did not exceed WQCC standards during the preceding monitoring event.

6.3 *Annual Monitoring*

Plant personnel notify the OCD, Santa Fe and local district offices, ***at least two weeks in advance*** of all scheduled activities such that the OCD has the opportunity to witness the events and split samples.

6.4 *Repairs and Modifications*

Plant personnel secure approval from the OCD, Santa Fe and local district offices, ***prior to implementation*** of repairs or modifications to the evaporation ponds, wastewater collection system, and/or monitoring systems.

6.5 *Facility Closure Remediation*

Remediation of groundwater and vadose zone contamination will be addressed upon closure of the facility, or at any time upon discovery the contamination begins to migrate away from the area. At that time, Plant personnel submit a corrective plan to the OCD approval and this *Abatement Plan* revised or replaced, as necessary.

7. ANNUAL REPORTING

Groundwater contamination (RM&R) and release detection (Plant) monitoring activities are reported to the OCD by ***15 September*** of each year. Reports, filed in an OCD acceptable electronic format, contain:

- A description of the monitoring and remediation activities that occurred during the year, including conclusions and recommendations
- Summary tables listing laboratory analytical results of all water quality sampling for each monitoring point
- Plots of concentration versus time for contaminants of concern from each monitoring point
- Copies of the most recent years laboratory analytical data sheets
- An annual water table potentiometric elevation map using the water table elevation of the groundwater in all facility monitoring wells
- A corrected water table elevation for all wells containing phase-separated hydrocarbons
- A map showing monitoring well locations, pertinent site features, and the direction and magnitude of hydraulic gradient
- Plots of the water table elevation versus time for each groundwater monitoring point
- Any WQCC constituent found to exceed the groundwater standard is highlighted and noted

Appendix B

Laboratory Analytical Reports

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 05, 2015

Cheryl Johnson
Western Refining Southwest
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX

RE: Wingate Terminal-GW OrderNo.: 1507959

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 7/21/2015 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 qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest
Project: Wingate Terminal-GW
Lab ID: 1507959-001 **Matrix:** AQUEOUS

Client Sample ID: WMW-6
Collection Date: 7/20/2015 10:00:00 AM
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst: **DBD**	
Uranium	0.010	0.00050		mg/L	1	7/30/2015 7:20:14 PM	20445
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	57	10		mg/L	20	7/21/2015 8:30:20 PM	R27664
Nitrogen, Nitrate (As N)	0.10	0.10		mg/L	1	7/21/2015 8:17:55 PM	R27664
Sulfate	260	10	*	mg/L	20	7/21/2015 8:30:20 PM	R27664
SM2320B: ALKALINITY						Analyst: **JRR**	
Bicarbonate (As CaCO3)	458.4	20.00		mg/L CaCO3	1	7/22/2015 7:49:44 PM	R27706
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	7/22/2015 7:49:44 PM	R27706
Total Alkalinity (as CaCO3)	458.4	20.00		mg/L CaCO3	1	7/22/2015 7:49:44 PM	R27706
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	984	20.0	*	mg/L	1	7/22/2015 3:55:00 PM	20350
SM4500-H+B: PH						Analyst: **JRR**	
pH	8.23	1.68	H	pH units	1	7/22/2015 7:49:44 PM	R27706
EPA METHOD 7470: MERCURY						Analyst: **JLF**	
Mercury	ND	0.00020		mg/L	1	7/30/2015 10:20:48 AM	20514
EPA METHOD 6010B: DISSOLVED METALS						Analyst: **MED**	
Arsenic	ND	0.020		mg/L	1	7/24/2015 10:06:34 AM	R27727
Barium	0.032	0.020		mg/L	1	7/24/2015 10:06:34 AM	R27727
Cadmium	ND	0.0020		mg/L	1	7/24/2015 10:06:34 AM	R27727
Calcium	37	1.0		mg/L	1	7/24/2015 10:06:34 AM	R27727
Chromium	ND	0.0060		mg/L	1	7/24/2015 10:06:34 AM	R27727
Lead	ND	0.0050		mg/L	1	7/24/2015 10:06:34 AM	R27727
Selenium	ND	0.050		mg/L	1	7/24/2015 10:06:34 AM	R27727
Silver	ND	0.0050		mg/L	1	7/24/2015 10:06:34 AM	R27727
Sodium	300	10		mg/L	10	7/24/2015 10:49:44 AM	R27727
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Acenaphthylene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Aniline	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Anthracene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Azobenzene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Benz(a)anthracene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Benzo(a)pyrene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Benzo(b)fluoranthene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Benzo(g,h,i)perylene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Benzo(k)fluoranthene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399

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
Project: Wingate Terminal-GW
Lab ID: 1507959-001 **Matrix:** AQUEOUS

Client Sample ID: WMW-6
Collection Date: 7/20/2015 10:00:00 AM
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Benzoic acid	ND	20		µg/L	1	7/23/2015 1:27:05 PM	20399
Benzyl alcohol	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Bis(2-chloroethyl)ether	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
4-Bromophenyl phenyl ether	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Butyl benzyl phthalate	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Carbazole	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
4-Chloro-3-methylphenol	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
4-Chloroaniline	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
2-Chloronaphthalene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
2-Chlorophenol	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Chrysene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Di-n-butyl phthalate	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Di-n-octyl phthalate	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Dibenz(a,h)anthracene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Dibenzofuran	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
1,2-Dichlorobenzene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
1,3-Dichlorobenzene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
1,4-Dichlorobenzene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
3,3'-Dichlorobenzidine	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Diethyl phthalate	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Dimethyl phthalate	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
2,4-Dichlorophenol	ND	20		µg/L	1	7/23/2015 1:27:05 PM	20399
2,4-Dimethylphenol	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	7/23/2015 1:27:05 PM	20399
2,4-Dinitrophenol	ND	20		µg/L	1	7/23/2015 1:27:05 PM	20399
2,4-Dinitrotoluene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
2,6-Dinitrotoluene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Fluoranthene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Fluorene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Hexachlorobenzene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Hexachlorobutadiene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Hexachlorocyclopentadiene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Hexachloroethane	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Isophorone	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399

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
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest
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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1-Methylnaphthalene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
2-Methylnaphthalene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
2-Methylphenol	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
3+4-Methylphenol	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
N-Nitrosodimethylamine	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
N-Nitrosodiphenylamine	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Naphthalene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
2-Nitroaniline	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
3-Nitroaniline	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
4-Nitroaniline	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Nitrobenzene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
2-Nitrophenol	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
4-Nitrophenol	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Pentachlorophenol	ND	20		µg/L	1	7/23/2015 1:27:05 PM	20399
Phenanthrene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Phenol	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Pyrene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Pyridine	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
1,2,4-Trichlorobenzene	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
2,4,5-Trichlorophenol	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
2,4,6-Trichlorophenol	ND	10		µg/L	1	7/23/2015 1:27:05 PM	20399
Surr: 2-Fluorophenol	69.9	14.9-111		%REC	1	7/23/2015 1:27:05 PM	20399
Surr: Phenol-d5	62.6	11.3-108		%REC	1	7/23/2015 1:27:05 PM	20399
Surr: 2,4,6-Tribromophenol	89.2	15.7-154		%REC	1	7/23/2015 1:27:05 PM	20399
Surr: Nitrobenzene-d5	85.9	47.8-106		%REC	1	7/23/2015 1:27:05 PM	20399
Surr: 2-Fluorobiphenyl	86.4	21.3-123		%REC	1	7/23/2015 1:27:05 PM	20399
Surr: 4-Terphenyl-d14	61.7	14.3-135		%REC	1	7/23/2015 1:27:05 PM	20399
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
Toluene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
Ethylbenzene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
Naphthalene	ND	2.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
1-Methylnaphthalene	ND	4.0		µg/L	1	7/22/2015 4:24:26 PM	R27692

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
Project: Wingate Terminal-GW
Lab ID: 1507959-001 **Matrix:** AQUEOUS

Client Sample ID: WMW-6
Collection Date: 7/20/2015 10:00:00 AM
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
2-Methylnaphthalene	ND	4.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
Acetone	ND	10		µg/L	1	7/22/2015 4:24:26 PM	R27692
Bromobenzene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
Bromodichloromethane	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
Bromoform	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
Bromomethane	ND	3.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
2-Butanone	ND	10		µg/L	1	7/22/2015 4:24:26 PM	R27692
Carbon disulfide	ND	10		µg/L	1	7/22/2015 4:24:26 PM	R27692
Carbon Tetrachloride	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
Chlorobenzene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
Chloroethane	ND	2.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
Chloroform	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
Chloromethane	ND	3.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
2-Chlorotoluene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
4-Chlorotoluene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
cis-1,2-DCE	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
Dibromochloromethane	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
Dibromomethane	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
1,1-Dichloroethane	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
1,1-Dichloroethene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
1,2-Dichloropropane	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
1,3-Dichloropropane	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
2,2-Dichloropropane	ND	2.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
1,1-Dichloropropene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
Hexachlorobutadiene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
2-Hexanone	ND	10		µg/L	1	7/22/2015 4:24:26 PM	R27692
Isopropylbenzene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
4-Isopropyltoluene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
4-Methyl-2-pentanone	ND	10		µg/L	1	7/22/2015 4:24:26 PM	R27692
Methylene Chloride	ND	3.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
n-Butylbenzene	ND	3.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
n-Propylbenzene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
sec-Butylbenzene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692

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
Project: Wingate Terminal-GW
Lab ID: 1507959-001 **Matrix:** AQUEOUS

Client Sample ID: WMW-6
Collection Date: 7/20/2015 10:00:00 AM
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Styrene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
tert-Butylbenzene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
trans-1,2-DCE	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
Trichlorofluoromethane	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
Vinyl chloride	ND	1.0		µg/L	1	7/22/2015 4:24:26 PM	R27692
Xylenes, Total	ND	1.5		µg/L	1	7/22/2015 4:24:26 PM	R27692
Surr: 1,2-Dichloroethane-d4	96.5	70-130		%REC	1	7/22/2015 4:24:26 PM	R27692
Surr: 4-Bromofluorobenzene	111	70-130		%REC	1	7/22/2015 4:24:26 PM	R27692
Surr: Dibromofluoromethane	91.3	70-130		%REC	1	7/22/2015 4:24:26 PM	R27692
Surr: Toluene-d8	99.3	70-130		%REC	1	7/22/2015 4:24:26 PM	R27692

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

Qualifiers:

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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
Project: Wingate Terminal-GW
Lab ID: 1507959-002 **Matrix:** AQUEOUS

Client Sample ID: WMW-7
Collection Date: 7/20/2015 12:00:00 PM
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst: **DBD**	
Uranium	0.039	0.0025	*	mg/L	5	8/3/2015 1:50:49 PM	20445
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	190	10		mg/L	20	7/21/2015 8:55:09 PM	R27664
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	7/21/2015 8:42:44 PM	R27664
Sulfate	1000	25	*	mg/L	50	7/30/2015 4:25:35 AM	R27852
SM2320B: ALKALINITY						Analyst: **JRR**	
Bicarbonate (As CaCO3)	759.8	20.00		mg/L CaCO3	1	7/22/2015 8:50:18 PM	R27706
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	7/22/2015 8:50:18 PM	R27706
Total Alkalinity (as CaCO3)	759.8	20.00		mg/L CaCO3	1	7/22/2015 8:50:18 PM	R27706
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	2740	100	*	mg/L	1	7/22/2015 3:55:00 PM	20350
SM4500-H+B: PH						Analyst: **JRR**	
pH	8.23	1.68	H	pH units	1	7/22/2015 8:50:18 PM	R27706
EPA METHOD 7470: MERCURY						Analyst: **JLF**	
Mercury	ND	0.00020		mg/L	1	7/30/2015 10:26:54 AM	20514
EPA METHOD 6010B: DISSOLVED METALS						Analyst: **MED**	
Arsenic	ND	0.020		mg/L	1	7/24/2015 10:08:15 AM	R27727
Barium	0.028	0.020		mg/L	1	7/24/2015 10:08:15 AM	R27727
Cadmium	ND	0.0020		mg/L	1	7/24/2015 10:08:15 AM	R27727
Calcium	47	1.0		mg/L	1	7/24/2015 10:08:15 AM	R27727
Chromium	ND	0.0060		mg/L	1	7/24/2015 10:08:15 AM	R27727
Lead	ND	0.0050		mg/L	1	7/24/2015 10:08:15 AM	R27727
Selenium	ND	0.050		mg/L	1	7/24/2015 10:08:15 AM	R27727
Silver	ND	0.0050		mg/L	1	7/24/2015 10:08:15 AM	R27727
Sodium	830	10		mg/L	10	7/24/2015 10:51:19 AM	R27727
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Acenaphthylene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Aniline	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Anthracene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Azobenzene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Benz(a)anthracene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Benzo(a)pyrene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Benzo(b)fluoranthene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Benzo(g,h,i)perylene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Benzo(k)fluoranthene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399

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Qualifiers:

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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
Client Sample ID: WMW-7
Project: Wingate Terminal-GW
Collection Date: 7/20/2015 12:00:00 PM
Lab ID: 1507959-002
Matrix: AQUEOUS
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Benzoic acid	ND	20		µg/L	1	7/23/2015 1:54:51 PM	20399
Benzyl alcohol	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Bis(2-chloroethyl)ether	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
4-Bromophenyl phenyl ether	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Butyl benzyl phthalate	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Carbazole	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
4-Chloro-3-methylphenol	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
4-Chloroaniline	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
2-Chloronaphthalene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
2-Chlorophenol	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Chrysene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Di-n-butyl phthalate	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Di-n-octyl phthalate	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Dibenz(a,h)anthracene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Dibenzofuran	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
1,2-Dichlorobenzene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
1,3-Dichlorobenzene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
1,4-Dichlorobenzene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
3,3'-Dichlorobenzidine	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Diethyl phthalate	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Dimethyl phthalate	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
2,4-Dichlorophenol	ND	20		µg/L	1	7/23/2015 1:54:51 PM	20399
2,4-Dimethylphenol	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	7/23/2015 1:54:51 PM	20399
2,4-Dinitrophenol	ND	20		µg/L	1	7/23/2015 1:54:51 PM	20399
2,4-Dinitrotoluene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
2,6-Dinitrotoluene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Fluoranthene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Fluorene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Hexachlorobenzene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Hexachlorobutadiene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Hexachlorocyclopentadiene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Hexachloroethane	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Isophorone	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399

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
Project: Wingate Terminal-GW
Lab ID: 1507959-002 **Matrix:** AQUEOUS

Client Sample ID: WMW-7
Collection Date: 7/20/2015 12:00:00 PM
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1-Methylnaphthalene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
2-Methylnaphthalene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
2-Methylphenol	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
3+4-Methylphenol	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
N-Nitrosodimethylamine	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
N-Nitrosodiphenylamine	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Naphthalene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
2-Nitroaniline	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
3-Nitroaniline	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
4-Nitroaniline	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Nitrobenzene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
2-Nitrophenol	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
4-Nitrophenol	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Pentachlorophenol	ND	20		µg/L	1	7/23/2015 1:54:51 PM	20399
Phenanthrene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Phenol	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Pyrene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Pyridine	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
1,2,4-Trichlorobenzene	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
2,4,5-Trichlorophenol	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
2,4,6-Trichlorophenol	ND	10		µg/L	1	7/23/2015 1:54:51 PM	20399
Surr: 2-Fluorophenol	51.5	14.9-111		%REC	1	7/23/2015 1:54:51 PM	20399
Surr: Phenol-d5	44.9	11.3-108		%REC	1	7/23/2015 1:54:51 PM	20399
Surr: 2,4,6-Tribromophenol	71.9	15.7-154		%REC	1	7/23/2015 1:54:51 PM	20399
Surr: Nitrobenzene-d5	69.5	47.8-106		%REC	1	7/23/2015 1:54:51 PM	20399
Surr: 2-Fluorobiphenyl	72.6	21.3-123		%REC	1	7/23/2015 1:54:51 PM	20399
Surr: 4-Terphenyl-d14	52.9	14.3-135		%REC	1	7/23/2015 1:54:51 PM	20399
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
Toluene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
Ethylbenzene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
Naphthalene	ND	2.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
1-Methylnaphthalene	ND	4.0		µg/L	1	7/22/2015 5:50:51 PM	R27692

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
Client Sample ID: WMW-7
Project: Wingate Terminal-GW
Collection Date: 7/20/2015 12:00:00 PM
Lab ID: 1507959-002 **Matrix:** AQUEOUS **Received Date:** 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
2-Methylnaphthalene	ND	4.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
Acetone	ND	10		µg/L	1	7/22/2015 5:50:51 PM	R27692
Bromobenzene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
Bromodichloromethane	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
Bromoform	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
Bromomethane	ND	3.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
2-Butanone	ND	10		µg/L	1	7/22/2015 5:50:51 PM	R27692
Carbon disulfide	ND	10		µg/L	1	7/22/2015 5:50:51 PM	R27692
Carbon Tetrachloride	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
Chlorobenzene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
Chloroethane	ND	2.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
Chloroform	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
Chloromethane	ND	3.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
2-Chlorotoluene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
4-Chlorotoluene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
cis-1,2-DCE	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
Dibromochloromethane	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
Dibromomethane	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
1,1-Dichloroethane	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
1,1-Dichloroethene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
1,2-Dichloropropane	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
1,3-Dichloropropane	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
2,2-Dichloropropane	ND	2.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
1,1-Dichloropropene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
Hexachlorobutadiene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
2-Hexanone	ND	10		µg/L	1	7/22/2015 5:50:51 PM	R27692
Isopropylbenzene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
4-Isopropyltoluene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
4-Methyl-2-pentanone	ND	10		µg/L	1	7/22/2015 5:50:51 PM	R27692
Methylene Chloride	ND	3.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
n-Butylbenzene	ND	3.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
n-Propylbenzene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
sec-Butylbenzene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692

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
Project: Wingate Terminal-GW
Lab ID: 1507959-002 **Matrix:** AQUEOUS

Client Sample ID: WMW-7
Collection Date: 7/20/2015 12:00:00 PM
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Styrene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
tert-Butylbenzene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
trans-1,2-DCE	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
Trichlorofluoromethane	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
Vinyl chloride	ND	1.0		µg/L	1	7/22/2015 5:50:51 PM	R27692
Xylenes, Total	ND	1.5		µg/L	1	7/22/2015 5:50:51 PM	R27692
Surr: 1,2-Dichloroethane-d4	96.9	70-130		%REC	1	7/22/2015 5:50:51 PM	R27692
Surr: 4-Bromofluorobenzene	104	70-130		%REC	1	7/22/2015 5:50:51 PM	R27692
Surr: Dibromofluoromethane	92.6	70-130		%REC	1	7/22/2015 5:50:51 PM	R27692
Surr: Toluene-d8	101	70-130		%REC	1	7/22/2015 5:50:51 PM	R27692

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
Project: Wingate Terminal-GW
Lab ID: 1507959-003 **Matrix:** AQUEOUS

Client Sample ID: DUP01
Collection Date: 7/20/2015
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst: **DBD**	
Uranium	0.037	0.0025	*	mg/L	5	8/3/2015 1:53:49 PM	20445
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	320	50	*	mg/L	100	7/30/2015 4:38:00 AM	R27852
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	7/21/2015 9:32:22 PM	R27664
Sulfate	1800	50	*	mg/L	100	7/30/2015 4:38:00 AM	R27852
SM2320B: ALKALINITY						Analyst: **JRR**	
Bicarbonate (As CaCO3)	844.4	20.00		mg/L CaCO3	1	7/22/2015 9:16:32 PM	R27706
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	7/22/2015 9:16:32 PM	R27706
Total Alkalinity (as CaCO3)	844.4	20.00		mg/L CaCO3	1	7/22/2015 9:16:32 PM	R27706
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	4350	20.0	*	mg/L	1	7/22/2015 3:55:00 PM	20350
SM4500-H+B: PH						Analyst: **JRR**	
pH	7.89	1.68	H	pH units	1	7/22/2015 9:16:32 PM	R27706
EPA METHOD 7470: MERCURY						Analyst: **JLF**	
Mercury	ND	0.00020		mg/L	1	7/30/2015 10:28:56 AM	20514
EPA METHOD 6010B: DISSOLVED METALS						Analyst: **MED**	
Arsenic	ND	0.020		mg/L	1	7/24/2015 10:09:57 AM	R27727
Barium	ND	0.020		mg/L	1	7/24/2015 10:09:57 AM	R27727
Cadmium	ND	0.0020		mg/L	1	7/24/2015 10:09:57 AM	R27727
Calcium	160	5.0		mg/L	5	7/24/2015 10:54:29 AM	R27727
Chromium	ND	0.0060		mg/L	1	7/24/2015 10:09:57 AM	R27727
Lead	ND	0.0050		mg/L	1	7/24/2015 10:09:57 AM	R27727
Selenium	ND	0.050		mg/L	1	7/24/2015 10:09:57 AM	R27727
Silver	ND	0.0050		mg/L	1	7/24/2015 10:09:57 AM	R27727
Sodium	1200	50		mg/L	50	7/24/2015 10:52:55 AM	R27727
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Acenaphthylene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Aniline	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Anthracene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Azobenzene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Benz(a)anthracene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Benzo(a)pyrene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Benzo(b)fluoranthene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Benzo(g,h,i)perylene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Benzo(k)fluoranthene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399

