AP - 001

ANNUAL MONITORING REPORT

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19 March 2009

Mr. Glenn von Gonten
New Mexico Oil Conservation District
Environmental Bureau
1220 So. St. Francis Dr.
Santa Fe, NM 87505

RE: **Submission of the 2008 Annual Groundwater Report for the Former Brickland Refinery Site**
Sunland Park, New Mexico
Huntsman Corporation
Case No. AP-01

Dear Mr. von Gonten:

Enclosed is a copy of the 2008 Annual Groundwater Report for the Former Brickland Refinery Site. As agreed upon on 11 February 2003, the report will be submitted on or before 1 April for the previous year.

Please do not hesitate to contact me at 281-719-3039 any time you have questions or need additional information.

A copy of this report is also being sent to the District 2 office in Artesia.

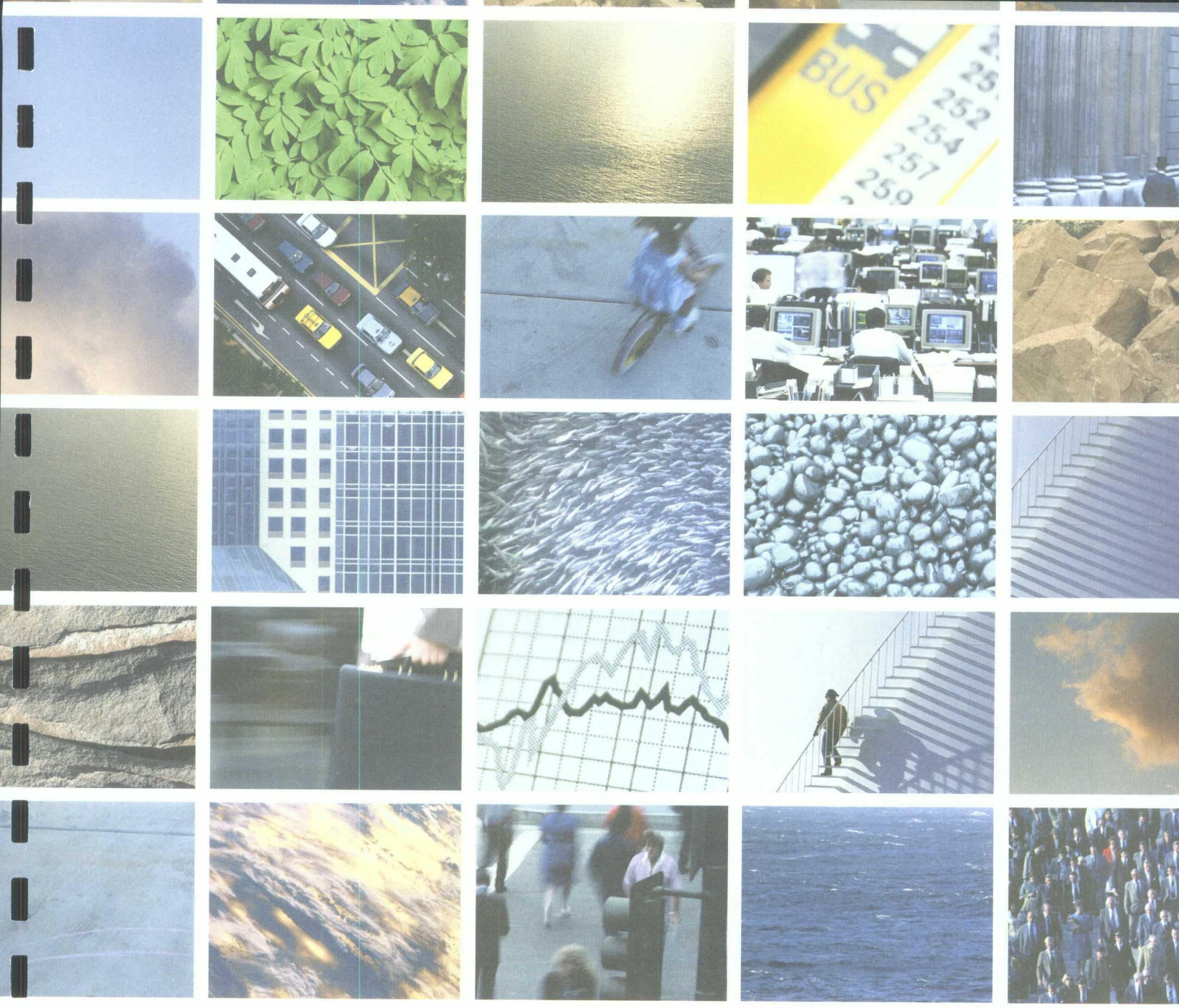
Sincerely,

Edward L. Gunderson

Edward L. Gunderson
Manager EHS Center of Excellence – Americas
Huntsman International

cc: NMOCD District 2 – Artesia
Ronald Keichline – Huntsman
Lon Tullos – Huntsman EHS Library

cc w/o enclosures:
Brad Stokes – ERM



2008 Annual Groundwater Monitoring Report

Huntsman International, LLC
Former Brickland Refinery

March 19, 2009

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Huntsman International, LLC

2008 Annual Groundwater Monitoring Report: *Former Brickland Refinery*

March 19, 2009

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Sunland Park, New Mexico

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EXECUTIVE SUMMARY

This 2008 Annual Groundwater Monitoring Report documents the results of two semi-annual groundwater monitoring operations conducted at the former Brickland Refinery site in Sunland Park, New Mexico. The semi-annual groundwater monitoring operations were conducted in June 2008 and early January 2009. The report contains summaries of groundwater elevation and analytical data for the past six years.

This monitoring program was conducted in accordance with the Groundwater Monitoring Plan included as Section 3.5 of the Stage 2 Abatement Plan approved by Mr. Bill Olson of the New Mexico Oil Conservation Division (NMOCD) in a letter dated December 17, 1998, and revised in 2006. Since 2008 is an even-numbered year, in June samples were collected from:

- the five off-site wells (MW-3S, MW-3D, MW-6S, MW-6D, and MW-9S),
- the four on-site wells (MW-4, MW-7, MW-14, and MW-15), and
- upstream and downstream in the river.

In January samples were collected from the five off-site wells and from upstream and downstream in the river.

The June 2008 monitoring event analytical results report that benzene, toluene, ethylbenzene, and toluene (BTEX) were not detected in any of the samples (Table 3). The January 2009 results report that BTEX were not detected in any of the samples.

Polynuclear aromatic hydrocarbons (PAH) were not reported in any sample during the June 2008 monitoring event (see Table 4). PAH analysis was not required for the January event.

Metals were reported in samples collected from wells and the river during 2008 sampling, however, the reported metal concentrations were either below New Mexico Water Quality Control Commission (NMWQCC) standard, or the metal was reported in background samples.

Metals that were not reported at concentrations above detection limits in any sample include antimony, beryllium, cadmium, chromium, cobalt, lead, mercury, silver, and thallium.

Metals that were reported at concentrations above detection limits but below NMWQCC standards include arsenic, barium, copper, molybdenum, nickel, selenium, and zinc.

Metals that were reported at concentrations above the NMWQCC standard include aluminum, boron, iron, and manganese.

Aluminum was not reported in groundwater samples, but was reported above the NMWQCC standard in river water samples, appearing in both upstream and downstream river water. Because it was noted in upstream river water, it is unlikely related to on-site conditions. Aluminum was also reported in a field blank, indicating a possible airborne source that could result in samples with a false positive.

Data from MW-12, the upgradient background well, had boron, iron and manganese in groundwater at concentrations similar to concentrations reported in the other monitoring wells. Because boron, iron, and manganese were reported in groundwater samples from an upgradient well, they are likely naturally-occurring background constituents. Boron data was collected in MW-12 during the January sampling event to determine if it is naturally-occurring in the upgradient well. Boron was reported at a concentration of 1.2 mg/L, indicating that boron is naturally-occurring in groundwater as well. On the basis of these metals analyses, we conclude that groundwater is not impacted by metals from activities conducted at the site.