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
Client Sample ID: DUP01
Project: Wingate Terminal-GW
Collection Date: 7/20/2015
Lab ID: 1507959-003
Matrix: AQUEOUS
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Benzoic acid	ND	20		µg/L	1	7/23/2015 2:22:44 PM	20399
Benzyl alcohol	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Bis(2-chloroethyl)ether	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
4-Bromophenyl phenyl ether	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Butyl benzyl phthalate	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Carbazole	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
4-Chloro-3-methylphenol	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
4-Chloroaniline	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
2-Chloronaphthalene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
2-Chlorophenol	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Chrysene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Di-n-butyl phthalate	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Di-n-octyl phthalate	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Dibenz(a,h)anthracene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Dibenzofuran	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
1,2-Dichlorobenzene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
1,3-Dichlorobenzene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
1,4-Dichlorobenzene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
3,3´-Dichlorobenzidine	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Diethyl phthalate	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Dimethyl phthalate	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
2,4-Dichlorophenol	ND	20		µg/L	1	7/23/2015 2:22:44 PM	20399
2,4-Dimethylphenol	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	7/23/2015 2:22:44 PM	20399
2,4-Dinitrophenol	ND	20		µg/L	1	7/23/2015 2:22:44 PM	20399
2,4-Dinitrotoluene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
2,6-Dinitrotoluene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Fluoranthene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Fluorene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Hexachlorobenzene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Hexachlorobutadiene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Hexachlorocyclopentadiene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Hexachloroethane	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Isophorone	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399

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
Project: Wingate Terminal-GW
Lab ID: 1507959-003 **Matrix:** AQUEOUS

Client Sample ID: DUP01
Collection Date: 7/20/2015
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1-Methylnaphthalene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
2-Methylnaphthalene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
2-Methylphenol	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
3+4-Methylphenol	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
N-Nitrosodimethylamine	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
N-Nitrosodiphenylamine	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Naphthalene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
2-Nitroaniline	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
3-Nitroaniline	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
4-Nitroaniline	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Nitrobenzene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
2-Nitrophenol	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
4-Nitrophenol	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Pentachlorophenol	ND	20		µg/L	1	7/23/2015 2:22:44 PM	20399
Phenanthrene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Phenol	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Pyrene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Pyridine	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
1,2,4-Trichlorobenzene	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
2,4,5-Trichlorophenol	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
2,4,6-Trichlorophenol	ND	10		µg/L	1	7/23/2015 2:22:44 PM	20399
Surr: 2-Fluorophenol	32.8	14.9-111		%REC	1	7/23/2015 2:22:44 PM	20399
Surr: Phenol-d5	43.4	11.3-108		%REC	1	7/23/2015 2:22:44 PM	20399
Surr: 2,4,6-Tribromophenol	42.2	15.7-154		%REC	1	7/23/2015 2:22:44 PM	20399
Surr: Nitrobenzene-d5	76.6	47.8-106		%REC	1	7/23/2015 2:22:44 PM	20399
Surr: 2-Fluorobiphenyl	79.1	21.3-123		%REC	1	7/23/2015 2:22:44 PM	20399
Surr: 4-Terphenyl-d14	50.7	14.3-135		%REC	1	7/23/2015 2:22:44 PM	20399
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
Toluene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
Ethylbenzene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
Naphthalene	ND	2.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
1-Methylnaphthalene	ND	4.0		µg/L	1	7/27/2015 12:33:20 PM	R27786

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
Client Sample ID: DUP01
Project: Wingate Terminal-GW
Collection Date: 7/20/2015
Lab ID: 1507959-003
Matrix: AQUEOUS
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
2-Methylnaphthalene	ND	4.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
Acetone	ND	10		µg/L	1	7/27/2015 12:33:20 PM	R27786
Bromobenzene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
Bromodichloromethane	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
Bromoform	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
Bromomethane	ND	3.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
2-Butanone	ND	10		µg/L	1	7/27/2015 12:33:20 PM	R27786
Carbon disulfide	ND	10		µg/L	1	7/27/2015 12:33:20 PM	R27786
Carbon Tetrachloride	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
Chlorobenzene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
Chloroethane	ND	2.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
Chloroform	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
Chloromethane	ND	3.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
2-Chlorotoluene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
4-Chlorotoluene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
cis-1,2-DCE	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
Dibromochloromethane	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
Dibromomethane	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
1,1-Dichloroethane	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
1,1-Dichloroethene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
1,2-Dichloropropane	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
1,3-Dichloropropane	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
2,2-Dichloropropane	ND	2.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
1,1-Dichloropropene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
Hexachlorobutadiene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
2-Hexanone	ND	10		µg/L	1	7/27/2015 12:33:20 PM	R27786
Isopropylbenzene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
4-Isopropyltoluene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
4-Methyl-2-pentanone	ND	10		µg/L	1	7/27/2015 12:33:20 PM	R27786
Methylene Chloride	ND	3.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
n-Butylbenzene	ND	3.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
n-Propylbenzene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
sec-Butylbenzene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786

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
Client Sample ID: DUP01
Project: Wingate Terminal-GW
Collection Date: 7/20/2015
Lab ID: 1507959-003
Matrix: AQUEOUS
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Styrene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
tert-Butylbenzene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
trans-1,2-DCE	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
Trichlorofluoromethane	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
Vinyl chloride	ND	1.0		µg/L	1	7/27/2015 12:33:20 PM	R27786
Xylenes, Total	ND	1.5		µg/L	1	7/27/2015 12:33:20 PM	R27786
Surr: 1,2-Dichloroethane-d4	96.3	70-130		%REC	1	7/27/2015 12:33:20 PM	R27786
Surr: 4-Bromofluorobenzene	108	70-130		%REC	1	7/27/2015 12:33:20 PM	R27786
Surr: Dibromofluoromethane	92.2	70-130		%REC	1	7/27/2015 12:33:20 PM	R27786
Surr: Toluene-d8	105	70-130		%REC	1	7/27/2015 12:33:20 PM	R27786

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
Client Sample ID: Trip Blank
Project: Wingate Terminal-GW
Collection Date:
Lab ID: 1507959-004
Matrix: TRIP BLANK
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Toluene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Ethylbenzene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Naphthalene	ND	2.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
1-Methylnaphthalene	ND	4.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
2-Methylnaphthalene	ND	4.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Acetone	ND	10		µg/L	1	7/24/2015 1:39:15 PM	R27756
Bromobenzene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Bromodichloromethane	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Bromoform	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Bromomethane	ND	3.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
2-Butanone	ND	10		µg/L	1	7/24/2015 1:39:15 PM	R27756
Carbon disulfide	ND	10		µg/L	1	7/24/2015 1:39:15 PM	R27756
Carbon Tetrachloride	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Chlorobenzene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Chloroethane	ND	2.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Chloroform	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Chloromethane	ND	3.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
2-Chlorotoluene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
4-Chlorotoluene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
cis-1,2-DCE	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Dibromochloromethane	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Dibromomethane	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
1,1-Dichloroethane	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
1,1-Dichloroethene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
1,2-Dichloropropane	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
1,3-Dichloropropane	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
2,2-Dichloropropane	ND	2.0		µg/L	1	7/24/2015 1:39:15 PM	R27756

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
Project: Wingate Terminal-GW
Lab ID: 1507959-004
Client Sample ID: Trip Blank
Collection Date:
Matrix: TRIP BLANK
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Hexachlorobutadiene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
2-Hexanone	ND	10		µg/L	1	7/24/2015 1:39:15 PM	R27756
Isopropylbenzene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
4-Isopropyltoluene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
4-Methyl-2-pentanone	ND	10		µg/L	1	7/24/2015 1:39:15 PM	R27756
Methylene Chloride	ND	3.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
n-Butylbenzene	ND	3.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
n-Propylbenzene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
sec-Butylbenzene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Styrene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
tert-Butylbenzene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
trans-1,2-DCE	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Trichlorofluoromethane	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Vinyl chloride	ND	1.0		µg/L	1	7/24/2015 1:39:15 PM	R27756
Xylenes, Total	ND	1.5		µg/L	1	7/24/2015 1:39:15 PM	R27756
Surr: 1,2-Dichloroethane-d4	78.6	70-130		%REC	1	7/24/2015 1:39:15 PM	R27756
Surr: 4-Bromofluorobenzene	94.0	70-130		%REC	1	7/24/2015 1:39:15 PM	R27756
Surr: Dibromofluoromethane	105	70-130		%REC	1	7/24/2015 1:39:15 PM	R27756
Surr: Toluene-d8	100	70-130		%REC	1	7/24/2015 1:39:15 PM	R27756

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#: **1507959**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID	**MB-20445**	SampType:	**MBLK**		TestCode:	**EPA 200.8: Metals**				
Client ID:	**PBW**	Batch ID:	**20445**		RunNo:	**27780**				
Prep Date:	**7/27/2015**	Analysis Date:	**7/27/2015**		SeqNo:	**835215**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID	**MSLCS-20445**	SampType:	**LCS**		TestCode:	**EPA 200.8: Metals**				
Client ID:	**LCSW**	Batch ID:	**20445**		RunNo:	**27780**				
Prep Date:	**7/27/2015**	Analysis Date:	**7/27/2015**		SeqNo:	**835217**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.013	0.00050	0.01250	0	105	85	115			

Sample ID	**MSLLLCS-20445**	SampType:	**LCSLL**		TestCode:	**EPA 200.8: Metals**				
Client ID:	**BatchQC**	Batch ID:	**20445**		RunNo:	**27780**				
Prep Date:	**7/27/2015**	Analysis Date:	**7/27/2015**		SeqNo:	**835219**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00052	0.00050	0.0005000	0	104	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#: **1507959**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R27664**	RunNo: **27664**
Prep Date:	Analysis Date: **7/21/2015**	SeqNo: **830797** Units: **mg/L**

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

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R27664**	RunNo: **27664**
Prep Date:	Analysis Date: **7/21/2015**	SeqNo: **830799** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.8	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	96.4	90	110			
Sulfate	9.4	0.50	10.00	0	94.2	90	110			

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
Chloride	ND	0.50								
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
Chloride	5.0	0.50	5.000	0	101	90	110			
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#: **1507959**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **100ng lcs**	SampType: **LCS**			TestCode: **EPA Method 8260B: VOLATILES**					
Client ID: **LCSW**	Batch ID: **R27692**			RunNo: **27692**					
Prep Date:	Analysis Date: **7/22/2015**			SeqNo: **832140**		Units: **µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.4	70	130			
Toluene	20	1.0	20.00	0	100	70	130			
Chlorobenzene	19	1.0	20.00	0	94.4	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	113	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.4	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.6	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID **1507959-001a ms**	SampType: **MS**			TestCode: **EPA Method 8260B: VOLATILES**					
Client ID: **WMW-6**	Batch ID: **R27692**			RunNo: **27692**					
Prep Date:	Analysis Date: **7/22/2015**			SeqNo: **832142**		Units: **µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.5	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
lorobenzene	19	1.0	20.00	0	95.2	70	130			
ı,1-Dichloroethene	22	1.0	20.00	0	111	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	85.3	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.4	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.1	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID **1507959-001a msd**	SampType: **MSD**			TestCode: **EPA Method 8260B: VOLATILES**					
Client ID: **WMW-6**	Batch ID: **R27692**			RunNo: **27692**					
Prep Date:	Analysis Date: **7/22/2015**			SeqNo: **832143**		Units: **µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.3	70	130	6.66	20	
Toluene	20	1.0	20.00	0	98.6	70	130	2.02	20	
Chlorobenzene	19	1.0	20.00	0	93.5	70	130	1.82	20	
1,1-Dichloroethene	20	1.0	20.00	0	102	70	130	8.45	20	
Trichloroethene (TCE)	17	1.0	20.00	0	83.2	70	130	2.56	20	
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.4	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130	0	0	
Surr: Dibromofluoromethane	9.6		10.00		95.9	70	130	0	0	
Surr: Toluene-d8	10		10.00		104	70	130	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#: **1507959**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27692**	RunNo: **27692**
Prep Date:	Analysis Date: **7/22/2015**	SeqNo: **832148** 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#: **1507959**

05-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27692**	RunNo: **27692**
Prep Date:	Analysis Date: **7/22/2015**	SeqNo: **832148** 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	11		10.00		107	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.7	70	130			
Surr: Toluene-d8	9.7		10.00		96.8	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R27756**	RunNo: **27756**
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **834596** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	84.4	70	130			
Toluene	20	1.0	20.00	0	100	70	130			
Chlorobenzene	19	1.0	20.00	0	92.7	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#: **1507959**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **100ng lcs**	SampType: **LCS**			TestCode: **EPA Method 8260B: VOLATILES**					
Client ID: **LCSW**	Batch ID: **R27756**			RunNo: **27756**					
Prep Date:	Analysis Date: **7/24/2015**			SeqNo: **834596**		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)	18	1.0	20.00	0	87.7	70	130			
Surr: 1,2-Dichloroethane-d4	8.1		10.00		81.4	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.3	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.7	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID **rb2**	SampType: **MBLK**			TestCode: **EPA Method 8260B: VOLATILES**					
Client ID: **PBW**	Batch ID: **R27756**			RunNo: **27756**					
Prep Date:	Analysis Date: **7/24/2015**			SeqNo: **834623**		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.
- 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#: **1507959**

05-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27756**	RunNo: **27756**
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **834623** 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	8.9		10.00		89.0	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#: **1507959**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27756**	RunNo: **27756**
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **834623** 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		111	70	130			
Surr: Toluene-d8	11		10.00		106	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R27786**	RunNo: **27786**
Prep Date:	Analysis Date: **7/27/2015**	SeqNo: **835388** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.6	70	130			
Toluene	21	1.0	20.00	0	105	70	130			
Chlorobenzene	20	1.0	20.00	0	99.2	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	114	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	88.6	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.2	70	130			
Surr: Toluene-d8	11		10.00		105	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27786**	RunNo: **27786**
Prep Date:	Analysis Date: **7/27/2015**	SeqNo: **835409** 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								

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#: **1507959**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27786**	RunNo: **27786**
Prep Date:	Analysis Date: **7/27/2015**	SeqNo: **835409** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
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								

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#: **1507959**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27786**	RunNo: **27786**
Prep Date:	Analysis Date: **7/27/2015**	SeqNo: **835409** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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		98.9	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.3	70	130			
Surr: Toluene-d8	10		10.00		102	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

WO#: **1507959**

Hall Environmental Analysis Laboratory, Inc.

05-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **mb-20399**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **20399**	RunNo: **27719**
Prep Date: **7/23/2015**	Analysis Date: **7/23/2015**	SeqNo: **833283** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
,tyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3'-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	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#: **1507959**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **mb-20399**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **20399**	RunNo: **27719**
Prep Date: **7/23/2015**	Analysis Date: **7/23/2015**	SeqNo: **833283** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	140		200.0		69.9	14.9	111			
Surr: Phenol-d5	140		200.0		69.1	11.3	108			
Surr: 2,4,6-Tribromophenol	150		200.0		76.3	15.7	154			
Surr: Nitrobenzene-d5	72		100.0		72.3	47.8	106			
Surr: 2-Fluorobiphenyl	80		100.0		80.3	21.3	123			
Surr: 4-Terphenyl-d14	53		100.0		53.1	14.3	135			

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#: **1507959**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **lcs-20399**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **20399**	RunNo: **27719**
Prep Date: **7/23/2015**	Analysis Date: **7/23/2015**	SeqNo: **833290** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	63	10	100.0	0	63.0	47.8	99.7			
4-Chloro-3-methylphenol	130	10	200.0	0	67.2	58.1	103			
2-Chlorophenol	120	10	200.0	0	60.6	49.5	96.8			
1,4-Dichlorobenzene	64	10	100.0	0	63.6	40.4	89.4			
2,4-Dinitrotoluene	54	10	100.0	0	53.8	38.6	91.3			
N-Nitrosodi-n-propylamine	62	10	100.0	0	62.4	53.9	95.6			
4-Nitrophenol	130	10	200.0	0	66.6	26.4	108			
Pentachlorophenol	110	20	200.0	0	55.9	36.5	86.6			
Phenol	130	10	200.0	0	64.6	29.3	108			
Pyrene	53	10	100.0	0	52.9	45.7	100			
1,2,4-Trichlorobenzene	69	10	100.0	0	68.8	39.3	94.5			
Surr: 2-Fluorophenol	120		200.0		61.4	14.9	111			
Surr: Phenol-d5	130		200.0		63.0	11.3	108			
Surr: 2,4,6-Tribromophenol	150		200.0		76.4	15.7	154			
Surr: Nitrobenzene-d5	66		100.0		65.7	47.8	106			
Surr: 2-Fluorobiphenyl	65		100.0		64.7	21.3	123			
Surr: 4-Terphenyl-d14	54		100.0		54.4	14.3	135			

Sample ID **lcsd-20399**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **20399**	RunNo: **27719**
Prep Date: **7/23/2015**	Analysis Date: **7/23/2015**	SeqNo: **833292** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	60	10	100.0	0	60.0	47.8	99.7	4.98	28.2	
4-Chloro-3-methylphenol	130	10	200.0	0	63.3	58.1	103	5.95	24.4	
2-Chlorophenol	110	10	200.0	0	53.1	49.5	96.8	13.1	28.1	
1,4-Dichlorobenzene	54	10	100.0	0	53.5	40.4	89.4	17.2	31.2	
2,4-Dinitrotoluene	50	10	100.0	0	50.1	38.6	91.3	7.12	44.4	
N-Nitrosodi-n-propylamine	61	10	100.0	0	60.9	53.9	95.6	2.40	24.2	
4-Nitrophenol	110	10	200.0	0	57.3	26.4	108	15.0	36.6	
Pentachlorophenol	97	20	200.0	0	48.5	36.5	86.6	14.2	29.5	
Phenol	120	10	200.0	0	60.4	29.3	108	6.78	30	
Pyrene	54	10	100.0	0	53.9	45.7	100	1.87	31	
1,2,4-Trichlorobenzene	58	10	100.0	0	58.4	39.3	94.5	16.4	24	
Surr: 2-Fluorophenol	100		200.0		52.3	14.9	111	0	0	
Surr: Phenol-d5	110		200.0		57.1	11.3	108	0	0	
Surr: 2,4,6-Tribromophenol	130		200.0		65.5	15.7	154	0	0	
Surr: Nitrobenzene-d5	58		100.0		57.9	47.8	106	0	0	
Surr: 2-Fluorobiphenyl	59		100.0		59.1	21.3	123	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#: **1507959**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **lcsd-20399**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **20399**	RunNo: **27719**
Prep Date: **7/23/2015**	Analysis Date: **7/23/2015**	SeqNo: **833292** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	46		100.0		46.2	14.3	135	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#: **1507959**

05-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **MB-20514**	SampType: **MBLK**	TestCode: **EPA Method 7470: Mercury**
Client ID: **PBW**	Batch ID: **20514**	RunNo: **27855**
Prep Date: **7/29/2015**	Analysis Date: **7/30/2015**	SeqNo: **837935** Units: **mg/L**

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

Sample ID **LCS-20514**	SampType: **LCS**	TestCode: **EPA Method 7470: Mercury**
Client ID: **LCSW**	Batch ID: **20514**	RunNo: **27855**
Prep Date: **7/29/2015**	Analysis Date: **7/30/2015**	SeqNo: **837936** 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	99.5	80	120			

Sample ID **1507959-001EMS**	SampType: **MS**	TestCode: **EPA Method 7470: Mercury**
Client ID: **WMW-6**	Batch ID: **20514**	RunNo: **27855**
Prep Date: **7/29/2015**	Analysis Date: **7/30/2015**	SeqNo: **837938** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0047	0.00020	0.005000	0	93.2	75	125			

Sample ID **1507959-001EMSD**	SampType: **MSD**	TestCode: **EPA Method 7470: Mercury**
Client ID: **WMW-6**	Batch ID: **20514**	RunNo: **27855**
Prep Date: **7/29/2015**	Analysis Date: **7/30/2015**	SeqNo: **837939** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0046	0.00020	0.005000	0	92.8	75	125	0.348	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#: **1507959**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 6010B: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R27727**	RunNo: **27727**
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **833615** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								
Sodium	ND	1.0								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 6010B: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R27727**	RunNo: **27727**
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **833616** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.51	0.020	0.5000	0	103	80	120			
Barium	0.48	0.020	0.5000	0	96.8	80	120			
Cadmium	0.49	0.0020	0.5000	0	98.1	80	120			
Calcium	53	1.0	50.00	0	106	80	120			
Chromium	0.48	0.0060	0.5000	0	96.9	80	120			
Lead	0.49	0.0050	0.5000	0	97.7	80	120			
Selenium	0.48	0.050	0.5000	0	95.9	80	120			
Silver	0.099	0.0050	0.1000	0	99.1	80	120			
Sodium	51	1.0	50.00	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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507959**

05-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **mb-1**	SampType: **MBLK**			TestCode: **SM2320B: Alkalinity**					
Client ID: **PBW**	Batch ID: **R27706**			RunNo: **27706**					
Prep Date:	Analysis Date: **7/22/2015**			SeqNo: **832739**		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: **R27706**			RunNo: **27706**					
Prep Date:	Analysis Date: **7/22/2015**			SeqNo: **832740**		Units: **mg/L CaCO3**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79.36	20.00	80.00	0	99.2	90	110			

Sample ID **mb-2**	SampType: **MBLK**			TestCode: **SM2320B: Alkalinity**					
Client ID: **PBW**	Batch ID: **R27706**			RunNo: **27706**					
Prep Date:	Analysis Date: **7/22/2015**			SeqNo: **832765**		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: **R27706**			RunNo: **27706**					
Prep Date:	Analysis Date: **7/22/2015**			SeqNo: **832766**		Units: **mg/L CaCO3**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79.04	20.00	80.00	0	98.8	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#: **1507959**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **MB-20350**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW**	Batch ID: **20350**	RunNo: **27680**
Prep Date: **7/21/2015**	Analysis Date: **7/22/2015**	SeqNo: **831675** 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-20350**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW**	Batch ID: **20350**	RunNo: **27680**
Prep Date: **7/21/2015**	Analysis Date: **7/22/2015**	SeqNo: **831676** 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.
- 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

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 Gallup   Work Order Number: 1507959   RcptNo: 1

Received by/date: CS 07/21/15

Logged By: Lindsay Mangin 7/21/2015 4:13:00 PM

Completed By: Lindsay Mangin 7/22/2015 7:39:39 AM

Reviewed By: CS 07/22/15

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? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? ~~Yes ☑~~ No ☑
9. Was preservative added to bottles? 07/22/15 Yes ☑ ~~No ☑~~ NA ☐

For metals analysis: Added 1mL HNO_3 to -003E for acceptable pH Held in login 2 hours after preservation

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: 9 (<2 or >12 unless noted)

12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)

Adjusted? Yes

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.)