Light non-aqueous phase liquid (LNAPL) was not detected in the product recovery/monitoring well, MW-10, during the 2008 monitoring events. Well points WP-25 and WP-26S had measurable thicknesses of 0.45 foot and 0.73 foot, respectively, during the June 2008 monitoring event, and 0.08 foot and 0.38 foot during the January 2009 monitoring event. MW-27S had a trace of LNAPL at 0.01 feet during the January 2009 event only. Figure 4 is a graph of LNAPL thicknesses. Only three wells now have detectable thickness of LNAPL. The LNAPL present appears to be viscous, residual material that is decreasing in thickness.

Based on the results of ongoing monitoring, Huntsman recommends the following actions:

- Continue LNAPL recovery in all wells or well points that have detectable thickness of LNAPL.
- Initiate quarterly sampling and monitoring for BTEX.
- Remove PAH and Metals analyses from the sampling program.

1.0 INTRODUCTION

1.1 BACKGROUND

The Brickland Refinery Site is located in Sunland Park, New Mexico and consists of approximately 33 acres situated along the west bank of the Rio Grande (see Figure 1). Huntsman International, LLC. (Huntsman) currently owns the site. From 1933 to 1958, the site was operated as a petroleum refinery, producing both gasoline and jet fuel. The site was closed and the plant dismantled in 1958. Between 1964 and 1989, the site was leased to various parties to service trucks, conduct automobile salvage operations, graze livestock and store used bricks. Petroleum hydrocarbons have been reported in soil and groundwater at the site. The distribution of petroleum hydrocarbons was investigated and these investigations provided the basis for the Stage 2 Abatement Plan. The Stage 2 Abatement Plan provides the methods for abating contamination of groundwater and soil in compliance with New Mexico Water Quality Control Commission (NMWQCC) regulations on prevention and abatement of water pollution (20NMAC 6.2, Subpart IV), and New Mexico Oil Conservation Division (NMOCD) requirements to protect public health and the environment with respect to wastes from the refinement of crude oil (s70-2-12.8 (22) NMSA 1978). Huntsman has maintained a stand-alone light non-aqueous phase liquid (LNAPL) recovery system on the site as part of the Stage 2 Abatement Plan. The system was installed in December 1998 and is currently shut down because LNAPL is no longer detected in MW-10. Site visits are now being made quarterly to measure hydrocarbon thicknesses and to remove LNAPL from wells. The site layout and monitoring well and sampling locations are shown on Figure 2.

1.2 SCOPE OF SERVICES

ERM performed semi-annual groundwater monitoring at the subject site in June 2008 and January 2009. The monitoring program was conducted in accordance with the Groundwater Monitoring Plan and Stage 2 Abatement Plan, approved by Mr. Bill Olsen of the NMOCD in his letter dated December 23, 1998. The sampling protocol was modified in 2006 and was first used during the June 2006 monitoring event. The revised protocol is in general accordance with applicable NMOCD, New Mexico Environment Department (NMED) and Environmental Protection Agency (EPA) regulations, procedures and guidelines. The following items were included in the semi-annual monitoring as required by the Groundwater Monitoring Plan and Stage 2 Abatement Plan and approved by the NMOCD:

- Depth to groundwater measurements were recorded in the ten on-site monitoring wells and eight off-site monitoring wells.

- LNAPL thicknesses were measured, if present, in the 18 monitoring wells and 14 well points, and a summary of the LNAPL thicknesses is included in Table 6 and Figure 4.
- Groundwater sampling was conducted in each of the five required off-site monitoring wells (MW-3S, MW-3D, MW-6S, MW-6D, and MW-9S), the four required on-site wells (MW-4, MW-7, MW-14, and MW-15) in June, and in the on-site wells in January.
- Surface water samples were collected from the Rio Grande during each semi-annual monitoring event for laboratory analytical testing. One sample was collected from the upstream end of the site, north of MW-1, and the other sample was collected from the downstream end of the site, south of MW-9s.
- Analytical testing for the June monitoring event included benzene, toluene, ethylbenzene, and toluene (BTEX), polynuclear aromatic hydrocarbons (PAH), and 20 priority pollutant metals (using US EPA Test Methods 8021B, 8270C, 7470, and 6020, respectively). Samples were analyzed for BTEX only for the January monitoring event. Additionally, one sample was collected from MW-12 for analysis of boron by Method 6020.
- Purged water and used personal protection wastes were managed by Safety Kleen in their Denton, Texas facility.
- Extraction system O&M reports were not prepared because the extraction system was shut down in 2008, due to an absence of LNAPL in the recovery well.