Checked by: [initials] 07/22 @ 0837

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	2.1	Good	Yes			

Chain-of-Custody Record

ent: WESTERN REFINING
GALLUP REFINERY
iling Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
one #: 505-722-3833
ail or Fax#: CHERYL.JOHNSON@WNR.COM
/QC Package: Standard ☐ Level 4 (Full Validation)
creditation NELAP ☐ Other
EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: WINGATE TERMINAL - GW
Project #:
Project Manager: CHERYL JOHNSON
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 2.1°C

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

ate	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1507959
0-15	1000	WATER	WMW-6	40mL VOA-3	HCL	-001
				1L AMBER	NEAT	
				PLASTIC-1	HNO_3	
				PLASTIC-1	HNO_3	
				PLASTIC-1	H_2SO_4	
				PLASTIC-1	NEAT	
0-15	1200	WATER	WMW-7	40mL VOA-3	HCL	-002
				1L AMBER	NEAT	
				PLASTIC-1	HNO_3	
				PLASTIC-1	HNO_3	
				PLASTIC-1	H_2SO_4	
				PLASTIC-1	NEAT	

Analysis Request																
BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	SEE ATTACHED LIST				Air Bubbles (Y or N)
									✓						
										✓					
											✓				
											✓				
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te.	Time:	Relinquished by:	Received by:	Date	Time
15	0720			7/20/15	1CC
te:	Time:	Relinquished by:	Received by:	Date	Time
15	1413		Celina Sanchez	07/21/15	1613

Remarks:

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

Chain-of-Custody Record

ent: WESTERN REFINING
GALLUP REFINERY
iling Address: 92 GIANT CROSSING RD
GALLUP NM 87301
one #: 505-722-3833
ail or Fax#: CHERYL.JOHNSON@WNR.COM
/QC Package:
Standard ☐ Level 4 (Full Validation)
creditation
NELAP ☐ Other
EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: WINGATE TERMINAL - GW
Project #:
Project Manager: CHERYL JOHNSON
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 2.1°C

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1507959	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	SEE ATTACHED LIST	Air Bubbles (Y or N)
7/15	—	WATER	DUP01	40 mL VOA-3	HCL	-003										✓			
				1L AMBER	NEAT												✓		
				PLASTIC-1	HNO_3													✓	
				PLASTIC-1	HNO_3													✓	
				PLASTIC-1	H_2SO_4													✓	
				PLASTIC-1	NEAT													✓	
—	—	WATER	TRIP BLANK	40mL VOA-2	HCL	-004										✓			

Date	Time	Relinquished by	Received by	Date	Time
7.21.15	0720			7-21-15	100
		Relinquished by:	Received by:	Date	Time
45	1113		Celina Sanchez	07/21/15	1613

Remarks:

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

Annual Groundwater Sampling Event
Western Refining Southwest, Inc.
Wingate Terminal - Gallup, New Mexico

METHOD
8260 VOCs
8270 SVOCs
3010/6010 Metals - Dissolved Arsenic Barium Cadmium Calcium Chromium Lead Selenium Silver Sodium
7470 Mercury - Dissolved
SM2320B Alkalinity, Total as CaCO3
SM2540C Total Dissolved Solids
EPA 9040 pH
EPA 300.0 Chloride Sulfate Nitrogen, Nitrate
EPA Method 200.8 Total Uranium

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 05, 2015

Cheryl Johnson
Western Refining Southwest
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX

RE: Wingate Terminal-GW OrderNo.: 1507960

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 7/21/2015 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 qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest
Project: Wingate Terminal-GW
Lab ID: 1507960-001 **Matrix:** AQUEOUS

Client Sample ID: WMW-1R
Collection Date: 7/20/2015 2:00:00 PM
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst: **DBD**	
Uranium	0.0080	0.00050		mg/L	1	7/30/2015 7:29:16 PM	20445
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	170	10		mg/L	20	7/21/2015 10:09:36 PM	R27664
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	7/21/2015 9:57:12 PM	R27664
Sulfate	630	10	*	mg/L	20	7/21/2015 10:09:36 PM	R27664
SM2320B: ALKALINITY						Analyst: **JRR**	
Bicarbonate (As CaCO3)	221.5	20.00		mg/L CaCO3	1	7/22/2015 9:45:59 PM	R27706
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	7/22/2015 9:45:59 PM	R27706
Total Alkalinity (as CaCO3)	221.5	20.00		mg/L CaCO3	1	7/22/2015 9:45:59 PM	R27706
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	1610	40.0	*	mg/L	1	7/25/2015 2:57:00 PM	20415
SM4500-H+B: PH						Analyst: **JRR**	
pH	7.86	1.68	H	pH units	1	7/22/2015 9:45:59 PM	R27706
EPA METHOD 7470: MERCURY						Analyst: **JLF**	
Mercury	ND	0.00020		mg/L	1	7/30/2015 10:31:00 AM	20514
EPA METHOD 6010B: DISSOLVED METALS						Analyst: **MED**	
Arsenic	0.027	0.020		mg/L	1	7/24/2015 10:11:41 AM	R27727
Barium	0.046	0.020		mg/L	1	7/24/2015 10:11:41 AM	R27727
Cadmium	ND	0.0020		mg/L	1	7/24/2015 10:11:41 AM	R27727
Calcium	180	5.0		mg/L	5	7/24/2015 10:56:10 AM	R27727
Chromium	ND	0.0060		mg/L	1	7/24/2015 10:11:41 AM	R27727
Lead	ND	0.0050		mg/L	1	7/24/2015 10:11:41 AM	R27727
Selenium	ND	0.050		mg/L	1	7/24/2015 10:11:41 AM	R27727
Silver	ND	0.0050		mg/L	1	7/24/2015 10:11:41 AM	R27727
Sodium	280	5.0		mg/L	5	7/24/2015 10:56:10 AM	R27727
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Acenaphthylene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Aniline	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Anthracene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Azobenzene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Benz(a)anthracene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Benzo(a)pyrene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Benzo(b)fluoranthene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Benzo(g,h,i)perylene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Benzo(k)fluoranthene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399

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
Project: Wingate Terminal-GW
Lab ID: 1507960-001 **Matrix:** AQUEOUS

Client Sample ID: WMW-1R
Collection Date: 7/20/2015 2:00:00 PM
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Benzoic acid	ND	20		µg/L	1	7/23/2015 2:50:33 PM	20399
Benzyl alcohol	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Bis(2-chloroethyl)ether	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
4-Bromophenyl phenyl ether	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Butyl benzyl phthalate	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Carbazole	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
4-Chloro-3-methylphenol	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
4-Chloroaniline	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
2-Chloronaphthalene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
2-Chlorophenol	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Chrysene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Di-n-butyl phthalate	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Di-n-octyl phthalate	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Dibenz(a,h)anthracene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Dibenzofuran	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
1,2-Dichlorobenzene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
1,3-Dichlorobenzene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
1,4-Dichlorobenzene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
3,3'-Dichlorobenzidine	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Diethyl phthalate	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Dimethyl phthalate	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
2,4-Dichlorophenol	ND	20		µg/L	1	7/23/2015 2:50:33 PM	20399
2,4-Dimethylphenol	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	7/23/2015 2:50:33 PM	20399
2,4-Dinitrophenol	ND	20		µg/L	1	7/23/2015 2:50:33 PM	20399
2,4-Dinitrotoluene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
2,6-Dinitrotoluene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Fluoranthene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Fluorene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Hexachlorobenzene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Hexachlorobutadiene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Hexachlorocyclopentadiene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Hexachloroethane	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Isophorone	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399

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

Qualifiers:

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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
Project: Wingate Terminal-GW
Lab ID: 1507960-001 **Matrix:** AQUEOUS

Client Sample ID: WMW-1R
Collection Date: 7/20/2015 2:00:00 PM
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1-Methylnaphthalene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
2-Methylnaphthalene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
2-Methylphenol	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
3+4-Methylphenol	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
N-Nitrosodimethylamine	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
N-Nitrosodiphenylamine	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Naphthalene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
2-Nitroaniline	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
3-Nitroaniline	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
4-Nitroaniline	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Nitrobenzene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
2-Nitrophenol	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
4-Nitrophenol	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Pentachlorophenol	ND	20		µg/L	1	7/23/2015 2:50:33 PM	20399
Phenanthrene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Phenol	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Pyrene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Pyridine	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
1,2,4-Trichlorobenzene	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
2,4,5-Trichlorophenol	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
2,4,6-Trichlorophenol	ND	10		µg/L	1	7/23/2015 2:50:33 PM	20399
Surr: 2-Fluorophenol	15.5	14.9-111		%REC	1	7/23/2015 2:50:33 PM	20399
Surr: Phenol-d5	22.3	11.3-108		%REC	1	7/23/2015 2:50:33 PM	20399
Surr: 2,4,6-Tribromophenol	23.9	15.7-154		%REC	1	7/23/2015 2:50:33 PM	20399
Surr: Nitrobenzene-d5	64.3	47.8-106		%REC	1	7/23/2015 2:50:33 PM	20399
Surr: 2-Fluorobiphenyl	67.6	21.3-123		%REC	1	7/23/2015 2:50:33 PM	20399
Surr: 4-Terphenyl-d14	47.5	14.3-135		%REC	1	7/23/2015 2:50:33 PM	20399
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
Toluene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
Ethylbenzene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
Naphthalene	ND	2.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
1-Methylnaphthalene	ND	4.0		µg/L	1	7/22/2015 3:55:35 PM	R27692

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

Qualifiers:

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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
Client Sample ID: WMW-1R
Project: Wingate Terminal-GW
Collection Date: 7/20/2015 2:00:00 PM
Lab ID: 1507960-001 **Matrix:** AQUEOUS **Received Date:** 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**
2-Methylnaphthalene	ND	4.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
Acetone	ND	10		µg/L	1	7/22/2015 3:55:35 PM	R27692
Bromobenzene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
Bromodichloromethane	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
Bromoform	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
Bromomethane	ND	3.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
2-Butanone	ND	10		µg/L	1	7/22/2015 3:55:35 PM	R27692
Carbon disulfide	ND	10		µg/L	1	7/22/2015 3:55:35 PM	R27692
Carbon Tetrachloride	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
Chlorobenzene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
Chloroethane	ND	2.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
Chloroform	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
Chloromethane	ND	3.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
2-Chlorotoluene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
4-Chlorotoluene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
cis-1,2-DCE	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
Dibromochloromethane	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
Dibromomethane	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
1,1-Dichloroethane	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
1,1-Dichloroethene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
1,2-Dichloropropane	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
1,3-Dichloropropane	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
2,2-Dichloropropane	ND	2.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
1,1-Dichloropropene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
Hexachlorobutadiene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
2-Hexanone	ND	10		µg/L	1	7/22/2015 3:55:35 PM	R27692
Isopropylbenzene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
4-Isopropyltoluene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
4-Methyl-2-pentanone	ND	10		µg/L	1	7/22/2015 3:55:35 PM	R27692
Methylene Chloride	ND	3.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
n-Butylbenzene	ND	3.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
n-Propylbenzene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
sec-Butylbenzene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692

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
Project: Wingate Terminal-GW
Lab ID: 1507960-001 **Matrix:** AQUEOUS

Client Sample ID: WMW-1R
Collection Date: 7/20/2015 2:00:00 PM
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Styrene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
tert-Butylbenzene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
trans-1,2-DCE	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
Trichlorofluoromethane	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
Vinyl chloride	ND	1.0		µg/L	1	7/22/2015 3:55:35 PM	R27692
Xylenes, Total	ND	1.5		µg/L	1	7/22/2015 3:55:35 PM	R27692
Surr: 1,2-Dichloroethane-d4	99.4	70-130		%REC	1	7/22/2015 3:55:35 PM	R27692
Surr: 4-Bromofluorobenzene	111	70-130		%REC	1	7/22/2015 3:55:35 PM	R27692
Surr: Dibromofluoromethane	97.3	70-130		%REC	1	7/22/2015 3:55:35 PM	R27692
Surr: Toluene-d8	103	70-130		%REC	1	7/22/2015 3:55:35 PM	R27692

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Qualifiers:

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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
Client Sample ID: WMW-5
Project: Wingate Terminal-GW
Collection Date: 7/20/2015 3:15:00 PM
Lab ID: 1507960-002
Matrix: AQUEOUS
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst: **DBD**	
Uranium	0.036	0.0025	*	mg/L	5	7/31/2015 3:14:20 PM	R27899
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	400	10	*	mg/L	20	7/21/2015 10:34:25 PM	R27664
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	7/21/2015 10:22:01 PM	R27664
Sulfate	1900	50	*	mg/L	100	7/30/2015 4:49:16 PM	R27872
SM2320B: ALKALINITY						Analyst: **JRR**	
Bicarbonate (As CaCO3)	845.0	20.00		mg/L CaCO3	1	7/22/2015 9:57:48 PM	R27706
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	7/22/2015 9:57:48 PM	R27706
Total Alkalinity (as CaCO3)	845.0	20.00		mg/L CaCO3	1	7/22/2015 9:57:48 PM	R27706
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	4350	100	*	mg/L	1	7/25/2015 2:57:00 PM	20415
SM4500-H+B: PH						Analyst: **JRR**	
pH	7.88	1.68	H	pH units	1	7/22/2015 9:57:48 PM	R27706
EPA METHOD 7470: MERCURY						Analyst: **JLF**	
Mercury	ND	0.00020		mg/L	1	7/30/2015 10:33:04 AM	20514
EPA METHOD 6010B: DISSOLVED METALS						Analyst: **MED**	
Arsenic	ND	0.020		mg/L	1	7/24/2015 10:13:22 AM	R27727
Barium	ND	0.020		mg/L	1	7/24/2015 10:13:22 AM	R27727
Cadmium	ND	0.0020		mg/L	1	7/24/2015 10:13:22 AM	R27727
Calcium	160	5.0		mg/L	5	7/24/2015 11:05:39 AM	R27727
Chromium	ND	0.0060		mg/L	1	7/24/2015 10:13:22 AM	R27727
Lead	0.0050	0.0050		mg/L	1	7/24/2015 10:13:22 AM	R27727
Selenium	ND	0.050		mg/L	1	7/24/2015 10:13:22 AM	R27727
Silver	ND	0.0050		mg/L	1	7/24/2015 10:13:22 AM	R27727
Sodium	1200	50		mg/L	50	7/24/2015 10:57:46 AM	R27727
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Acenaphthylene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Aniline	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Anthracene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Azobenzene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Benz(a)anthracene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Benzo(a)pyrene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Benzo(b)fluoranthene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Benzo(g,h,i)perylene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Benzo(k)fluoranthene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399

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Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest
Project: Wingate Terminal-GW
Lab ID: 1507960-002 **Matrix:** AQUEOUS

Client Sample ID: WMW-5
Collection Date: 7/20/2015 3:15:00 PM
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Benzoic acid	ND	20		µg/L	1	7/23/2015 3:18:22 PM	20399
Benzyl alcohol	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Bis(2-chloroethyl)ether	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
4-Bromophenyl phenyl ether	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Butyl benzyl phthalate	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Carbazole	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
4-Chloro-3-methylphenol	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
4-Chloroaniline	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
2-Chloronaphthalene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
2-Chlorophenol	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Chrysene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Di-n-butyl phthalate	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Di-n-octyl phthalate	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Dibenz(a,h)anthracene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Dibenzofuran	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
1,2-Dichlorobenzene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
1,3-Dichlorobenzene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
1,4-Dichlorobenzene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
3,3'-Dichlorobenzidine	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Diethyl phthalate	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Dimethyl phthalate	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
2,4-Dichlorophenol	ND	20		µg/L	1	7/23/2015 3:18:22 PM	20399
2,4-Dimethylphenol	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	7/23/2015 3:18:22 PM	20399
2,4-Dinitrophenol	ND	20		µg/L	1	7/23/2015 3:18:22 PM	20399
2,4-Dinitrotoluene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
2,6-Dinitrotoluene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Fluoranthene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Fluorene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Hexachlorobenzene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Hexachlorobutadiene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Hexachlorocyclopentadiene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Hexachloroethane	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Isophorone	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399

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Qualifiers:

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- 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
Project: Wingate Terminal-GW
Lab ID: 1507960-002 **Matrix:** AQUEOUS

Client Sample ID: WMW-5
Collection Date: 7/20/2015 3:15:00 PM
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1-Methylnaphthalene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
2-Methylnaphthalene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
2-Methylphenol	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
3+4-Methylphenol	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
N-Nitrosodimethylamine	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
N-Nitrosodiphenylamine	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Naphthalene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
2-Nitroaniline	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
3-Nitroaniline	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
4-Nitroaniline	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Nitrobenzene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
2-Nitrophenol	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
4-Nitrophenol	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Pentachlorophenol	ND	20		µg/L	1	7/23/2015 3:18:22 PM	20399
Phenanthrene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Phenol	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Pyrene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Pyridine	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
1,2,4-Trichlorobenzene	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
2,4,5-Trichlorophenol	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
2,4,6-Trichlorophenol	ND	10		µg/L	1	7/23/2015 3:18:22 PM	20399
Surr: 2-Fluorophenol	63.3	14.9-111		%REC	1	7/23/2015 3:18:22 PM	20399
Surr: Phenol-d5	56.8	11.3-108		%REC	1	7/23/2015 3:18:22 PM	20399
Surr: 2,4,6-Tribromophenol	84.9	15.7-154		%REC	1	7/23/2015 3:18:22 PM	20399
Surr: Nitrobenzene-d5	87.3	47.8-106		%REC	1	7/23/2015 3:18:22 PM	20399
Surr: 2-Fluorobiphenyl	90.1	21.3-123		%REC	1	7/23/2015 3:18:22 PM	20399
Surr: 4-Terphenyl-d14	64.8	14.3-135		%REC	1	7/23/2015 3:18:22 PM	20399
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
Toluene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
Ethylbenzene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
Naphthalene	ND	2.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
1-Methylnaphthalene	ND	4.0		µg/L	1	7/24/2015 2:08:04 PM	R27756

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

Qualifiers:

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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
Project: Wingate Terminal-GW
Lab ID: 1507960-002 **Matrix:** AQUEOUS