2.0 *GROUNDWATER ELEVATION, HYDRAULIC GRADIENT AND FLOW DIRECTION*

The hydraulic gradient beneath the former Brickland Refinery varies slightly across the site, and in response to river stage. In June 2008 the gradient was approximately 0.001 and groundwater flow direction was estimated to be approximately S 50° E in the northern portion of the site, and was approximately 0.0002 with a flow direction of due East in the southern portion of the site. The hydraulic gradient in January 2009 was calculated to be approximately 0.0005 foot/foot and the flow direction was approximately S 25° E. Historical groundwater elevations for the monitoring wells are provided in Table 2. Water levels are not listed for the well points because the well points were specifically designed to detect LNAPL product at discrete depth and the screened intervals do not correlate with the monitoring well screens. Groundwater elevation contour maps for the June 2008 and January 2009 monitoring events are depicted in Figures 3 and 4, respectively.

Groundwater levels in the monitoring wells are influenced by the stage of the Rio Grande bordering the site. Due to seasonal fluctuations in the river, water levels in the monitoring wells may vary as much as two feet over the course of a year. Monitoring over the past 15 years indicates a consistent pattern of higher water elevations in the wells and the river during summer sampling events and lower water elevations during the winter sampling events, therefore the correlations between river stage and sampling date, and between river water and groundwater elevations are firmly established.

3.0 *LNAPL PRODUCT REMOVAL*

3.1 *LNAPL PRODUCT THICKNESS*

LNAPL product thickness in each monitoring well and well point was measured, if present, with an oil/water interface meter. The historical product thickness measurements for each monitoring point are listed in Table 6. Only three locations now show any trace of LNAPL. LNAPL Hydrocarbon Thickness maps were not prepared because an insufficient number of wells contained LNAPL to prepare a useful contour map.

3.2 *REMOVAL AND DISPOSAL OF LNAPL PRODUCT*

A total of approximately 235 gallons of LNAPL product had been removed from recovery well MW-10 since 1998. There was no product removed from the site in 2006, 2007, or 2008, because LNAPL is no longer present in MW-10.

4.0 SAMPLE COLLECTION AND LABORATORY ANALYTICAL TESTING PROCEDURES

4.1 FLUID LEVEL MEASUREMENTS

The ten on-site monitoring wells and eight off-site monitoring wells were probed for the presence of LNAPL product using an oil/water interface probe. LNAPL was not detected in the wells to be sampled. The fluid elevations in each well and monitoring point were measured and recorded. The water surface elevations for the two monitoring periods are shown in Table 2.

4.2 DECONTAMINATION

The interface probe was decontaminated prior to each use and between each well to prevent the introduction of external contamination or artifacts into a well. A wash and double-rinse decontamination procedure was used. The procedure consisted of washing the probe with Liquinox, a mild, non- phosphate detergent, then double-rinsing with distilled water.

4.3 CALIBRATION OF THE MULTI-PROBE WATER ANALYZER

The multi-probe analyzer was calibrated prior to use at the former Brickland Refinery site. Each calibration was carried out in accordance with the equipment manufacturer's procedures and recommendations. Date, time, calibration readings, and the method of calibration were recorded on Calibration Logs presented in Appendix A.

4.4 WELL PURGING AND FIELD PARAMETER MEASUREMENTS

The monitoring wells were micropurged prior to sampling. Micropurging consists of removing small volumes of groundwater at very low pumping rates until certain physiochemical field parameters stabilized. Field parameter measurements were recorded while each well was purged through the multi-probe flow cell. The groundwater temperature, pH, specific conductance, dissolved oxygen, redox potential, and turbidity was documented on the Sampling Information Form provided in Appendix A. Micropurging of each well was continued until two consecutive readings for three field parameters (dissolved oxygen, redox potential, and turbidity) stabilized within 10% of one another. When stabilization was achieved, well purging was discontinued and the well sampled. The total volume of water purged prior to sample collection was recorded on the Sampling Information Form. The purged water was containerized for disposal.

Approximately 2 gallons were removed from each well with pumping rates of 0.2 liter per minute. Field data collected during the purging of each well is

provided in Appendix A. Groundwater odor, color, and other physically apparent characteristics were also documented. Monitor well integrity was also documented (see the Sampling Information Forms provided in Appendix A).

Since each pump is dedicated to a specific well, no decontamination was required. Approximately 18 gallons of water were purged from the sampled monitoring wells during the June 2008 monitoring event. Approximately 8 gallons were purged from the sampled wells during the January 2009 monitoring event. The purged water collected during these monitoring events was transported Safety Kleen's Denton, Texas facility. A copy of the disposal manifest is provided in Appendix C.

4.5 *GROUNDWATER SAMPLE COLLECTION*

Samples were collected for laboratory analysis in the order of volatilization sensitivity of the analytical parameters, (first, volatile organics; second, polynuclear aromatic hydrocarbons; and third, metals). All samples were properly labeled with the correct sampling location, date, time, and testing requirements written on self-adhering labels provided by the laboratory. Metals samples were filtered during the June event to determine if suspended solids were affecting the analytical results.

4.5.1 *Volatile Organic Compounds (VOCs)*

The groundwater samples were analyzed by US EPA Method 8021B for the following volatile organic compounds (VOCs): benzene, ethylbenzene, toluene, and total xylenes (BTEX). The VOC sample containers were 40 milliliter (mL) glass vials that contained a premeasured amount of hydrochloric acid (HCl), prepared by the laboratory. The HCl is a preservative, and sample containers for VOCs were not rinsed or allowed to overflow during the collection of samples. Water was collected from the well and slowly poured into the glass vial until a convex meniscus formed above the lip of the bottle. Once capped, the vial was checked for air bubbles (headspace) by turning it upside down, tapping the cap of the inverted bottle, and visually inspecting the bottle contents. No bubbles were observed.

4.5.2 *Polynuclear Aromatic Hydrocarbons*

Wells sampled in the June 2008 monitoring event were analyzed by US EPA Method 8270C for the presence of PAHs. Sample containers for PAH were 1 liter amber glass bottles with no preservative. Water was collected from the well and slowly poured into the sample container until filled to the neck.

4.5.3 *Metals*

Wells sampled in the June 2008 monitoring event were analyzed by US EPA Method 6020 for aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium, cobalt, copper, iron, lead, manganese, molybdenum,

nickel, selenium, silver, thallium, and zinc. Mercury was analyzed by US EPA Method 7470.

Sample bottles were 500 mL plastic bottles that contained a pre-measured amount of nitric acid (HNO_3) prepared in the laboratory. The HNO_3 is a preservative and sample containers for metals were not rinsed before or allowed to overflow during sample collection.

4.6 *SURFACE WATER SAMPLING*

Surface water samples from the Rio Grande were collected for chemical analysis from one location up-river and one location down-river from the Brickland facility. The samples were subjected to the same group of analytical testing listed previously for the groundwater samples.

Surface water grab samples were collected by submerging a decontaminated Teflon® dipper into the river. The dipper was decontaminated between sampling sites with Liquinox, a non-phosphate detergent followed by a double rinse with distilled water. Sampling protocols outlined in the Monitoring and Sampling Protocol was strictly adhered to during the sampling process.

4.7 *FIELD QUALITY ASSURANCE / QUALITY CONTROL*

The Field Quality Assurance/Quality Control (QA/QC) program includes collection of field blanks, equipment blanks, trip blanks, and duplicate samples. Descriptions of the QA/QC samples are presented below.

4.7.1 *Field Blanks*

Field blanks were used to determine potential absorption of volatile organics from the air into the water samples. The blanks for volatile organics were collected by filling one 40 mL glass vial with distilled water. The field blanks were analyzed for BTEX. Additionally, field blanks were collected during the June event for metals analyses to assess if windblown dusts and airborne particles could affect samples. The blanks for metals were collected in a 500 mL plastic bottle with acid preservative. The field blanks did not detect any BTEX constituents. One of the field blanks detected aluminum, indicating a possible airborne source of aluminum.