Client Sample ID: WMW-5
Collection Date: 7/20/2015 3:15:00 PM
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
2-Methylnaphthalene	ND	4.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
Acetone	ND	10		µg/L	1	7/24/2015 2:08:04 PM	R27756
Bromobenzene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
Bromodichloromethane	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
Bromoform	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
Bromomethane	ND	3.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
2-Butanone	ND	10		µg/L	1	7/24/2015 2:08:04 PM	R27756
Carbon disulfide	ND	10		µg/L	1	7/24/2015 2:08:04 PM	R27756
Carbon Tetrachloride	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
Chlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
Chloroethane	ND	2.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
Chloroform	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
Chloromethane	ND	3.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
2-Chlorotoluene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
4-Chlorotoluene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
cis-1,2-DCE	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
Dibromochloromethane	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
Dibromomethane	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
1,1-Dichloroethane	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
1,1-Dichloroethene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
1,2-Dichloropropane	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
1,3-Dichloropropane	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
2,2-Dichloropropane	ND	2.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
1,1-Dichloropropene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
Hexachlorobutadiene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
2-Hexanone	ND	10		µg/L	1	7/24/2015 2:08:04 PM	R27756
Isopropylbenzene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
4-Isopropyltoluene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
4-Methyl-2-pentanone	ND	10		µg/L	1	7/24/2015 2:08:04 PM	R27756
Methylene Chloride	ND	3.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
n-Butylbenzene	ND	3.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
n-Propylbenzene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
sec-Butylbenzene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756

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
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest
Project: Wingate Terminal-GW
Lab ID: 1507960-002 **Matrix:** AQUEOUS

Client Sample ID: WMW-5
Collection Date: 7/20/2015 3:15:00 PM
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Styrene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
tert-Butylbenzene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
trans-1,2-DCE	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
Trichlorofluoromethane	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
Vinyl chloride	ND	1.0		µg/L	1	7/24/2015 2:08:04 PM	R27756
Xylenes, Total	ND	1.5		µg/L	1	7/24/2015 2:08:04 PM	R27756
Surr: 1,2-Dichloroethane-d4	81.3	70-130		%REC	1	7/24/2015 2:08:04 PM	R27756
Surr: 4-Bromofluorobenzene	113	70-130		%REC	1	7/24/2015 2:08:04 PM	R27756
Surr: Dibromofluoromethane	102	70-130		%REC	1	7/24/2015 2:08:04 PM	R27756
Surr: Toluene-d8	105	70-130		%REC	1	7/24/2015 2:08:04 PM	R27756

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
Project: Wingate Terminal-GW
Lab ID: 1507960-003 **Matrix:** AQUEOUS

Client Sample ID: EB01
Collection Date: 7/20/2015 5:00:00 PM
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst: **DBD**	
Uranium	ND	0.00050		mg/L	1	7/31/2015 2:39:00 PM	R27899
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	0.50		mg/L	1	7/21/2015 10:46:49 PM	R27664
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	7/21/2015 10:46:49 PM	R27664
Sulfate	ND	0.50		mg/L	1	7/21/2015 10:46:49 PM	R27664
SM2320B: ALKALINITY						Analyst: **JRR**	
Bicarbonate (As CaCO3)	ND	20.00		mg/L CaCO3	1	7/22/2015 10:27:44 PM	R27706
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	7/22/2015 10:27:44 PM	R27706
Total Alkalinity (as CaCO3)	ND	20.00		mg/L CaCO3	1	7/22/2015 10:27:44 PM	R27706
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	ND	20.0		mg/L	1	7/25/2015 2:57:00 PM	20415
SM4500-H+B: PH						Analyst: **JRR**	
pH	6.41	1.68	H	pH units	1	7/22/2015 10:27:44 PM	R27706
EPA METHOD 7470: MERCURY						Analyst: **JLF**	
Mercury	ND	0.00020		mg/L	1	7/30/2015 10:35:09 AM	20514
EPA METHOD 6010B: DISSOLVED METALS						Analyst: **MED**	
Arsenic	ND	0.020		mg/L	1	7/24/2015 10:15:05 AM	R27727
Barium	ND	0.020		mg/L	1	7/24/2015 10:15:05 AM	R27727
Cadmium	ND	0.0020		mg/L	1	7/24/2015 10:15:05 AM	R27727
Calcium	ND	1.0		mg/L	1	7/24/2015 10:15:05 AM	R27727
Chromium	ND	0.0060		mg/L	1	7/24/2015 10:15:05 AM	R27727
Lead	ND	0.0050		mg/L	1	7/24/2015 10:15:05 AM	R27727
Selenium	ND	0.050		mg/L	1	7/24/2015 10:15:05 AM	R27727
Silver	ND	0.0050		mg/L	1	7/24/2015 10:15:05 AM	R27727
Sodium	ND	1.0		mg/L	1	7/24/2015 10:15:05 AM	R27727
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Acenaphthylene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Aniline	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Anthracene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Azobenzene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Benz(a)anthracene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Benzo(a)pyrene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Benzo(b)fluoranthene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Benzo(g,h,i)perylene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Benzo(k)fluoranthene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399

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
Client Sample ID: EB01
Project: Wingate Terminal-GW
Collection Date: 7/20/2015 5:00:00 PM
Lab ID: 1507960-003
Matrix: AQUEOUS
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Benzoic acid	ND	20		µg/L	1	7/23/2015 3:46:12 PM	20399
Benzyl alcohol	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Bis(2-chloroethyl)ether	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
4-Bromophenyl phenyl ether	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Butyl benzyl phthalate	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Carbazole	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
4-Chloro-3-methylphenol	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
4-Chloroaniline	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
2-Chloronaphthalene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
2-Chlorophenol	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Chrysene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Di-n-butyl phthalate	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Di-n-octyl phthalate	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Dibenz(a,h)anthracene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Dibenzofuran	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
1,2-Dichlorobenzene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
1,3-Dichlorobenzene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
1,4-Dichlorobenzene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
3,3'-Dichlorobenzidine	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Diethyl phthalate	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Dimethyl phthalate	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
2,4-Dichlorophenol	ND	20		µg/L	1	7/23/2015 3:46:12 PM	20399
2,4-Dimethylphenol	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	7/23/2015 3:46:12 PM	20399
2,4-Dinitrophenol	ND	20		µg/L	1	7/23/2015 3:46:12 PM	20399
2,4-Dinitrotoluene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
2,6-Dinitrotoluene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Fluoranthene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Fluorene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Hexachlorobenzene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Hexachlorobutadiene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Hexachlorocyclopentadiene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Hexachloroethane	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Isophorone	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399

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
Project: Wingate Terminal-GW
Lab ID: 1507960-003 **Matrix:** AQUEOUS

Client Sample ID: EB01
Collection Date: 7/20/2015 5:00:00 PM
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1-Methylnaphthalene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
2-Methylnaphthalene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
2-Methylphenol	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
3+4-Methylphenol	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
N-Nitrosodimethylamine	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
N-Nitrosodiphenylamine	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Naphthalene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
2-Nitroaniline	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
3-Nitroaniline	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
4-Nitroaniline	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Nitrobenzene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
2-Nitrophenol	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
4-Nitrophenol	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Pentachlorophenol	ND	20		µg/L	1	7/23/2015 3:46:12 PM	20399
Phenanthrene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Phenol	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Pyrene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Pyridine	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
1,2,4-Trichlorobenzene	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
2,4,5-Trichlorophenol	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
2,4,6-Trichlorophenol	ND	10		µg/L	1	7/23/2015 3:46:12 PM	20399
Surr: 2-Fluorophenol	43.4	14.9-111		%REC	1	7/23/2015 3:46:12 PM	20399
Surr: Phenol-d5	41.1	11.3-108		%REC	1	7/23/2015 3:46:12 PM	20399
Surr: 2,4,6-Tribromophenol	57.9	15.7-154		%REC	1	7/23/2015 3:46:12 PM	20399
Surr: Nitrobenzene-d5	64.8	47.8-106		%REC	1	7/23/2015 3:46:12 PM	20399
Surr: 2-Fluorobiphenyl	63.5	21.3-123		%REC	1	7/23/2015 3:46:12 PM	20399
Surr: 4-Terphenyl-d14	47.1	14.3-135		%REC	1	7/23/2015 3:46:12 PM	20399
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
Toluene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
Ethylbenzene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
Naphthalene	ND	2.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
1-Methylnaphthalene	ND	4.0		µg/L	1	7/24/2015 2:36:54 PM	R27756

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
Project: Wingate Terminal-GW
Lab ID: 1507960-003 **Matrix:** AQUEOUS

Client Sample ID: EB01
Collection Date: 7/20/2015 5:00:00 PM
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
2-Methylnaphthalene	ND	4.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
Acetone	ND	10		µg/L	1	7/24/2015 2:36:54 PM	R27756
Bromobenzene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
Bromodichloromethane	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
Bromoform	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
Bromomethane	ND	3.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
2-Butanone	ND	10		µg/L	1	7/24/2015 2:36:54 PM	R27756
Carbon disulfide	ND	10		µg/L	1	7/24/2015 2:36:54 PM	R27756
Carbon Tetrachloride	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
Chlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
Chloroethane	ND	2.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
Chloroform	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
Chloromethane	ND	3.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
2-Chlorotoluene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
4-Chlorotoluene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
cis-1,2-DCE	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
Dibromochloromethane	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
Dibromomethane	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
1,1-Dichloroethane	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
1,1-Dichloroethene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
1,2-Dichloropropane	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
1,3-Dichloropropane	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
2,2-Dichloropropane	ND	2.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
1,1-Dichloropropene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
Hexachlorobutadiene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
2-Hexanone	ND	10		µg/L	1	7/24/2015 2:36:54 PM	R27756
Isopropylbenzene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
4-Isopropyltoluene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
4-Methyl-2-pentanone	ND	10		µg/L	1	7/24/2015 2:36:54 PM	R27756
Methylene Chloride	ND	3.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
n-Butylbenzene	ND	3.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
n-Propylbenzene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
sec-Butylbenzene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756

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
Project: Wingate Terminal-GW
Lab ID: 1507960-003 **Matrix:** AQUEOUS

Client Sample ID: EB01
Collection Date: 7/20/2015 5:00:00 PM
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Styrene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
tert-Butylbenzene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
trans-1,2-DCE	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
Trichlorofluoromethane	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
Vinyl chloride	ND	1.0		µg/L	1	7/24/2015 2:36:54 PM	R27756
Xylenes, Total	ND	1.5		µg/L	1	7/24/2015 2:36:54 PM	R27756
Surr: 1,2-Dichloroethane-d4	85.3	70-130		%REC	1	7/24/2015 2:36:54 PM	R27756
Surr: 4-Bromofluorobenzene	104	70-130		%REC	1	7/24/2015 2:36:54 PM	R27756
Surr: Dibromofluoromethane	103	70-130		%REC	1	7/24/2015 2:36:54 PM	R27756
Surr: Toluene-d8	99.5	70-130		%REC	1	7/24/2015 2:36:54 PM	R27756

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
Client Sample ID: Trip Blank
Project: Wingate Terminal-GW
Collection Date:
Lab ID: 1507960-004
Matrix: TRIP BLANK
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Toluene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Ethylbenzene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Naphthalene	ND	2.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
1-Methylnaphthalene	ND	4.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
2-Methylnaphthalene	ND	4.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Acetone	ND	10		µg/L	1	7/24/2015 3:05:45 PM	R27756
Bromobenzene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Bromodichloromethane	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Bromoform	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Bromomethane	ND	3.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
2-Butanone	ND	10		µg/L	1	7/24/2015 3:05:45 PM	R27756
Carbon disulfide	ND	10		µg/L	1	7/24/2015 3:05:45 PM	R27756
Carbon Tetrachloride	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Chlorobenzene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Chloroethane	ND	2.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Chloroform	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Chloromethane	ND	3.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
2-Chlorotoluene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
4-Chlorotoluene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
cis-1,2-DCE	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Dibromochloromethane	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Dibromomethane	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
1,1-Dichloroethane	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
1,1-Dichloroethene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
1,2-Dichloropropane	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
1,3-Dichloropropane	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
2,2-Dichloropropane	ND	2.0		µg/L	1	7/24/2015 3:05:45 PM	R27756

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
Client Sample ID: Trip Blank
Project: Wingate Terminal-GW
Collection Date:
Lab ID: 1507960-004
Matrix: TRIP BLANK
Received Date: 7/21/2015 4:13:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Hexachlorobutadiene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
2-Hexanone	ND	10		µg/L	1	7/24/2015 3:05:45 PM	R27756
Isopropylbenzene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
4-Isopropyltoluene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
4-Methyl-2-pentanone	ND	10		µg/L	1	7/24/2015 3:05:45 PM	R27756
Methylene Chloride	ND	3.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
n-Butylbenzene	ND	3.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
n-Propylbenzene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
sec-Butylbenzene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Styrene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
tert-Butylbenzene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
trans-1,2-DCE	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Trichlorofluoromethane	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Vinyl chloride	ND	1.0		µg/L	1	7/24/2015 3:05:45 PM	R27756
Xylenes, Total	ND	1.5		µg/L	1	7/24/2015 3:05:45 PM	R27756
Surr: 1,2-Dichloroethane-d4	75.2	70-130		%REC	1	7/24/2015 3:05:45 PM	R27756
Surr: 4-Bromofluorobenzene	104	70-130		%REC	1	7/24/2015 3:05:45 PM	R27756
Surr: Dibromofluoromethane	97.4	70-130		%REC	1	7/24/2015 3:05:45 PM	R27756
Surr: Toluene-d8	98.8	70-130		%REC	1	7/24/2015 3:05:45 PM	R27756

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#: **1507960**

05-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID	**MB-20445**	SampType:	**MBLK**		TestCode:	**EPA 200.8: Metals**				
Client ID:	**PBW**	Batch ID:	**20445**		RunNo:	**27780**				
Prep Date:	**7/27/2015**	Analysis Date:	**7/27/2015**		SeqNo:	**835215**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID	**MSLCS-20445**	SampType:	**LCS**		TestCode:	**EPA 200.8: Metals**				
Client ID:	**LCSW**	Batch ID:	**20445**		RunNo:	**27780**				
Prep Date:	**7/27/2015**	Analysis Date:	**7/27/2015**		SeqNo:	**835217**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.013	0.00050	0.01250	0	105	85	115			

Sample ID	**MSLLLCS-20445**	SampType:	**LCSLL**		TestCode:	**EPA 200.8: Metals**				
Client ID:	**BatchQC**	Batch ID:	**20445**		RunNo:	**27780**				
Prep Date:	**7/27/2015**	Analysis Date:	**7/27/2015**		SeqNo:	**835219**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00052	0.00050	0.0005000	0	104	50	150			

Sample ID	**LCS**	SampType:	**LCS**		TestCode:	**EPA 200.8: Metals**				
Client ID:	**LCSW**	Batch ID:	**R27899**		RunNo:	**27899**				
Prep Date:		Analysis Date:	**7/31/2015**		SeqNo:	**839102**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.013	0.00050	0.01250	0	101	85	115			

Sample ID	**LCS**	SampType:	**LCS**		TestCode:	**EPA 200.8: Metals**				
Client ID:	**LCSW**	Batch ID:	**R27899**		RunNo:	**27899**				
Prep Date:		Analysis Date:	**7/31/2015**		SeqNo:	**839103**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050	0.01250	0	0	85	115			S

Sample ID	**LLLCS**	SampType:	**LCSLL**		TestCode:	**EPA 200.8: Metals**				
Client ID:	**BatchQC**	Batch ID:	**R27899**		RunNo:	**27899**				
Prep Date:		Analysis Date:	**7/31/2015**		SeqNo:	**839106**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00050	0.00050	0.0005000	0	101	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#: **1507960**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**
Client ID: **PBW**	Batch ID: **R27899**	RunNo: **27899**
Prep Date:	Analysis Date: **7/31/2015**	SeqNo: **839109** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

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#: **1507960**

05-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R27664**	RunNo: **27664**
Prep Date:	Analysis Date: **7/21/2015**	SeqNo: **830797** Units: **mg/L**

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

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R27664**	RunNo: **27664**
Prep Date:	Analysis Date: **7/21/2015**	SeqNo: **830799** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.8	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	96.4	90	110			
Sulfate	9.4	0.50	10.00	0	94.2	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R27872**	RunNo: **27872**
Prep Date:	Analysis Date: **7/30/2015**	SeqNo: **838282** 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: **R27872**	RunNo: **27872**
Prep Date:	Analysis Date: **7/30/2015**	SeqNo: **838283** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	10	0.50	10.00	0	100	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#: **1507960**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R27692**	RunNo: **27692**
Prep Date:	Analysis Date: **7/22/2015**	SeqNo: **832140** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.4	70	130			
Toluene	20	1.0	20.00	0	100	70	130			
Chlorobenzene	19	1.0	20.00	0	94.4	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	113	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.4	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.6	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27692**	RunNo: **27692**
Prep Date:	Analysis Date: **7/22/2015**	SeqNo: **832148** 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

QC SUMMARY REPORT

WO#: **1507960**

Hall Environmental Analysis Laboratory, Inc.

05-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27692**	RunNo: **27692**
Prep Date:	Analysis Date: **7/22/2015**	SeqNo: **832148** 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								
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.
- 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#: **1507960**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27692**	RunNo: **27692**
Prep Date:	Analysis Date: **7/22/2015**	SeqNo: **832148** 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	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.7	70	130			
Surr: Toluene-d8	9.7		10.00		96.8	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R27756**	RunNo: **27756**
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **834596** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	84.4	70	130			
Toluene	20	1.0	20.00	0	100	70	130			
Chlorobenzene	19	1.0	20.00	0	92.7	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	107	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	87.7	70	130			
Surr: 1,2-Dichloroethane-d4	8.1		10.00		81.4	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.3	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.7	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27756**	RunNo: **27756**
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **834623** 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								

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#: **1507960**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27756**	RunNo: **27756**
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **834623** Units: **µg/L**

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

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#: **1507960**

05-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27756**	RunNo: **27756**
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **834623** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.9		10.00		89.0	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	11		10.00		106	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#: **1507960**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **mb-20399**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **20399**	RunNo: **27719**
Prep Date: **7/23/2015**	Analysis Date: **7/23/2015**	SeqNo: **833283** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
ıtyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	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#: **1507960**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **mb-20399**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **20399**	RunNo: **27719**
Prep Date: **7/23/2015**	Analysis Date: **7/23/2015**	SeqNo: **833283** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	140		200.0		69.9	14.9	111			
Surr: Phenol-d5	140		200.0		69.1	11.3	108			
Surr: 2,4,6-Tribromophenol	150		200.0		76.3	15.7	154			
Surr: Nitrobenzene-d5	72		100.0		72.3	47.8	106			
Surr: 2-Fluorobiphenyl	80		100.0		80.3	21.3	123			
Surr: 4-Terphenyl-d14	53		100.0		53.1	14.3	135			

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#: **1507960**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **lcs-20399**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **20399**	RunNo: **27719**
Prep Date: **7/23/2015**	Analysis Date: **7/23/2015**	SeqNo: **833290** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	63	10	100.0	0	63.0	47.8	99.7			
4-Chloro-3-methylphenol	130	10	200.0	0	67.2	58.1	103			
2-Chlorophenol	120	10	200.0	0	60.6	49.5	96.8			
1,4-Dichlorobenzene	64	10	100.0	0	63.6	40.4	89.4			
2,4-Dinitrotoluene	54	10	100.0	0	53.8	38.6	91.3			
N-Nitrosodi-n-propylamine	62	10	100.0	0	62.4	53.9	95.6			
4-Nitrophenol	130	10	200.0	0	66.6	26.4	108			
Pentachlorophenol	110	20	200.0	0	55.9	36.5	86.6			
Phenol	130	10	200.0	0	64.6	29.3	108			
Pyrene	53	10	100.0	0	52.9	45.7	100			
1,2,4-Trichlorobenzene	69	10	100.0	0	68.8	39.3	94.5			
Surr: 2-Fluorophenol	120		200.0		61.4	14.9	111			
Surr: Phenol-d5	130		200.0		63.0	11.3	108			
Surr: 2,4,6-Tribromophenol	150		200.0		76.4	15.7	154			
Surr: Nitrobenzene-d5	66		100.0		65.7	47.8	106			
Surr: 2-Fluorobiphenyl	65		100.0		64.7	21.3	123			
Surr: 4-Terphenyl-d14	54		100.0		54.4	14.3	135			