4.7.2. *Equipment Blanks*

Equipment blanks were collected during each up-river and down-river monitoring event since the non-dedicated sampling equipment (i.e.- Teflon® dipper) was used to collect samples. To collect an equipment blank, the Teflon® dipper was decontaminated with Liquinox, a non-phosphate detergent followed by a double rinse with distilled water. Immediately following decontamination,

the equipment blank was collected by pouring distilled water into the Teflon® dipper, and then filling one 40 mL, glass vial with the water from the dipper. The equipment blank was analyzed for the same volatile organic compounds (BTEX) as the surface water samples.

The equipment blanks did not report any BTEX constituents.

4.7.3. *Trip Blanks*

The trip blank is used to detect and quantify potential organic chemical artifacts occurring in the samples which originate from either the sample containers or the de-ionized water comprising the blank. One bottle set for each ice chest was filled with de-ionized water by the laboratory prior to field mobilization. These bottles were transported to the sampling location and returned to the laboratory in the ice chests used to transport groundwater and surface water samples. The trip blanks were analyzed for the same volatile organic compounds (BTEX) as the groundwater and surface water samples.

The trip blanks did not report any BTEX constituents.

4.7.4. *Duplicate Samples*

One duplicate sample was collected during the monitoring events. The duplicate samples collected during the June and January monitoring events were collected from monitor well MW-6S.

The duplicate sample results were similar to the MW-6S concentrations.

4.8 *SAMPLE SHIPPING AND CHAIN-OF-CUSTODY RECORDS*

The water samples collected during the monitoring events were placed in ice-filled coolers immediately after collection and shipped to ALS Laboratories in Houston, Texas for analysis. In each event, chain-of-custody (COC) forms, documenting sample identification numbers, the required analysis for each sample, collection times, and delivery times to the laboratories were completed for each set of samples. Copies of COC forms are provided in Appendix B.

5.0 GROUNDWATER ANALYTICAL RESULTS

5.1 BENZENE, TOLUENE, ETHYLBENZENE AND TOTAL XYLENES (BTEX)

Historical reported BTEX concentrations for the five off-site monitoring wells (MW-3S, MW-3D, MW-6S, MW-6D, and MW-9S) and four on-site monitoring wells (MW-4, MW-7, MW14, and MW-15) are summarized in Table 3. This table lists BTEX concentrations for the period from June 2002 to January 2009. BTEX concentrations for monitoring events prior to June 2002 are included in previously submitted reports.

The analytical results for the 2008 reporting period indicate that BTEX were not detected in samples collected from any of the on-site or off-site wells, or from the river.

The laboratory reports and Chain-of-Custody (COC) documentation are included in Appendix B.

5.2 POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)

Historical analytical results for PAHs for five off-site monitoring wells (MW-3S, MW-3D, MW-6S, MW-6D, and MW-9S) and four on-site monitoring wells (MW-4, MW-7, MW14, and MW-15) indicate that PAH constituents have not been detected since 1999. The June 2008 monitoring results indicate that groundwater and river water do not contain PAH constituents. Analytical results for PAHs for the period of December 1993 to June 2008 are listed in Table 4.

5.3 PRIORITY POLLUTANT METALS

Historical (2001 through 2008) groundwater and surface water (Rio Grande) sample analytical results for Priority Pollutant metals (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc) are presented in Table 5. Metals were filtered during the June sampling event to determine if suspended solids were affecting the analytical results. No obvious difference was apparent with the filtered data when compared to previous data, therefore it is concluded that the purging and sampling procedures have likely not introduced bias into the metals data by suspended solids. The metals concentrations in groundwater are dissolved concentrations.

Metals concentrations were analyzed in samples from wells and the river during 2008. In each case the metal concentration was reported either below detection limits, below NMWQCC standard, or the metal was not reported above typically occurring background concentrations.

Metals that were not reported above detection limits in any sample include antimony, beryllium, cadmium, chromium, cobalt, lead, mercury, silver, and thallium.

Metals that were reported above detection limits but below NMWQCC standards include arsenic, barium, copper, molybdenum, nickel, selenium, and zinc.

Aluminum was not reported above detection limits in groundwater samples, but was reported at concentrations above the NMWQCC standard in river water samples in both the upstream and downstream river water samples. Because it was noted in upstream river water, it is not a result of on-site conditions. It should be noted that aluminum was reported in the field blank, indicating an airborne source that potentially can affect all samples with a false positive.