Sample ID **lcsd-20399**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **20399**	RunNo: **27719**
Prep Date: **7/23/2015**	Analysis Date: **7/23/2015**	SeqNo: **833292** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	60	10	100.0	0	60.0	47.8	99.7	4.98	28.2	
4-Chloro-3-methylphenol	130	10	200.0	0	63.3	58.1	103	5.95	24.4	
2-Chlorophenol	110	10	200.0	0	53.1	49.5	96.8	13.1	28.1	
1,4-Dichlorobenzene	54	10	100.0	0	53.5	40.4	89.4	17.2	31.2	
2,4-Dinitrotoluene	50	10	100.0	0	50.1	38.6	91.3	7.12	44.4	
N-Nitrosodi-n-propylamine	61	10	100.0	0	60.9	53.9	95.6	2.40	24.2	
4-Nitrophenol	110	10	200.0	0	57.3	26.4	108	15.0	36.6	
Pentachlorophenol	97	20	200.0	0	48.5	36.5	86.6	14.2	29.5	
Phenol	120	10	200.0	0	60.4	29.3	108	6.78	30	
Pyrene	54	10	100.0	0	53.9	45.7	100	1.87	31	
1,2,4-Trichlorobenzene	58	10	100.0	0	58.4	39.3	94.5	16.4	24	
Surr: 2-Fluorophenol	100		200.0		52.3	14.9	111	0	0	
Surr: Phenol-d5	110		200.0		57.1	11.3	108	0	0	
Surr: 2,4,6-Tribromophenol	130		200.0		65.5	15.7	154	0	0	
Surr: Nitrobenzene-d5	58		100.0		57.9	47.8	106	0	0	
Surr: 2-Fluorobiphenyl	59		100.0		59.1	21.3	123	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#: **1507960**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID	**lcsd-20399**	SampType:	**LCSD**		TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**LCSS02**	Batch ID:	**20399**		RunNo:	**27719**				
Prep Date:	**7/23/2015**	Analysis Date:	**7/23/2015**		SeqNo:	**833292**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	46		100.0		46.2	14.3	135	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#: **1507960**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **MB-20514**	SampType: **MBLK**	TestCode: **EPA Method 7470: Mercury**
Client ID: **PBW**	Batch ID: **20514**	RunNo: **27855**
Prep Date: **7/29/2015**	Analysis Date: **7/30/2015**	SeqNo: **837935** Units: **mg/L**

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

Sample ID **LCS-20514**	SampType: **LCS**	TestCode: **EPA Method 7470: Mercury**
Client ID: **LCSW**	Batch ID: **20514**	RunNo: **27855**
Prep Date: **7/29/2015**	Analysis Date: **7/30/2015**	SeqNo: **837936** 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	99.5	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#: **1507960**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 6010B: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R27727**	RunNo: **27727**
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **833615** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								
Sodium	ND	1.0								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 6010B: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R27727**	RunNo: **27727**
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **833616** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.51	0.020	0.5000	0	103	80	120			
Barium	0.48	0.020	0.5000	0	96.8	80	120			
Cadmium	0.49	0.0020	0.5000	0	98.1	80	120			
Calcium	53	1.0	50.00	0	106	80	120			
Chromium	0.48	0.0060	0.5000	0	96.9	80	120			
Lead	0.49	0.0050	0.5000	0	97.7	80	120			
Selenium	0.48	0.050	0.5000	0	95.9	80	120			
Silver	0.099	0.0050	0.1000	0	99.1	80	120			
Sodium	51	1.0	50.00	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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507960**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **mb-1**	SampType: **MBLK**	TestCode: **SM2320B: Alkalinity**
Client ID: **PBW**	Batch ID: **R27706**	RunNo: **27706**
Prep Date:	Analysis Date: **7/22/2015**	SeqNo: **832739** 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: **R27706**	RunNo: **27706**
Prep Date:	Analysis Date: **7/22/2015**	SeqNo: **832740** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79.36	20.00	80.00	0	99.2	90	110			

Sample ID **mb-2**	SampType: **MBLK**	TestCode: **SM2320B: Alkalinity**
Client ID: **PBW**	Batch ID: **R27706**	RunNo: **27706**
Prep Date:	Analysis Date: **7/22/2015**	SeqNo: **832765** 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: **R27706**	RunNo: **27706**
Prep Date:	Analysis Date: **7/22/2015**	SeqNo: **832766** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79.04	20.00	80.00	0	98.8	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#: **1507960**

05-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **MB-20415**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW**	Batch ID: **20415**	RunNo: **27739**
Prep Date: **7/23/2015**	Analysis Date: **7/25/2015**	SeqNo: **833960** 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-20415**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW**	Batch ID: **20415**	RunNo: **27739**
Prep Date: **7/23/2015**	Analysis Date: **7/25/2015**	SeqNo: **833961** 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		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1507960 RcptNo: 1

Received by/date: CS 07/21/15

Logged By: Lindsay Mangin 7/21/2015 4:13:00 PM

Completed By: Lindsay Mangin 7/22/2015 7:57:45 AM

Reviewed By: CS 07/22/15

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?	Client		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 9 (<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	2.1	Good	Yes			

Chain-of-Custody Record

nt: WESTERN REFINERY
GALLUP REFINERY
ing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
ne #: 505-722-3833
ail or Fax#: CHERYL.JOHNSON@WNR.COM
QC Package:
Standard ☐ Level 4 (Full Validation)
reditation
NELAP ☐ Other
EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: WINGATE TERMINAL -GW
Project #:
Project Manager: CHERYL JOHNSON
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 2.1°C

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

ate	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	SEE ATTACHED LIST				Air Bubbles (Y or N)
						Analysis Request																
.15	1400	WATER	WMW-1R	40mL VOA-3	HCL	1507960 -001										✓						
				1L AMBER	NEAT												✓					
				PLASTIC-1	HNO_3													✓				
				PLASTIC-1	HNO_3													✓				
				PLASTIC-1	H_2SO_4													✓				
				PLASTIC-1	NEAT													✓				
.15	1515	WATER	WMW-5	40 mL VOA-3	HCL	-002										✓						
				1L AMBER	NEAT												✓					
				PLASTIC-1	HNO_3													✓				
				PLASTIC-1	HNO_3													✓				
				PLASTIC-1	H_2SO_4													✓				
				PLASTIC-1	NEAT													✓				

te:	Time:	Relinquished by:	Received by:	Date	Time
21.15	0720			7/21/15	1000
te:	Time:	Relinquished by:	Received by:	Date	Time
7/15	4:13		Celina Sanchez	07/21/15	1613

Remarks:

Chain-of-Custody Record

ent: WESTERN REFINING
GALLUP REFINERY
iling Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
one #: 505-722-3833
ail or Fax#: CHERYL.JOHNSON@WNR.COM
/QC Package:
Standard ☐ Level 4 (Full Validation)
creditation
NELAP ☐ Other
EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: WINGATE TERMINAL - GW
Project #:
Project Manager: CHERYL JOHNSON
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 2.1°C

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

ate	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1507960
7.15	1700	WATER	EB01	40 mL VOA-3	HCL	-003
				1L AMBER	NEAT	
				PLASTIC-1	HNO_3	
				PLASTIC-1	HNO_3	
				PLASTIC-1	H_2SO_4	
				PLASTIC-1	NEAT	
—	—	WATER	TRIP BLANK	40 mL VOA-2	HCL	-004

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	SEE ATTACHED LIST				Air Bubbles (Y or N)
									✓						
										✓					
											✓				
											✓				
											✓				
											✓				
									✓						

e:	Time:	Relinquished by:	Received by:	Date	Time
7.15	0720			7/21/15	1CC
e:	Time:	Relinquished by:	Received by:	Date	Time
7/15	1413		Celina Sims	07/21/15	1613

Remarks:

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

Annual Groundwater Sampling Event
Western Refining Southwest, Inc.
Wingate Terminal - Gallup, New Mexico

METHOD
8260 VOCs
8270 SVOCs
3010/6010 Metals - Dissolved Arsenic Barium Cadmium Calcium Chromium Lead Selenium Silver Sodium
7470 Mercury - Dissolved
SM2320B Alkalinity, Total as $CaCO_3$
SM2540C Total Dissolved Solids
EPA 9040 pH
EPA 300.0 Chloride Sulfate Nitrogen, Nitrate
EPA Method 200.8 Total Uranium

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August 10, 2015

Cheryl Johnson
Western Refining Southwest
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX

RE: Wingate Terminal-GW OrderNo.: 1507987

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 3 sample(s) on 7/22/2015 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 qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest
Project: Wingate Terminal-GW
Lab ID: 1507987-001 **Matrix:** AQUEOUS

Client Sample ID: WMW-4
Collection Date: 7/21/2015 12:30:00 PM
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst: **DBD**	
Uranium	0.0015	0.00050		mg/L	1	7/30/2015 7:35:17 PM	20445
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	210	10		mg/L	20	7/30/2015 4:24:27 PM	R27872
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	7/23/2015 10:41:21 AM	R27694
Sulfate	330	10	*	mg/L	20	7/30/2015 4:24:27 PM	R27872
SM2320B: ALKALINITY						Analyst: **JRR**	
Bicarbonate (As CaCO3)	813.4	20.00		mg/L CaCO3	1	7/24/2015 12:49:57 PM	R27797
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	7/24/2015 12:49:57 PM	R27797
Total Alkalinity (as CaCO3)	813.4	20.00		mg/L CaCO3	1	7/24/2015 12:49:57 PM	R27797
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	1680	40.0	*	mg/L	1	7/25/2015 2:57:00 PM	20415
SM4500-H+B: PH						Analyst: **JRR**	
pH	7.94	1.68	H	pH units	1	7/24/2015 12:49:57 PM	R27797
EPA METHOD 7470: MERCURY						Analyst: **JLF**	
Mercury	ND	0.00020		mg/L	1	7/30/2015 10:41:28 AM	20514
EPA METHOD 6010B: DISSOLVED METALS						Analyst: **MED**	
Arsenic	ND	0.020		mg/L	1	7/24/2015 10:23:05 AM	R27727
Barium	0.063	0.020		mg/L	1	7/24/2015 10:23:05 AM	R27727
Cadmium	ND	0.0020		mg/L	1	7/24/2015 10:23:05 AM	R27727
Calcium	22	1.0		mg/L	1	7/24/2015 10:23:05 AM	R27727
Chromium	ND	0.0060		mg/L	1	7/24/2015 10:23:05 AM	R27727
Lead	ND	0.0050		mg/L	1	7/24/2015 10:23:05 AM	R27727
Selenium	ND	0.050		mg/L	1	7/24/2015 10:23:05 AM	R27727
Silver	ND	0.0050		mg/L	1	7/24/2015 10:23:05 AM	R27727
Sodium	580	10		mg/L	10	7/24/2015 11:07:21 AM	R27727
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Acenaphthylene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Aniline	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Anthracene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Azobenzene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Benz(a)anthracene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Benzo(a)pyrene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Benzo(b)fluoranthene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Benzo(g,h,i)perylene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Benzo(k)fluoranthene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399

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
Project: Wingate Terminal-GW
Lab ID: 1507987-001 **Matrix:** AQUEOUS

Client Sample ID: WMW-4
Collection Date: 7/21/2015 12:30:00 PM
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Benzoic acid	ND	20		µg/L	1	7/28/2015 11:55:53 AM	20399
Benzyl alcohol	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Bis(2-chloroethyl)ether	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
4-Bromophenyl phenyl ether	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Butyl benzyl phthalate	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Carbazole	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
4-Chloro-3-methylphenol	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
4-Chloroaniline	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
2-Chloronaphthalene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
2-Chlorophenol	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Chrysene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Di-n-butyl phthalate	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Di-n-octyl phthalate	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Dibenz(a,h)anthracene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Dibenzofuran	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
1,2-Dichlorobenzene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
1,3-Dichlorobenzene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
1,4-Dichlorobenzene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
3,3'-Dichlorobenzidine	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Diethyl phthalate	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Dimethyl phthalate	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
2,4-Dichlorophenol	ND	20		µg/L	1	7/28/2015 11:55:53 AM	20399
2,4-Dimethylphenol	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	7/28/2015 11:55:53 AM	20399
2,4-Dinitrophenol	ND	20		µg/L	1	7/28/2015 11:55:53 AM	20399
2,4-Dinitrotoluene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
2,6-Dinitrotoluene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Fluoranthene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Fluorene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Hexachlorobenzene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Hexachlorobutadiene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Hexachlorocyclopentadiene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Hexachloroethane	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Isophorone	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399

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
Project: Wingate Terminal-GW
Lab ID: 1507987-001 **Matrix:** AQUEOUS

Client Sample ID: WMW-4
Collection Date: 7/21/2015 12:30:00 PM
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1-Methylnaphthalene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
2-Methylnaphthalene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
2-Methylphenol	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
3+4-Methylphenol	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
N-Nitrosodimethylamine	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
N-Nitrosodiphenylamine	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Naphthalene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
2-Nitroaniline	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
3-Nitroaniline	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
4-Nitroaniline	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Nitrobenzene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
2-Nitrophenol	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
4-Nitrophenol	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Pentachlorophenol	ND	20		µg/L	1	7/28/2015 11:55:53 AM	20399
Phenanthrene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Phenol	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Pyrene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Pyridine	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
1,2,4-Trichlorobenzene	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
2,4,5-Trichlorophenol	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
2,4,6-Trichlorophenol	ND	10		µg/L	1	7/28/2015 11:55:53 AM	20399
Surr: 2-Fluorophenol	68.4	14.9-111		%REC	1	7/28/2015 11:55:53 AM	20399
Surr: Phenol-d5	57.6	11.3-108		%REC	1	7/28/2015 11:55:53 AM	20399
Surr: 2,4,6-Tribromophenol	90.4	15.7-154		%REC	1	7/28/2015 11:55:53 AM	20399
Surr: Nitrobenzene-d5	84.5	47.8-106		%REC	1	7/28/2015 11:55:53 AM	20399
Surr: 2-Fluorobiphenyl	81.9	21.3-123		%REC	1	7/28/2015 11:55:53 AM	20399
Surr: 4-Terphenyl-d14	75.4	14.3-135		%REC	1	7/28/2015 11:55:53 AM	20399
EPA METHOD 8260B: VOLATILES						Analyst: **BCN**	
Benzene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
Toluene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
Ethylbenzene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
Naphthalene	ND	2.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
1-Methylnaphthalene	ND	4.0		µg/L	1	7/23/2015 12:58:30 PM	R27721

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

Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest
Project: Wingate Terminal-GW
Lab ID: 1507987-001 **Matrix:** AQUEOUS

Client Sample ID: WMW-4
Collection Date: 7/21/2015 12:30:00 PM
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BCN**	
2-Methylnaphthalene	ND	4.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
Acetone	ND	10		µg/L	1	7/23/2015 12:58:30 PM	R27721
Bromobenzene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
Bromodichloromethane	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
Bromoform	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
Bromomethane	ND	3.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
2-Butanone	ND	10		µg/L	1	7/23/2015 12:58:30 PM	R27721
Carbon disulfide	ND	10		µg/L	1	7/23/2015 12:58:30 PM	R27721
Carbon Tetrachloride	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
Chlorobenzene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
Chloroethane	ND	2.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
Chloroform	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
Chloromethane	ND	3.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
2-Chlorotoluene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
4-Chlorotoluene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
cis-1,2-DCE	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
Dibromochloromethane	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
Dibromomethane	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
1,1-Dichloroethane	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
1,1-Dichloroethene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
1,2-Dichloropropane	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
1,3-Dichloropropane	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
2,2-Dichloropropane	ND	2.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
1,1-Dichloropropene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
Hexachlorobutadiene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
2-Hexanone	ND	10		µg/L	1	7/23/2015 12:58:30 PM	R27721
Isopropylbenzene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
4-Isopropyltoluene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
4-Methyl-2-pentanone	ND	10		µg/L	1	7/23/2015 12:58:30 PM	R27721
Methylene Chloride	ND	3.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
n-Butylbenzene	ND	3.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
n-Propylbenzene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
sec-Butylbenzene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721

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
Project: Wingate Terminal-GW
Lab ID: 1507987-001 **Matrix:** AQUEOUS

Client Sample ID: WMW-4
Collection Date: 7/21/2015 12:30:00 PM
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BCN**	
Styrene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
tert-Butylbenzene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
trans-1,2-DCE	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
Trichlorofluoromethane	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
Vinyl chloride	ND	1.0		µg/L	1	7/23/2015 12:58:30 PM	R27721
Xylenes, Total	ND	1.5		µg/L	1	7/23/2015 12:58:30 PM	R27721
Surr: 1,2-Dichloroethane-d4	96.2	70-130		%REC	1	7/23/2015 12:58:30 PM	R27721
Surr: 4-Bromofluorobenzene	109	70-130		%REC	1	7/23/2015 12:58:30 PM	R27721
Surr: Dibromofluoromethane	102	70-130		%REC	1	7/23/2015 12:58:30 PM	R27721
Surr: Toluene-d8	99.1	70-130		%REC	1	7/23/2015 12:58:30 PM	R27721

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
Project: Wingate Terminal-GW
Lab ID: 1507987-002 **Matrix:** AQUEOUS

Client Sample ID: WMW-2
Collection Date: 7/21/2015 2:00:00 PM
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst: **DBD**	
Uranium	ND	0.00050		mg/L	1	7/30/2015 7:38:17 PM	20445
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	830	50	*	mg/L	100	7/30/2015 4:36:52 PM	R27872
Sulfate	ND	0.50		mg/L	1	7/24/2015 1:52:41 AM	R27726
Nitrate+Nitrite as N	ND	1.0		mg/L	5	7/30/2015 8:20:15 PM	R27872
SM2320B: ALKALINITY						Analyst: **JRR**	
Bicarbonate (As CaCO3)	1924	50.00		mg/L CaCO3	2.5	7/24/2015 6:35:17 PM	R27797
Carbonate (As CaCO3)	92.40	5.000		mg/L CaCO3	2.5	7/24/2015 6:35:17 PM	R27797
Total Alkalinity (as CaCO3)	2016	50.00		mg/L CaCO3	2.5	7/24/2015 6:35:17 PM	R27797
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	3410	200	*	mg/L	1	7/25/2015 2:57:00 PM	20415
SM4500-H+B: PH						Analyst: **JRR**	
pH	7.90	1.68	H	pH units	1	7/24/2015 2:25:58 PM	R27797
EPA METHOD 7470: MERCURY						Analyst: **JLF**	
Mercury	ND	0.00020		mg/L	1	7/30/2015 10:43:33 AM	20514
EPA METHOD 6010B: DISSOLVED METALS						Analyst: **MED**	
Arsenic	ND	0.020		mg/L	1	7/30/2015 10:00:08 AM	R27853
Barium	0.41	0.020		mg/L	1	7/30/2015 10:00:08 AM	R27853
Cadmium	ND	0.0020		mg/L	1	7/30/2015 10:00:08 AM	R27853
Calcium	31	1.0		mg/L	1	8/4/2015 12:03:37 PM	R27939
Chromium	ND	0.0060		mg/L	1	7/30/2015 10:00:08 AM	R27853
Lead	ND	0.0050		mg/L	1	8/4/2015 12:03:37 PM	R27939
Selenium	ND	0.050		mg/L	1	8/4/2015 12:03:37 PM	R27939
Silver	ND	0.0050		mg/L	1	7/30/2015 10:00:08 AM	R27853
Sodium	1300	50		mg/L	50	7/30/2015 9:58:26 AM	R27853
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Acenaphthylene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Aniline	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Anthracene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Azobenzene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Benz(a)anthracene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Benzo(a)pyrene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Benzo(b)fluoranthene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Benzo(g,h,i)perylene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Benzo(k)fluoranthene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399

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

Qualifiers:

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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
Project: Wingate Terminal-GW
Lab ID: 1507987-002 **Matrix:** AQUEOUS

Client Sample ID: WMW-2
Collection Date: 7/21/2015 2:00:00 PM
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Benzoic acid	ND	20		µg/L	1	7/28/2015 12:23:30 PM	20399
Benzyl alcohol	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Bis(2-chloroethyl)ether	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
4-Bromophenyl phenyl ether	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Butyl benzyl phthalate	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Carbazole	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
4-Chloro-3-methylphenol	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
4-Chloroaniline	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
2-Chloronaphthalene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
2-Chlorophenol	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Chrysene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Di-n-butyl phthalate	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Di-n-octyl phthalate	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Dibenz(a,h)anthracene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Dibenzofuran	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
1,2-Dichlorobenzene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
1,3-Dichlorobenzene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
1,4-Dichlorobenzene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
3,3'-Dichlorobenzidine	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Diethyl phthalate	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Dimethyl phthalate	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
2,4-Dichlorophenol	ND	20		µg/L	1	7/28/2015 12:23:30 PM	20399
2,4-Dimethylphenol	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	7/28/2015 12:23:30 PM	20399
2,4-Dinitrophenol	ND	20		µg/L	1	7/28/2015 12:23:30 PM	20399
2,4-Dinitrotoluene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
2,6-Dinitrotoluene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Fluoranthene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Fluorene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Hexachlorobenzene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Hexachlorobutadiene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Hexachlorocyclopentadiene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Hexachloroethane	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Isophorone	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399

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

Qualifiers:

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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
Project: Wingate Terminal-GW
Lab ID: 1507987-002 **Matrix:** AQUEOUS

Client Sample ID: WMW-2
Collection Date: 7/21/2015 2:00:00 PM
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1-Methylnaphthalene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
2-Methylnaphthalene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
2-Methylphenol	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
3+4-Methylphenol	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
N-Nitrosodimethylamine	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
N-Nitrosodiphenylamine	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Naphthalene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
2-Nitroaniline	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
3-Nitroaniline	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
4-Nitroaniline	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Nitrobenzene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
2-Nitrophenol	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
4-Nitrophenol	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Pentachlorophenol	ND	20		µg/L	1	7/28/2015 12:23:30 PM	20399
Phenanthrene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Phenol	10	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Pyrene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Pyridine	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
1,2,4-Trichlorobenzene	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
2,4,5-Trichlorophenol	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
2,4,6-Trichlorophenol	ND	10		µg/L	1	7/28/2015 12:23:30 PM	20399
Surr: 2-Fluorophenol	51.0	14.9-111		%REC	1	7/28/2015 12:23:30 PM	20399
Surr: Phenol-d5	48.3	11.3-108		%REC	1	7/28/2015 12:23:30 PM	20399
Surr: 2,4,6-Tribromophenol	87.0	15.7-154		%REC	1	7/28/2015 12:23:30 PM	20399
Surr: Nitrobenzene-d5	67.7	47.8-106		%REC	1	7/28/2015 12:23:30 PM	20399
Surr: 2-Fluorobiphenyl	77.5	21.3-123		%REC	1	7/28/2015 12:23:30 PM	20399
Surr: 4-Terphenyl-d14	61.4	14.3-135		%REC	1	7/28/2015 12:23:30 PM	20399
EPA METHOD 8260B: VOLATILES						Analyst: **BCN**	
Benzene	26000	500		µg/L	500	7/27/2015 1:23:31 PM	R27792
Toluene	3.1	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
Ethylbenzene	68	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
1,2,4-Trimethylbenzene	17	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
1,3,5-Trimethylbenzene	6.1	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
Naphthalene	20	2.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
1-Methylnaphthalene	7.4	4.0		µg/L	1	7/23/2015 2:24:40 PM	R27721

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

Qualifiers:

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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
Client Sample ID: WMW-2
Project: Wingate Terminal-GW
Collection Date: 7/21/2015 2:00:00 PM
Lab ID: 1507987-002 **Matrix:** AQUEOUS **Received Date:** 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BCN**	
2-Methylnaphthalene	11	4.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
Acetone	ND	10		µg/L	1	7/23/2015 2:24:40 PM	R27721
Bromobenzene	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
Bromodichloromethane	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
Bromoform	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
Bromomethane	ND	3.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
2-Butanone	ND	10		µg/L	1	7/23/2015 2:24:40 PM	R27721
Carbon disulfide	ND	10		µg/L	1	7/23/2015 2:24:40 PM	R27721
Carbon Tetrachloride	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
Chlorobenzene	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
Chloroethane	ND	2.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
Chloroform	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
Chloromethane	ND	3.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
2-Chlorotoluene	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
4-Chlorotoluene	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
cis-1,2-DCE	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
Dibromochloromethane	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
Dibromomethane	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
1,1-Dichloroethane	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
1,1-Dichloroethene	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
1,2-Dichloropropane	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
1,3-Dichloropropane	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
2,2-Dichloropropane	ND	2.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
1,1-Dichloropropene	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
Hexachlorobutadiene	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
2-Hexanone	ND	10		µg/L	1	7/23/2015 2:24:40 PM	R27721
Isopropylbenzene	2.9	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
4-Isopropyltoluene	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
4-Methyl-2-pentanone	18	10		µg/L	1	7/23/2015 2:24:40 PM	R27721
Methylene Chloride	ND	3.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
n-Butylbenzene	ND	3.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
n-Propylbenzene	2.4	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
sec-Butylbenzene	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721

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
Project: Wingate Terminal-GW
Lab ID: 1507987-002 **Matrix:** AQUEOUS

Client Sample ID: WMW-2
Collection Date: 7/21/2015 2:00:00 PM
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BCN**	
Styrene	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
tert-Butylbenzene	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
trans-1,2-DCE	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
Trichlorofluoromethane	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
Vinyl chloride	ND	1.0		µg/L	1	7/23/2015 2:24:40 PM	R27721
Xylenes, Total	520	15		µg/L	10	7/24/2015 3:53:04 PM	R27736
Surr: 1,2-Dichloroethane-d4	94.4	70-130		%REC	1	7/23/2015 2:24:40 PM	R27721
Surr: 4-Bromofluorobenzene	115	70-130		%REC	1	7/23/2015 2:24:40 PM	R27721
Surr: Dibromofluoromethane	100	70-130		%REC	1	7/23/2015 2:24:40 PM	R27721
Surr: Toluene-d8	92.8	70-130		%REC	1	7/23/2015 2:24:40 PM	R27721

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
Project: Wingate Terminal-GW
Lab ID: 1507987-003
Matrix: AQUEOUS
Client Sample ID: Trip Blank
Collection Date:
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BCN**	
Benzene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Toluene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Ethylbenzene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Naphthalene	ND	2.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
1-Methylnaphthalene	ND	4.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
2-Methylnaphthalene	ND	4.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Acetone	ND	10		µg/L	1	7/24/2015 2:26:13 PM	R27736
Bromobenzene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Bromodichloromethane	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Bromoform	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Bromomethane	ND	3.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
2-Butanone	ND	10		µg/L	1	7/24/2015 2:26:13 PM	R27736
Carbon disulfide	ND	10		µg/L	1	7/24/2015 2:26:13 PM	R27736
Carbon Tetrachloride	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Chlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Chloroethane	ND	2.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Chloroform	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Chloromethane	ND	3.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
2-Chlorotoluene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
4-Chlorotoluene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
cis-1,2-DCE	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Dibromochloromethane	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Dibromomethane	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
1,1-Dichloroethane	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
1,1-Dichloroethene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
1,2-Dichloropropane	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
1,3-Dichloropropane	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
2,2-Dichloropropane	ND	2.0		µg/L	1	7/24/2015 2:26:13 PM	R27736

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
Client Sample ID: Trip Blank
Project: Wingate Terminal-GW
Collection Date:
Lab ID: 1507987-003 **Matrix:** AQUEOUS **Received Date:** 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BCN**	
1,1-Dichloropropene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Hexachlorobutadiene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
2-Hexanone	ND	10		µg/L	1	7/24/2015 2:26:13 PM	R27736
Isopropylbenzene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
4-Isopropyltoluene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
4-Methyl-2-pentanone	ND	10		µg/L	1	7/24/2015 2:26:13 PM	R27736
Methylene Chloride	ND	3.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
n-Butylbenzene	ND	3.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
n-Propylbenzene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
sec-Butylbenzene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Styrene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
tert-Butylbenzene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
trans-1,2-DCE	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Trichlorofluoromethane	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Vinyl chloride	ND	1.0		µg/L	1	7/24/2015 2:26:13 PM	R27736
Xylenes, Total	ND	1.5		µg/L	1	7/24/2015 2:26:13 PM	R27736
Surr: 1,2-Dichloroethane-d4	94.0	70-130		%REC	1	7/24/2015 2:26:13 PM	R27736
Surr: 4-Bromofluorobenzene	97.4	70-130		%REC	1	7/24/2015 2:26:13 PM	R27736
Surr: Dibromofluoromethane	101	70-130		%REC	1	7/24/2015 2:26:13 PM	R27736
Surr: Toluene-d8	97.4	70-130		%REC	1	7/24/2015 2:26:13 PM	R27736

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#: **1507987**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID	**MB-20445**	SampType:	**MBLK**		TestCode:	**EPA 200.8: Metals**				
Client ID:	**PBW**	Batch ID:	**20445**		RunNo:	**27780**				
Prep Date:	**7/27/2015**	Analysis Date:	**7/27/2015**		SeqNo:	**835215**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID	**MSLCS-20445**	SampType:	**LCS**		TestCode:	**EPA 200.8: Metals**				
Client ID:	**LCSW**	Batch ID:	**20445**		RunNo:	**27780**				
Prep Date:	**7/27/2015**	Analysis Date:	**7/27/2015**		SeqNo:	**835217**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.013	0.00050	0.01250	0	105	85	115			

Sample ID	**MSLLLCS-20445**	SampType:	**LCSLL**		TestCode:	**EPA 200.8: Metals**				
Client ID:	**BatchQC**	Batch ID:	**20445**		RunNo:	**27780**				
Prep Date:	**7/27/2015**	Analysis Date:	**7/27/2015**		SeqNo:	**835219**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00052	0.00050	0.0005000	0	104	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#: **1507987**

10-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R27694**	RunNo: **27694**							
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **832954**	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: **R27694**	RunNo: **27694**							
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **832955**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	2.3	0.10	2.500	0	92.9	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R27726**	RunNo: **27726**							
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **833563**	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: **R27726**	RunNo: **27726**							
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **833564**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.8	0.50	10.00	0	97.5	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R27872**	RunNo: **27872**							
Prep Date:	Analysis Date: **7/30/2015**	SeqNo: **838282**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R27872**	RunNo: **27872**							
Prep Date:	Analysis Date: **7/30/2015**	SeqNo: **838283**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	99.0	90	110			
Sulfate	10	0.50	10.00	0	100	90	110			
Nitrate+Nitrite as N	3.6	0.20	3.500	0	102	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- 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#: **1507987**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **100ng LCS**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R27721**	RunNo: **27721**
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **833337** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.1	70	130			
Toluene	21	1.0	20.00	0	105	70	130			
Chlorobenzene	20	1.0	20.00	0	98.8	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	112	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	96.0	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.2	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27721**	RunNo: **27721**
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **833338** 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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507987**

10-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27721**	RunNo: **27721**
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **833338** 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								
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.
- 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#: **1507987**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27721**	RunNo: **27721**
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **833338** 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	9.9		10.00		98.7	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.8	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.4		10.00		93.8	70	130			

Sample ID **100ng LCS2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R27721**	RunNo: **27721**
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **833358** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	97.9	70	130			
Toluene	18	1.0	20.00	0	89.9	70	130			
Chlorobenzene	17	1.0	20.00	0	87.4	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	106	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	91.4	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.7	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.1	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.8	70	130			
Surr: Toluene-d8	9.8		10.00		97.8	70	130			

Sample ID **rb3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27721**	RunNo: **27721**
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **833359** 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								

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#: **1507987**

10-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **rb3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27721**	RunNo: **27721**
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **833359** Units: **µg/L**

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

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#: **1507987**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **rb3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27721**	RunNo: **27721**
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **833359** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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		98.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.9		10.00		98.7	70	130			

Sample ID **1507987-001ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **WMW-4**	Batch ID: **R27721**	RunNo: **27721**
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **833389** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	84.2	70	130			
Toluene	16	1.0	20.00	0	80.2	70	130			
Chlorobenzene	15	1.0	20.00	0	75.4	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	88.8	70	130			
Trichloroethene (TCE)	15	1.0	20.00	0	75.7	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.0	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.6		10.00		95.8	70	130			

Sample ID **1507987-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **WMW-4**	Batch ID: **R27721**	RunNo: **27721**
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **833390** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	88.0	70	130	4.41	20	
Toluene	17	1.0	20.00	0	82.5	70	130	2.88	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#: **1507987**

10-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **1507987-001amsd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **WMW-4** Batch ID: **R27721** RunNo: **27721**
Prep Date: Analysis Date: **7/23/2015** SeqNo: **833390** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlorobenzene	16	1.0	20.00	0	80.8	70	130	6.91	20	
1,1-Dichloroethene	18	1.0	20.00	0	92.5	70	130	4.12	20	
Trichloroethene (TCE)	16	1.0	20.00	0	79.6	70	130	5.00	20	
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.0	70	130	0	0	
Surr: 4-Bromofluorobenzene	12		10.00		115	70	130	0	0	
Surr: Dibromofluoromethane	10		10.00		103	70	130	0	0	
Surr: Toluene-d8	9.5		10.00		95.2	70	130	0	0	

Sample ID **100ng LCS** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R27736** RunNo: **27736**
Prep Date: Analysis Date: **7/24/2015** SeqNo: **833861** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	88.6	70	130			
Toluene	18	1.0	20.00	0	92.0	70	130			
Chlorobenzene	18	1.0	20.00	0	88.6	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	96.7	70	130			
ichloroethene (TCE)	17	1.0	20.00	0	86.1	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		92.6	70	130			
Surr: 4-Bromofluorobenzene	8.9		10.00		89.1	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.7	70	130			
Surr: Toluene-d8	9.4		10.00		94.2	70	130			

Sample ID **rb1** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R27736** RunNo: **27736**
Prep Date: Analysis Date: **7/24/2015** SeqNo: **833862** 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								

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#: **1507987**

10-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27736**	RunNo: **27736**
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **833862** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
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								

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#: **1507987**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27736**	RunNo: **27736**
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **833862** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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	9.5		10.00		95.2	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.0	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.0	70	130			
Surr: Toluene-d8	9.4		10.00		93.8	70	130			

Sample ID **rb3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27736**	RunNo: **27736**
Prep Date:	Analysis Date: **7/25/2015**	SeqNo: **833885** 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								

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#: **1507987**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **rb3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27736**	RunNo: **27736**
Prep Date:	Analysis Date: **7/25/2015**	SeqNo: **833885** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
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								

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#: **1507987**

10-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **rb3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27736**	RunNo: **27736**
Prep Date:	Analysis Date: **7/25/2015**	SeqNo: **833885** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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	9.5		10.00		94.9	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		92.7	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.9	70	130			
Surr: Toluene-d8	9.3		10.00		93.4	70	130			

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R27736**	RunNo: **27736**
Prep Date:	Analysis Date: **7/25/2015**	SeqNo: **833886** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.6	70	130			
Toluene	19	1.0	20.00	0	93.9	70	130			
Chlorobenzene	18	1.0	20.00	0	89.7	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	106	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	86.6	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.1	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.5	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.1	70	130			
Surr: Toluene-d8	9.7		10.00		96.6	70	130			

Sample ID **100ng LCS**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R27792**	RunNo: **27792**
Prep Date:	Analysis Date: **7/27/2015**	SeqNo: **835499** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	92.1	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.6	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.4	70	130			
Surr: Dibromofluoromethane	10		10.00		101	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#: **1507987**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **100ng LCS**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R27792**	RunNo: **27792**
Prep Date:	Analysis Date: **7/27/2015**	SeqNo: **835499** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Toluene-d8	9.9		10.00		98.9	70	130			

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27792**	RunNo: **27792**
Prep Date:	Analysis Date: **7/27/2015**	SeqNo: **835500** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.5	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	10		10.00		99.8	70	130			

Sample ID **rb3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27792**	RunNo: **27792**
Prep Date:	Analysis Date: **7/27/2015**	SeqNo: **835524** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		98.9	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		92.6	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.3		10.00		92.9	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- 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
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507987**

10-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **mb-20399**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **20399**	RunNo: **27719**
Prep Date: **7/23/2015**	Analysis Date: **7/23/2015**	SeqNo: **833283** Units: **µg/L**

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

Qualifiers:

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- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507987**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **mb-20399**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **20399**	RunNo: **27719**
Prep Date: **7/23/2015**	Analysis Date: **7/23/2015**	SeqNo: **833283** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	140		200.0		69.9	14.9	111			
Surr: Phenol-d5	140		200.0		69.1	11.3	108			
Surr: 2,4,6-Tribromophenol	150		200.0		76.3	15.7	154			
Surr: Nitrobenzene-d5	72		100.0		72.3	47.8	106			
Surr: 2-Fluorobiphenyl	80		100.0		80.3	21.3	123			
Surr: 4-Terphenyl-d14	53		100.0		53.1	14.3	135			

Qualifiers:

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507987**

10-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **lcs-20399**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **20399**	RunNo: **27719**
Prep Date: **7/23/2015**	Analysis Date: **7/23/2015**	SeqNo: **833290** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	63	10	100.0	0	63.0	47.8	99.7			
4-Chloro-3-methylphenol	130	10	200.0	0	67.2	58.1	103			
2-Chlorophenol	120	10	200.0	0	60.6	49.5	96.8			
1,4-Dichlorobenzene	64	10	100.0	0	63.6	40.4	89.4			
2,4-Dinitrotoluene	54	10	100.0	0	53.8	38.6	91.3			
N-Nitrosodi-n-propylamine	62	10	100.0	0	62.4	53.9	95.6			
4-Nitrophenol	130	10	200.0	0	66.6	26.4	108			
Pentachlorophenol	110	20	200.0	0	55.9	36.5	86.6			
Phenol	130	10	200.0	0	64.6	29.3	108			
Pyrene	53	10	100.0	0	52.9	45.7	100			
1,2,4-Trichlorobenzene	69	10	100.0	0	68.8	39.3	94.5			
Surr: 2-Fluorophenol	120		200.0		61.4	14.9	111			
Surr: Phenol-d5	130		200.0		63.0	11.3	108			
Surr: 2,4,6-Tribromophenol	150		200.0		76.4	15.7	154			
Surr: Nitrobenzene-d5	66		100.0		65.7	47.8	106			
Surr: 2-Fluorobiphenyl	65		100.0		64.7	21.3	123			
Surr: 4-Terphenyl-d14	54		100.0		54.4	14.3	135			

Sample ID **lcsd-20399**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **20399**	RunNo: **27719**
Prep Date: **7/23/2015**	Analysis Date: **7/23/2015**	SeqNo: **833292** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	60	10	100.0	0	60.0	47.8	99.7	4.98	28.2	
4-Chloro-3-methylphenol	130	10	200.0	0	63.3	58.1	103	5.95	24.4	
2-Chlorophenol	110	10	200.0	0	53.1	49.5	96.8	13.1	28.1	
1,4-Dichlorobenzene	54	10	100.0	0	53.5	40.4	89.4	17.2	31.2	
2,4-Dinitrotoluene	50	10	100.0	0	50.1	38.6	91.3	7.12	44.4	
N-Nitrosodi-n-propylamine	61	10	100.0	0	60.9	53.9	95.6	2.40	24.2	
4-Nitrophenol	110	10	200.0	0	57.3	26.4	108	15.0	36.6	
Pentachlorophenol	97	20	200.0	0	48.5	36.5	86.6	14.2	29.5	
Phenol	120	10	200.0	0	60.4	29.3	108	6.78	30	
Pyrene	54	10	100.0	0	53.9	45.7	100	1.87	31	
1,2,4-Trichlorobenzene	58	10	100.0	0	58.4	39.3	94.5	16.4	24	
Surr: 2-Fluorophenol	100		200.0		52.3	14.9	111	0	0	
Surr: Phenol-d5	110		200.0		57.1	11.3	108	0	0	
Surr: 2,4,6-Tribromophenol	130		200.0		65.5	15.7	154	0	0	
Surr: Nitrobenzene-d5	58		100.0		57.9	47.8	106	0	0	
Surr: 2-Fluorobiphenyl	59		100.0		59.1	21.3	123	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#: **1507987**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID	**lcsd-20399**	SampType:	**LCSD**		TestCode:	**EPA Method 8270C: Semivolatiles**					
Client ID:	**LCSS02**	Batch ID:	**20399**		RunNo:	**27719**					
Prep Date:	**7/23/2015**	Analysis Date:	**7/23/2015**		SeqNo:	**833292**	Units:	**µg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14		46		100.0		46.2	14.3	135	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#: **1507987**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **MB-20514**	SampType: **MBLK**	TestCode: **EPA Method 7470: Mercury**
Client ID: **PBW**	Batch ID: **20514**	RunNo: **27855**
Prep Date: **7/29/2015**	Analysis Date: **7/30/2015**	SeqNo: **837935** Units: **mg/L**

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

Sample ID **LCS-20514**	SampType: **LCS**	TestCode: **EPA Method 7470: Mercury**
Client ID: **LCSW**	Batch ID: **20514**	RunNo: **27855**
Prep Date: **7/29/2015**	Analysis Date: **7/30/2015**	SeqNo: **837936** 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	99.5	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#: **1507987**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 6010B: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R27727**	RunNo: **27727**
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **833615** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								
Sodium	ND	1.0								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 6010B: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R27727**	RunNo: **27727**
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **833616** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.51	0.020	0.5000	0	103	80	120			
Barium	0.48	0.020	0.5000	0	96.8	80	120			
Cadmium	0.49	0.0020	0.5000	0	98.1	80	120			
Calcium	53	1.0	50.00	0	106	80	120			
Chromium	0.48	0.0060	0.5000	0	96.9	80	120			
Lead	0.49	0.0050	0.5000	0	97.7	80	120			
Selenium	0.48	0.050	0.5000	0	95.9	80	120			
Silver	0.099	0.0050	0.1000	0	99.1	80	120			
Sodium	51	1.0	50.00	0	102	80	120			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 6010B: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R27853**	RunNo: **27853**
Prep Date:	Analysis Date: **7/30/2015**	SeqNo: **837829** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Silver	ND	0.0050								
Sodium	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#: **1507987**

10-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 6010B: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R27853** RunNo: **27853**
Prep Date: Analysis Date: **7/30/2015** SeqNo: **837830** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.48	0.020	0.5000	0	96.2	80	120			
Barium	0.45	0.020	0.5000	0	89.9	80	120			
Cadmium	0.45	0.0020	0.5000	0	91.0	80	120			
Chromium	0.44	0.0060	0.5000	0	89.0	80	120			
Silver	0.093	0.0050	0.1000	0	93.3	80	120			
Sodium	59	1.0	50.00	0	117	80	120			

Sample ID **1507987-002DMS** SampType: **MS** TestCode: **EPA Method 6010B: Dissolved Metals**
Client ID: **WMW-2** Batch ID: **R27853** RunNo: **27853**
Prep Date: Analysis Date: **7/30/2015** SeqNo: **837838** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.54	0.020	0.5000	0	109	75	125			
Barium	0.87	0.020	0.5000	0.4106	92.4	75	125			
Cadmium	0.48	0.0020	0.5000	0	96.1	75	125			
Chromium	0.47	0.0060	0.5000	0	94.6	75	125			
Silver	0.097	0.0050	0.1000	0.0008600	96.0	75	125			

Sample ID **1507987-002DMSD** SampType: **MSD** TestCode: **EPA Method 6010B: Dissolved Metals**
Client ID: **WMW-2** Batch ID: **R27853** RunNo: **27853**
Prep Date: Analysis Date: **7/30/2015** SeqNo: **837842** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.56	0.020	0.5000	0	113	75	125	3.51	20	
Barium	0.88	0.020	0.5000	0.4106	93.4	75	125	0.568	20	
Cadmium	0.49	0.0020	0.5000	0	97.6	75	125	1.55	20	
Chromium	0.48	0.0060	0.5000	0	96.2	75	125	1.62	20	
Silver	0.098	0.0050	0.1000	0.0008600	97.2	75	125	1.28	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 6010B: Dissolved Metals**
Client ID: **PBW** Batch ID: **R27939** RunNo: **27939**
Prep Date: Analysis Date: **8/4/2015** SeqNo: **840522** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Lead	ND	0.0050								
Selenium	ND	0.050								

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#: **1507987**

10-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 6010B: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R27939**	RunNo: **27939**
Prep Date:	Analysis Date: **8/4/2015**	SeqNo: **840523** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	47	1.0	50.00	0	94.6	80	120			
Lead	0.48	0.0050	0.5000	0	96.3	80	120			
Selenium	0.49	0.050	0.5000	0	97.8	80	120			

Sample ID **1507987-002DMS**	SampType: **MS**	TestCode: **EPA Method 6010B: Dissolved Metals**
Client ID: **WMW-2**	Batch ID: **R27939**	RunNo: **27939**
Prep Date:	Analysis Date: **8/4/2015**	SeqNo: **840527** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	78	1.0	50.00	30.91	95.2	75	125			
Lead	0.48	0.0050	0.5000	0	95.1	75	125			
Selenium	0.52	0.050	0.5000	0	105	75	125			

Sample ID **1507987-002DMSD**	SampType: **MSD**	TestCode: **EPA Method 6010B: Dissolved Metals**
Client ID: **WMW-2**	Batch ID: **R27939**	RunNo: **27939**
Prep Date:	Analysis Date: **8/4/2015**	SeqNo: **840528** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	79	1.0	50.00	30.91	96.7	75	125	0.989	20	
Lead	0.51	0.0050	0.5000	0	102	75	125	7.18	20	
Selenium	0.57	0.050	0.5000	0	115	75	125	9.16	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#: **1507987**

10-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **mb-1**	SampType: **MBLK**			TestCode: **SM2320B: Alkalinity**						
Client ID: **PBW**	Batch ID: **R27797**			RunNo: **27797**						
Prep Date:	Analysis Date: **7/24/2015**			SeqNo: **835725**		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: **R27797**			RunNo: **27797**						
Prep Date:	Analysis Date: **7/24/2015**			SeqNo: **835726**		Units: **mg/L CaCO3**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	78.96	20.00	80.00	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#: **1507987**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **MB-20415**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW**	Batch ID: **20415**	RunNo: **27739**
Prep Date: **7/23/2015**	Analysis Date: **7/25/2015**	SeqNo: **833960** 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-20415**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW**	Batch ID: **20415**	RunNo: **27739**
Prep Date: **7/23/2015**	Analysis Date: **7/25/2015**	SeqNo: **833961** 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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1507987** RcptNo: **1**

Received by/date: AT 07/22/15

Logged By: **Anne Thorne** 7/22/2015 9:40:00 AM Anne Thorne

Completed By: **Anne Thorne** 7/22/2015 Anne Thorne

Reviewed By: JA 07/23/15

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?	Client		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	~~Yes~~ ☑	No ☑	
9. Was preservative added to bottles? For metals analysis: Added 1mL HNO_3 to -002E for acceptable pH, and held in login for 24 hr Prior to analysis. AMG 07/23/15	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: 10 (<2 or >12 unless noted)

Adjusted? YES

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

Chain-of-Custody Record

Client: WESTERN REFINING
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-3833
email or Fax#: CHERYL.JOHNSON@WNR.COM
QA/QC Package: ☒ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: WINGATE TERMINAL - GW
Project #:
Project Manager: CHERYL JOHNSON
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 4.0

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1507987	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	SEE ATTACHED LIST				Air Bubbles (Y or N)
7-21-15	1230	WATER	WMW-4	40ML VOA-3	HCL	-001										✓						
				1 LAMBER	NEAT	-001											✓					
				PLASTIC-2	HNO_3	-001												✓				
				PLASTIC-1	H_2SO_4	-001												✓				
				PLASTIC-1	NEAT	-001												✓				
7-21-15	1400	WATER	WMW-2	40 ML VOA-3	HCL	-002										✓						
				1 LAMBER	NEAT	-002											✓					
				PLASTIC-2	HNO_3	-002												✓				
				PLASTIC-1	H_2SO_4	-002												✓				
				PLASTIC-1	NEAT	-002												✓				
—	—	WATER	TRIP BLANK	40ML VOA-2	HCL	-003										✓						

Date: 7-22-15 Time: 0940 Relinquished by: Received by: Date: 07/22/15 Time: 0940

Date: Time: Relinquished by: Received by: Date: Time:

Remarks:

Annual Groundwater Sampling Event
Western Refining Southwest, Inc.
Wingate Terminal - Gallup, New Mexico

METHOD
8260 VOCs
8270 SVOCs
3010/6010 Metals - Dissolved Arsenic Barium Cadmium Calcium Chromium Lead Selenium Silver Sodium
7470 Mercury - Dissolved
SM2320B Alkalinity, Total as CaCO3
SM2540C Total Dissolved Solids
EPA 9040 pH
EPA 300.0 Chloride Sulfate Nitrogen, Nitrate
EPA Method 200.8 Total Uranium

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 10, 2015

Cheryl Johnson
Western Refining Southwest
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX

RE: Wingate Terminal-GW OrderNo.: 1507A19

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 3 sample(s) on 7/22/2015 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 qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest
Project: Wingate Terminal-GW
Lab ID: 1507A19-001 **Matrix:** AQUEOUS

Client Sample ID: WMW-3
Collection Date: 7/21/2015 9:25:00 AM
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst:	**DBD**
Uranium	0.067	0.0025	*	mg/L	5	8/3/2015 1:56:50 PM	20445
EPA METHOD 300.0: ANIONS						Analyst:	**LGT**
Chloride	1800	50	*	mg/L	100	7/30/2015 6:03:44 PM	R27872
Sulfate	1700	50	*	mg/L	100	7/30/2015 6:03:44 PM	R27872
Nitrate+Nitrite as N	ND	1.0		mg/L	5	7/30/2015 6:40:58 PM	R27872
SM2320B: ALKALINITY						Analyst:	**JRR**
Bicarbonate (As CaCO3)	1081	20.00		mg/L CaCO3	1	7/24/2015 2:51:20 PM	R27797
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	7/24/2015 2:51:20 PM	R27797
Total Alkalinity (as CaCO3)	1081	20.00		mg/L CaCO3	1	7/24/2015 2:51:20 PM	R27797
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	**KS**
Total Dissolved Solids	5180	40.0	*	mg/L	1	7/28/2015 2:02:00 PM	20461
SM4500-H+B: PH						Analyst:	**JRR**
pH	7.77	1.68	H	pH units	1	7/24/2015 2:51:20 PM	R27797
EPA METHOD 7470: MERCURY						Analyst:	**JLF**
Mercury	ND	0.00020		mg/L	1	7/30/2015 10:45:39 AM	20514
EPA METHOD 6010B: DISSOLVED METALS						Analyst:	**MED**
Arsenic	ND	0.020		mg/L	1	7/24/2015 10:26:05 AM	R27727
Barium	0.023	0.020		mg/L	1	7/24/2015 10:26:05 AM	R27727
Cadmium	ND	0.0020		mg/L	1	7/24/2015 10:26:05 AM	R27727
Calcium	110	5.0		mg/L	5	7/24/2015 11:12:04 AM	R27727
Chromium	ND	0.0060		mg/L	1	7/24/2015 10:26:05 AM	R27727
Lead	ND	0.0050		mg/L	1	7/24/2015 10:26:05 AM	R27727
Selenium	ND	0.050		mg/L	1	7/24/2015 10:26:05 AM	R27727
Silver	ND	0.0050		mg/L	1	7/24/2015 10:26:05 AM	R27727
Sodium	1700	50		mg/L	50	7/24/2015 11:10:30 AM	R27727
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Acenaphthylene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Aniline	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Anthracene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Azobenzene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Benz(a)anthracene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Benzo(a)pyrene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Benzo(b)fluoranthene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Benzo(g,h,i)perylene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Benzo(k)fluoranthene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399

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
Client Sample ID: WMW-3
Project: Wingate Terminal-GW
Collection Date: 7/21/2015 9:25:00 AM
Lab ID: 1507A19-001
Matrix: AQUEOUS
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Benzoic acid	ND	20		µg/L	1	7/28/2015 12:51:19 PM	20399
Benzyl alcohol	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Bis(2-chloroethyl)ether	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
4-Bromophenyl phenyl ether	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Butyl benzyl phthalate	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Carbazole	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
4-Chloro-3-methylphenol	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
4-Chloroaniline	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
2-Chloronaphthalene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
2-Chlorophenol	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Chrysene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Di-n-butyl phthalate	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Di-n-octyl phthalate	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Dibenz(a,h)anthracene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Dibenzofuran	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
1,2-Dichlorobenzene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
1,3-Dichlorobenzene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
1,4-Dichlorobenzene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
3,3'-Dichlorobenzidine	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Diethyl phthalate	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Dimethyl phthalate	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
2,4-Dichlorophenol	ND	20		µg/L	1	7/28/2015 12:51:19 PM	20399
2,4-Dimethylphenol	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	7/28/2015 12:51:19 PM	20399
2,4-Dinitrophenol	ND	20		µg/L	1	7/28/2015 12:51:19 PM	20399
2,4-Dinitrotoluene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
2,6-Dinitrotoluene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Fluoranthene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Fluorene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Hexachlorobenzene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Hexachlorobutadiene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Hexachlorocyclopentadiene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Hexachloroethane	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Isophorone	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399

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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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
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest
Project: Wingate Terminal-GW
Lab ID: 1507A19-001 **Matrix:** AQUEOUS

Client Sample ID: WMW-3
Collection Date: 7/21/2015 9:25:00 AM
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1-Methylnaphthalene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
2-Methylnaphthalene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
2-Methylphenol	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
3+4-Methylphenol	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
N-Nitrosodimethylamine	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
N-Nitrosodiphenylamine	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Naphthalene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
2-Nitroaniline	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
3-Nitroaniline	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
4-Nitroaniline	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Nitrobenzene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
2-Nitrophenol	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
4-Nitrophenol	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Pentachlorophenol	ND	20		µg/L	1	7/28/2015 12:51:19 PM	20399
Phenanthrene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Phenol	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Pyrene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Pyridine	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
1,2,4-Trichlorobenzene	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
2,4,5-Trichlorophenol	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
2,4,6-Trichlorophenol	ND	10		µg/L	1	7/28/2015 12:51:19 PM	20399
Surr: 2-Fluorophenol	52.3	14.9-111		%REC	1	7/28/2015 12:51:19 PM	20399
Surr: Phenol-d5	51.2	11.3-108		%REC	1	7/28/2015 12:51:19 PM	20399
Surr: 2,4,6-Tribromophenol	86.8	15.7-154		%REC	1	7/28/2015 12:51:19 PM	20399
Surr: Nitrobenzene-d5	75.7	47.8-106		%REC	1	7/28/2015 12:51:19 PM	20399
Surr: 2-Fluorobiphenyl	85.4	21.3-123		%REC	1	7/28/2015 12:51:19 PM	20399
Surr: 4-Terphenyl-d14	72.3	14.3-135		%REC	1	7/28/2015 12:51:19 PM	20399
EPA METHOD 8260B: VOLATILES						Analyst: **BCN**	
Benzene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
Toluene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
Ethylbenzene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
Naphthalene	ND	2.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
1-Methylnaphthalene	ND	4.0		µg/L	1	7/24/2015 2:55:06 PM	R27736

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
Project: Wingate Terminal-GW
Lab ID: 1507A19-001 **Matrix:** AQUEOUS

Client Sample ID: WMW-3
Collection Date: 7/21/2015 9:25:00 AM
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BCN**	
2-Methylnaphthalene	ND	4.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
Acetone	ND	10		µg/L	1	7/24/2015 2:55:06 PM	R27736
Bromobenzene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
Bromodichloromethane	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
Bromoform	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
Bromomethane	ND	3.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
2-Butanone	ND	10		µg/L	1	7/24/2015 2:55:06 PM	R27736
Carbon disulfide	ND	10		µg/L	1	7/24/2015 2:55:06 PM	R27736
Carbon Tetrachloride	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
Chlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
Chloroethane	ND	2.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
Chloroform	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
Chloromethane	ND	3.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
2-Chlorotoluene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
4-Chlorotoluene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
cis-1,2-DCE	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
Dibromochloromethane	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
Dibromomethane	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
1,1-Dichloroethane	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
1,1-Dichloroethene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
1,2-Dichloropropane	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
1,3-Dichloropropane	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
2,2-Dichloropropane	ND	2.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
1,1-Dichloropropene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
Hexachlorobutadiene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
2-Hexanone	ND	10		µg/L	1	7/24/2015 2:55:06 PM	R27736
Isopropylbenzene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
4-Isopropyltoluene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
4-Methyl-2-pentanone	ND	10		µg/L	1	7/24/2015 2:55:06 PM	R27736
Methylene Chloride	ND	3.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
n-Butylbenzene	ND	3.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
n-Propylbenzene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
sec-Butylbenzene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736

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
Project: Wingate Terminal-GW
Lab ID: 1507A19-001 **Matrix:** AQUEOUS

Client Sample ID: WMW-3
Collection Date: 7/21/2015 9:25:00 AM
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BCN**	
Styrene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
tert-Butylbenzene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
trans-1,2-DCE	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
Trichlorofluoromethane	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
Vinyl chloride	ND	1.0		µg/L	1	7/24/2015 2:55:06 PM	R27736
Xylenes, Total	ND	1.5		µg/L	1	7/24/2015 2:55:06 PM	R27736
Surr: 1,2-Dichloroethane-d4	90.2	70-130		%REC	1	7/24/2015 2:55:06 PM	R27736
Surr: 4-Bromofluorobenzene	98.5	70-130		%REC	1	7/24/2015 2:55:06 PM	R27736
Surr: Dibromofluoromethane	93.4	70-130		%REC	1	7/24/2015 2:55:06 PM	R27736
Surr: Toluene-d8	97.5	70-130		%REC	1	7/24/2015 2:55:06 PM	R27736

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Qualifiers:

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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
Project: Wingate Terminal-GW
Lab ID: 1507A19-002
Matrix: AQUEOUS
Client Sample ID: WMW-8
Collection Date: 7/21/2015 11:00:00 AM
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst: **DBD**	
Uranium	0.012	0.00050		mg/L	1	7/30/2015 7:44:18 PM	20445
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	28	10		mg/L	20	7/30/2015 6:16:09 PM	R27872
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	7/23/2015 10:16:32 AM	R27694
Sulfate	160	10		mg/L	20	7/30/2015 6:16:09 PM	R27872
SM2320B: ALKALINITY						Analyst: **JRR**	
Bicarbonate (As CaCO3)	499.8	20.00		mg/L CaCO3	1	7/24/2015 3:28:41 PM	R27797
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	7/24/2015 3:28:41 PM	R27797
Total Alkalinity (as CaCO3)	499.8	20.00		mg/L CaCO3	1	7/24/2015 3:28:41 PM	R27797
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	822	20.0	*	mg/L	1	7/28/2015 2:02:00 PM	20461
SM4500-H+B: PH						Analyst: **JRR**	
pH	8.05	1.68	H	pH units	1	7/24/2015 3:28:41 PM	R27797
EPA METHOD 7470: MERCURY						Analyst: **JLF**	
Mercury	ND	0.00020		mg/L	1	7/30/2015 10:47:46 AM	20514
EPA METHOD 6010B: DISSOLVED METALS						Analyst: **MED**	
Arsenic	ND	0.020		mg/L	1	7/24/2015 10:27:49 AM	R27727
Barium	0.15	0.020		mg/L	1	7/24/2015 10:27:49 AM	R27727
Cadmium	ND	0.0020		mg/L	1	7/24/2015 10:27:49 AM	R27727
Calcium	36	5.0		mg/L	5	7/24/2015 11:13:45 AM	R27727
Chromium	ND	0.0060		mg/L	1	7/24/2015 10:27:49 AM	R27727
Lead	0.0051	0.0050		mg/L	1	7/24/2015 10:27:49 AM	R27727
Selenium	ND	0.050		mg/L	1	7/24/2015 10:27:49 AM	R27727
Silver	ND	0.0050		mg/L	1	7/24/2015 10:27:49 AM	R27727
Sodium	240	5.0		mg/L	5	7/24/2015 11:13:45 AM	R27727
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Acenaphthylene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Aniline	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Anthracene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Azobenzene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Benz(a)anthracene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Benzo(a)pyrene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Benzo(b)fluoranthene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Benzo(g,h,i)perylene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Benzo(k)fluoranthene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399

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Qualifiers:

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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
Project: Wingate Terminal-GW
Lab ID: 1507A19-002 **Matrix:** AQUEOUS

Client Sample ID: WMW-8
Collection Date: 7/21/2015 11:00:00 AM
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Benzoic acid	ND	20		µg/L	1	7/28/2015 1:19:12 PM	20399
Benzyl alcohol	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Bis(2-chloroethyl)ether	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
4-Bromophenyl phenyl ether	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Butyl benzyl phthalate	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Carbazole	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
4-Chloro-3-methylphenol	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
4-Chloroaniline	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
2-Chloronaphthalene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
2-Chlorophenol	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Chrysene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Di-n-butyl phthalate	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Di-n-octyl phthalate	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Dibenz(a,h)anthracene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Dibenzofuran	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
1,2-Dichlorobenzene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
1,3-Dichlorobenzene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
1,4-Dichlorobenzene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
3,3'-Dichlorobenzidine	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Diethyl phthalate	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Dimethyl phthalate	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
2,4-Dichlorophenol	ND	20		µg/L	1	7/28/2015 1:19:12 PM	20399
2,4-Dimethylphenol	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	7/28/2015 1:19:12 PM	20399
2,4-Dinitrophenol	ND	20		µg/L	1	7/28/2015 1:19:12 PM	20399
2,4-Dinitrotoluene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
2,6-Dinitrotoluene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Fluoranthene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Fluorene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Hexachlorobenzene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Hexachlorobutadiene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Hexachlorocyclopentadiene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Hexachloroethane	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Isophorone	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399

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
Project: Wingate Terminal-GW
Lab ID: 1507A19-002 **Matrix:** AQUEOUS

Client Sample ID: WMW-8
Collection Date: 7/21/2015 11:00:00 AM
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1-Methylnaphthalene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
2-Methylnaphthalene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
2-Methylphenol	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
3+4-Methylphenol	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
N-Nitrosodimethylamine	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
N-Nitrosodiphenylamine	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Naphthalene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
2-Nitroaniline	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
3-Nitroaniline	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
4-Nitroaniline	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Nitrobenzene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
2-Nitrophenol	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
4-Nitrophenol	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Pentachlorophenol	ND	20		µg/L	1	7/28/2015 1:19:12 PM	20399
Phenanthrene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Phenol	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Pyrene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Pyridine	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
1,2,4-Trichlorobenzene	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
2,4,5-Trichlorophenol	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
2,4,6-Trichlorophenol	ND	10		µg/L	1	7/28/2015 1:19:12 PM	20399
Surr: 2-Fluorophenol	60.9	14.9-111		%REC	1	7/28/2015 1:19:12 PM	20399
Surr: Phenol-d5	53.3	11.3-108		%REC	1	7/28/2015 1:19:12 PM	20399
Surr: 2,4,6-Tribromophenol	75.7	15.7-154		%REC	1	7/28/2015 1:19:12 PM	20399
Surr: Nitrobenzene-d5	71.8	47.8-106		%REC	1	7/28/2015 1:19:12 PM	20399
Surr: 2-Fluorobiphenyl	74.8	21.3-123		%REC	1	7/28/2015 1:19:12 PM	20399
Surr: 4-Terphenyl-d14	62.4	14.3-135		%REC	1	7/28/2015 1:19:12 PM	20399
EPA METHOD 8260B: VOLATILES						Analyst: **BCN**	
Benzene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
Toluene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
Ethylbenzene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
Naphthalene	ND	2.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
1-Methylnaphthalene	ND	4.0		µg/L	1	7/23/2015 3:51:06 PM	R27721

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
Project: Wingate Terminal-GW
Lab ID: 1507A19-002 **Matrix:** AQUEOUS

Client Sample ID: WMW-8
Collection Date: 7/21/2015 11:00:00 AM
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BCN**	
2-Methylnaphthalene	ND	4.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
Acetone	ND	10		µg/L	1	7/23/2015 3:51:06 PM	R27721
Bromobenzene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
Bromodichloromethane	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
Bromoform	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
Bromomethane	ND	3.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
2-Butanone	ND	10		µg/L	1	7/23/2015 3:51:06 PM	R27721
Carbon disulfide	ND	10		µg/L	1	7/23/2015 3:51:06 PM	R27721
Carbon Tetrachloride	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
Chlorobenzene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
Chloroethane	ND	2.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
Chloroform	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
Chloromethane	ND	3.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
2-Chlorotoluene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
4-Chlorotoluene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
cis-1,2-DCE	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
Dibromochloromethane	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
Dibromomethane	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
1,1-Dichloroethane	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
1,1-Dichloroethene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
1,2-Dichloropropane	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
1,3-Dichloropropane	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
2,2-Dichloropropane	ND	2.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
1,1-Dichloropropene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
Hexachlorobutadiene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
2-Hexanone	ND	10		µg/L	1	7/23/2015 3:51:06 PM	R27721
Isopropylbenzene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
4-Isopropyltoluene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
4-Methyl-2-pentanone	ND	10		µg/L	1	7/23/2015 3:51:06 PM	R27721
Methylene Chloride	ND	3.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
n-Butylbenzene	ND	3.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
n-Propylbenzene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
sec-Butylbenzene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721

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
Project: Wingate Terminal-GW
Lab ID: 1507A19-002 **Matrix:** AQUEOUS

Client Sample ID: WMW-8
Collection Date: 7/21/2015 11:00:00 AM
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BCN**	
Styrene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
tert-Butylbenzene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
trans-1,2-DCE	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
Trichlorofluoromethane	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
Vinyl chloride	ND	1.0		µg/L	1	7/23/2015 3:51:06 PM	R27721
Xylenes, Total	ND	1.5		µg/L	1	7/23/2015 3:51:06 PM	R27721
Surr: 1,2-Dichloroethane-d4	94.3	70-130		%REC	1	7/23/2015 3:51:06 PM	R27721
Surr: 4-Bromofluorobenzene	97.4	70-130		%REC	1	7/23/2015 3:51:06 PM	R27721
Surr: Dibromofluoromethane	97.6	70-130		%REC	1	7/23/2015 3:51:06 PM	R27721
Surr: Toluene-d8	94.2	70-130		%REC	1	7/23/2015 3:51:06 PM	R27721

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
Project: Wingate Terminal-GW
Lab ID: 1507A19-003 **Matrix:** AQUEOUS

Client Sample ID: Trip Blank
Collection Date:
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BCN**	
Benzene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Toluene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Ethylbenzene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Naphthalene	ND	2.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
1-Methylnaphthalene	ND	4.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
2-Methylnaphthalene	ND	4.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Acetone	ND	10		µg/L	1	7/23/2015 4:20:07 PM	R27721
Bromobenzene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Bromodichloromethane	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Bromoform	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Bromomethane	ND	3.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
2-Butanone	ND	10		µg/L	1	7/23/2015 4:20:07 PM	R27721
Carbon disulfide	ND	10		µg/L	1	7/23/2015 4:20:07 PM	R27721
Carbon Tetrachloride	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Chlorobenzene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Chloroethane	ND	2.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Chloroform	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Chloromethane	ND	3.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
2-Chlorotoluene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
4-Chlorotoluene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
cis-1,2-DCE	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Dibromochloromethane	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Dibromomethane	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
1,1-Dichloroethane	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
1,1-Dichloroethene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
1,2-Dichloropropane	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
1,3-Dichloropropane	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
2,2-Dichloropropane	ND	2.0		µg/L	1	7/23/2015 4:20:07 PM	R27721

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
Project: Wingate Terminal-GW
Lab ID: 1507A19-003
Matrix: AQUEOUS
Client Sample ID: Trip Blank
Collection Date:
Received Date: 7/22/2015 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BCN**	
1,1-Dichloropropene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Hexachlorobutadiene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
2-Hexanone	ND	10		µg/L	1	7/23/2015 4:20:07 PM	R27721
Isopropylbenzene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
4-Isopropyltoluene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
4-Methyl-2-pentanone	ND	10		µg/L	1	7/23/2015 4:20:07 PM	R27721
Methylene Chloride	ND	3.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
n-Butylbenzene	ND	3.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
n-Propylbenzene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
sec-Butylbenzene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Styrene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
tert-Butylbenzene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
trans-1,2-DCE	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Trichlorofluoromethane	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Vinyl chloride	ND	1.0		µg/L	1	7/23/2015 4:20:07 PM	R27721
Xylenes, Total	ND	1.5		µg/L	1	7/23/2015 4:20:07 PM	R27721
Surr: 1,2-Dichloroethane-d4	94.5	70-130		%REC	1	7/23/2015 4:20:07 PM	R27721
Surr: 4-Bromofluorobenzene	97.8	70-130		%REC	1	7/23/2015 4:20:07 PM	R27721
Surr: Dibromofluoromethane	101	70-130		%REC	1	7/23/2015 4:20:07 PM	R27721
Surr: Toluene-d8	101	70-130		%REC	1	7/23/2015 4:20:07 PM	R27721

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#: **1507A19**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID	**MB-20445**	SampType:	**MBLK**		TestCode:	**EPA 200.8: Metals**				
Client ID:	**PBW**	Batch ID:	**20445**		RunNo:	**27780**				
Prep Date:	**7/27/2015**	Analysis Date:	**7/27/2015**		SeqNo:	**835215**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID	**MSLCS-20445**	SampType:	**LCS**		TestCode:	**EPA 200.8: Metals**				
Client ID:	**LCSW**	Batch ID:	**20445**		RunNo:	**27780**				
Prep Date:	**7/27/2015**	Analysis Date:	**7/27/2015**		SeqNo:	**835217**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.013	0.00050	0.01250	0	105	85	115			

Sample ID	**MSLLLCS-20445**	SampType:	**LCSLL**		TestCode:	**EPA 200.8: Metals**				
Client ID:	**BatchQC**	Batch ID:	**20445**		RunNo:	**27780**				
Prep Date:	**7/27/2015**	Analysis Date:	**7/27/2015**		SeqNo:	**835219**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00052	0.00050	0.0005000	0	104	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#: **1507A19**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R27694**	RunNo: **27694**							
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **832954**	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: **R27694**	RunNo: **27694**							
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **832955**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	2.3	0.10	2.500	0	92.9	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R27872**	RunNo: **27872**							
Prep Date:	Analysis Date: **7/30/2015**	SeqNo: **838282**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R27872**	RunNo: **27872**							
Prep Date:	Analysis Date: **7/30/2015**	SeqNo: **838283**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	99.0	90	110			
Sulfate	10	0.50	10.00	0	100	90	110			
Nitrate+Nitrite as N	3.6	0.20	3.500	0	102	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- 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#: **1507A19**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **100ng LCS**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R27721**	RunNo: **27721**
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **833337** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.1	70	130			
Toluene	21	1.0	20.00	0	105	70	130			
Chlorobenzene	20	1.0	20.00	0	98.8	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	112	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	96.0	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.2	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27721**	RunNo: **27721**
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **833338** 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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507A19**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27721**	RunNo: **27721**
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **833338** 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								
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.
- 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#: **1507A19**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27721**	RunNo: **27721**
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **833338** 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	9.9		10.00		98.7	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.8	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.4		10.00		93.8	70	130			

Sample ID **100ng LCS2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R27721**	RunNo: **27721**
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **833358** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	97.9	70	130			
Toluene	18	1.0	20.00	0	89.9	70	130			
Chlorobenzene	17	1.0	20.00	0	87.4	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	106	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	91.4	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.7	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.1	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.8	70	130			
Surr: Toluene-d8	9.8		10.00		97.8	70	130			

Sample ID **rb3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27721**	RunNo: **27721**
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **833359** 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								

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#: **1507A19**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **rb3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27721**	RunNo: **27721**
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **833359** Units: **µg/L**

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

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#: **1507A19**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **rb3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27721**	RunNo: **27721**
Prep Date:	Analysis Date: **7/23/2015**	SeqNo: **833359** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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		98.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.9		10.00		98.7	70	130			

Sample ID **100ng LCS**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R27736**	RunNo: **27736**
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **833861** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	88.6	70	130			
Toluene	18	1.0	20.00	0	92.0	70	130			
Chlorobenzene	18	1.0	20.00	0	88.6	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	96.7	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	86.1	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		92.6	70	130			
Surr: 4-Bromofluorobenzene	8.9		10.00		89.1	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.7	70	130			
Surr: Toluene-d8	9.4		10.00		94.2	70	130			

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27736**	RunNo: **27736**
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **833862** 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								

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#: **1507A19**

10-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27736**	RunNo: **27736**
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **833862** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
ılorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- 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#: **1507A19**

10-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27736**	RunNo: **27736**
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **833862** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.2	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.0	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.0	70	130			
Surr: Toluene-d8	9.4		10.00		93.8	70	130			

Sample ID **rb3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27736**	RunNo: **27736**
Prep Date:	Analysis Date: **7/25/2015**	SeqNo: **833885** 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								

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#: **1507A19**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **rb3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27736**	RunNo: **27736**
Prep Date:	Analysis Date: **7/25/2015**	SeqNo: **833885** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
ıloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								

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#: **1507A19**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **rb3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27736**	RunNo: **27736**
Prep Date:	Analysis Date: **7/25/2015**	SeqNo: **833885** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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	9.5		10.00		94.9	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		92.7	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.9	70	130			
Surr: Toluene-d8	9.3		10.00		93.4	70	130			

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R27736**	RunNo: **27736**
Prep Date:	Analysis Date: **7/25/2015**	SeqNo: **833886** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.6	70	130			
Toluene	19	1.0	20.00	0	93.9	70	130			
Chlorobenzene	18	1.0	20.00	0	89.7	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	106	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	86.6	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.1	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.5	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.1	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#: **1507A19**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R27736**	RunNo: **27736**
Prep Date:	Analysis Date: **7/25/2015**	SeqNo: **833886** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Toluene-d8	9.7		10.00		96.6	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#: **1507A19**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **mb-20399**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **20399**	RunNo: **27719**
Prep Date: **7/23/2015**	Analysis Date: **7/23/2015**	SeqNo: **833283** Units: **µg/L**

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

Qualifiers:

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- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
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- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507A19**

10-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **mb-20399**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **20399**	RunNo: **27719**
Prep Date: **7/23/2015**	Analysis Date: **7/23/2015**	SeqNo: **833283** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
aphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	140		200.0		69.9	14.9	111			
Surr: Phenol-d5	140		200.0		69.1	11.3	108			
Surr: 2,4,6-Tribromophenol	150		200.0		76.3	15.7	154			
Surr: Nitrobenzene-d5	72		100.0		72.3	47.8	106			
Surr: 2-Fluorobiphenyl	80		100.0		80.3	21.3	123			
Surr: 4-Terphenyl-d14	53		100.0		53.1	14.3	135			

Qualifiers:

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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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507A19**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **lcs-20399**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **20399**	RunNo: **27719**
Prep Date: **7/23/2015**	Analysis Date: **7/23/2015**	SeqNo: **833290** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	63	10	100.0	0	63.0	47.8	99.7			
4-Chloro-3-methylphenol	130	10	200.0	0	67.2	58.1	103			
2-Chlorophenol	120	10	200.0	0	60.6	49.5	96.8			
1,4-Dichlorobenzene	64	10	100.0	0	63.6	40.4	89.4			
2,4-Dinitrotoluene	54	10	100.0	0	53.8	38.6	91.3			
N-Nitrosodi-n-propylamine	62	10	100.0	0	62.4	53.9	95.6			
4-Nitrophenol	130	10	200.0	0	66.6	26.4	108			
Pentachlorophenol	110	20	200.0	0	55.9	36.5	86.6			
Phenol	130	10	200.0	0	64.6	29.3	108			
Pyrene	53	10	100.0	0	52.9	45.7	100			
1,2,4-Trichlorobenzene	69	10	100.0	0	68.8	39.3	94.5			
Surr: 2-Fluorophenol	120		200.0		61.4	14.9	111			
Surr: Phenol-d5	130		200.0		63.0	11.3	108			
Surr: 2,4,6-Tribromophenol	150		200.0		76.4	15.7	154			
Surr: Nitrobenzene-d5	66		100.0		65.7	47.8	106			
Surr: 2-Fluorobiphenyl	65		100.0		64.7	21.3	123			
Surr: 4-Terphenyl-d14	54		100.0		54.4	14.3	135			

Sample ID **lcsd-20399**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **20399**	RunNo: **27719**
Prep Date: **7/23/2015**	Analysis Date: **7/23/2015**	SeqNo: **833292** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	60	10	100.0	0	60.0	47.8	99.7	4.98	28.2	
4-Chloro-3-methylphenol	130	10	200.0	0	63.3	58.1	103	5.95	24.4	
2-Chlorophenol	110	10	200.0	0	53.1	49.5	96.8	13.1	28.1	
1,4-Dichlorobenzene	54	10	100.0	0	53.5	40.4	89.4	17.2	31.2	
2,4-Dinitrotoluene	50	10	100.0	0	50.1	38.6	91.3	7.12	44.4	
N-Nitrosodi-n-propylamine	61	10	100.0	0	60.9	53.9	95.6	2.40	24.2	
4-Nitrophenol	110	10	200.0	0	57.3	26.4	108	15.0	36.6	
Pentachlorophenol	97	20	200.0	0	48.5	36.5	86.6	14.2	29.5	
Phenol	120	10	200.0	0	60.4	29.3	108	6.78	30	
Pyrene	54	10	100.0	0	53.9	45.7	100	1.87	31	
1,2,4-Trichlorobenzene	58	10	100.0	0	58.4	39.3	94.5	16.4	24	
Surr: 2-Fluorophenol	100		200.0		52.3	14.9	111	0	0	
Surr: Phenol-d5	110		200.0		57.1	11.3	108	0	0	
Surr: 2,4,6-Tribromophenol	130		200.0		65.5	15.7	154	0	0	
Surr: Nitrobenzene-d5	58		100.0		57.9	47.8	106	0	0	
Surr: 2-Fluorobiphenyl	59		100.0		59.1	21.3	123	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#: **1507A19**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID	**lcsd-20399**	SampType:	**LCSD**		TestCode:	**EPA Method 8270C: Semivolatiles**					
Client ID:	**LCSS02**	Batch ID:	**20399**		RunNo:	**27719**					
Prep Date:	**7/23/2015**	Analysis Date:	**7/23/2015**		SeqNo:	**833292**	Units:	**µg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14		46		100.0		46.2	14.3	135	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#: **1507A19**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID	**MB-20514**	SampType:	**MBLK**		TestCode:	**EPA Method 7470: Mercury**					
Client ID:	**PBW**	Batch ID:	**20514**		RunNo:	**27855**					
Prep Date:	**7/29/2015**	Analysis Date:	**7/30/2015**		SeqNo:	**837935**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		ND	0.00020								

Sample ID	**LCS-20514**	SampType:	**LCS**		TestCode:	**EPA Method 7470: Mercury**					
Client ID:	**LCSW**	Batch ID:	**20514**		RunNo:	**27855**					
Prep Date:	**7/29/2015**	Analysis Date:	**7/30/2015**		SeqNo:	**837936**	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	99.5	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#: **1507A19**

10-Aug-15

Client: Western Refining Southwest
Project: Wingate Terminal-GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 6010B: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R27727**	RunNo: **27727**
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **833615** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								
Sodium	ND	1.0								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 6010B: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R27727**	RunNo: **27727**
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **833616** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.51	0.020	0.5000	0	103	80	120			
Barium	0.48	0.020	0.5000	0	96.8	80	120			
ɜdmium	0.49	0.0020	0.5000	0	98.1	80	120			
Calcium	53	1.0	50.00	0	106	80	120			
Chromium	0.48	0.0060	0.5000	0	96.9	80	120			
Lead	0.49	0.0050	0.5000	0	97.7	80	120			
Selenium	0.48	0.050	0.5000	0	95.9	80	120			
Silver	0.099	0.0050	0.1000	0	99.1	80	120			
Sodium	51	1.0	50.00	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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507A19**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **mb-1**	SampType: **MBLK**	TestCode: **SM2320B: Alkalinity**							
Client ID: **PBW**	Batch ID: **R27797**	RunNo: **27797**							
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **835725**	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: **R27797**	RunNo: **27797**							
Prep Date:	Analysis Date: **7/24/2015**	SeqNo: **835726**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	78.96	20.00	80.00	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#: **1507A19**

10-Aug-15

Client: Western Refining Southwest

Project: Wingate Terminal-GW

Sample ID **MB-20461**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW**	Batch ID: **20461**	RunNo: **27805**
Prep Date: **7/27/2015**	Analysis Date: **7/28/2015**	SeqNo: **836096** 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-20461**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW**	Batch ID: **20461**	RunNo: **27805**
Prep Date: **7/27/2015**	Analysis Date: **7/28/2015**	SeqNo: **836097** 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

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 Gallup** Work Order Number: **1507A19** RcptNo: 1

Received by/date: AS 07/22/15

Logged By: **Anne Thorne** 7/22/2015 9:40:00 AM Anne Thorne

Completed By: **Anne Thorne** 7/22/2015 Anne Thorne

Reviewed By: JA 07/23/15

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?	Client		

Log In

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

For Metals analysis: Added 1mL HNO_3 to -001E for acceptable pH level and held in login for 24 hr Prior to analysis. AMG 07/23/15

# of preserved bottles checked for pH: 4 (<2 or >12 unless noted)

Adjusted? yes

Checked by: AMG

Special Handling (if applicable)

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

Person Notified: Date

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. **Cooler Information**

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

Chain-of-Custody Record

Client: WESTERN REFINING
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-3833
email or Fax#: CHERYL.JOHNSON@WNR.COM
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: WINGATE TERMINAL - GW
Project #:
Project Manager: CHERYL JOHNSON
Sampler: TRACY PAYNE
On Ice: [redacted]
Sample Temperature: [redacted]

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
7-21-15	0925	WATER	WMW-3	40 mL VOA-3	HCL	-001
				1L AMBER	NEAT	-001
				PLASTIC-2	HNO_3	-001
				PLASTIC-1	H_2SO_4	-001
				PLASTIC-1	NEAT	-001
7-21-15	1100	WATER	WMW-8	40 mL VOA-3	HCL	-002
				1L AMBER	NEAT	-002
				PLASTIC-2	HNO_3	-002
				PLASTIC-1	H_2SO_4	-002
				PLASTIC-1	NEAT	-002
—	—	WATER	TRIP BLANK	40 mL VOA-2	HCL	-003

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	SEE ATTACHED LIST				Air Bubbles (Y or N)
									✓						
										✓					
											✓				
											✓				
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Date:	Time:	Relinquished by:	Received by:	Date	Time
7-22-15	0940			07/22/15	0940
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

Annual Groundwater Sampling Event
Western Refining Southwest, Inc.
Wingate Terminal - Gallup, New Mexico

METHOD
8260 VOCs
8270 SVOCs
3010/6010 Metals - Dissolved Arsenic Barium Cadmium Calcium Chromium Lead Selenium Silver Sodium
7470 Mercury - Dissolved
SM2320B Alkalinity, Total as CaCO3
SM2540C Total Dissolved Solids
EPA 9040 pH
EPA 300.0 Chloride Sulfate Nitrogen, Nitrate
EPA Method 200.8 Total Uranium