Metals that were reported at concentrations above the NMWQCC standard include boron, iron, and manganese. Iron and manganese are known to occur naturally in the groundwater, and data from MW-12 (the upgradient background well) collected in 1994 show both iron and manganese present in groundwater at concentrations similar to onsite concentrations. Because iron and manganese appear in groundwater samples from an upgradient well, they are judged to be unrelated to on-site activities. Boron data was collected in MW-12 during the January 2009 sampling event to determine if it is also present in samples from the upgradient well. Boron was reported at a concentration of 1.2 mg/L. The concentration of 1.2 mg/L is consistent with concentrations in groundwater samples collected at the site, indicating that boron is also unrelated to on-site activities. On the basis of these metals analyses, we conclude that groundwater is not contaminated by metals from activities conducted at the site.

6.0 *REMEDIATION SYSTEM PERFORMANCE*

The remediation system installed in MW-10 was shut down in June 2008 because LNAPL is no longer present in MW-10. The system was checked quarterly to verify absence of LNAPL in MW-10.

7.0 *CONCLUSIONS*

The analytical results for this reporting period indicate that benzene, toluene, ethylbenzene, and toluene (BTEX) were not reported in samples collected from any of the on-site or off-site wells, or from the river.

Polynuclear aromatic hydrocarbons (PAHs) were not reported in any well sample or river sample during the June 2008 monitoring event.

Metals concentrations were reported in wells samples and the river samples during 2008 sampling, however, in each case the metal concentration was either below detection limits, below NMWQCC standards, or the metal has been reported at similar concentrations in an upgradient well, indicating that the reported concentrations are unrelated to site activities.

LNAPL was not detected in the product recovery/monitoring well, MW-10, during the 2008 monitoring events. Only three well points now have any measureable thickness of LNAPL. The LNAPL present appears to be viscous, residual material, decreasing in thickness.

8.0 *RECOMMENDATIONS*

The following recommendations are proposed for the remediation system and monitoring operations at the Brickland Refinery.

- Continue LNAPL recovery operations in wells or well points that have LNAPL. The limited volumes of LNAPL now present are indicative of residual non-mobile, non-migrating, LNAPLs. In 2009, Huntsman intends to evaluate LNAPL occurrence by American Petroleum Institute (API) and/or ASTM methods to assess continued recoverability.
- Dissolved-phase BTEX concentrations have been below regulatory action levels for two consecutive sampling events. In accordance with Section 5.2 of the Abatement Plan, quarterly closure monitoring should now be conducted.
- Dissolved-phase PAH concentrations have been below regulatory action levels for 9 consecutive sampling events, or since June 2000. We recommend removing PAH analyses from the sampling program. While the Termination of Abatement Activities in Section 5 of the Abatement Plan specifies two years of quarterly data (8 sampling events), PAH constituents have not been detected in groundwater samples for the past 9 years (9 sampling events), and a more frequent sampling is unlikely to produce different results.
- We recommend removing metals analyses from the sampling program. Metals are either not present, are present below NMWQCC standards, or have been reported at similar concentrations in an upgradient well, indicating that the reported concentrations are unrelated to site activities. Section 5 of the Abatement Plan "Termination of Abatement Activities" does not mention a procedure for termination of metals abatement activities.

Tables

Table 1
Brickland Refinery
Well Sampling and Purging Methods

Well No.	Sample Date	Purge Method	Sampling Method	Purge Volume	Laboratory Analytes
MW-3S	6/24/2008	Micropurge	Micropurge Bladder Pump	Approximately 2 gallons	BTEX, Semi-Vols, and Metals
	1/8/2009	Micropurge	Micropurge Bladder Pump	Approximately 2 gallons	BTEX only
MW-3D	6/25/2008	Micropurge	Micropurge Bladder Pump	Approximately 2 gallons	BTEX, Semi-Vols, and Metals
	1/8/2009	Micropurge	Micropurge Bladder Pump	Approximately 2 gallons	BTEX only
MW-4	6/25/2008	Micropurge	Micropurge Bladder Pump	Approximately 2 gallons	BTEX, Semi-Vols, and Metals
	1/8/2009	NS	NS	NS	NS
MW-6S	6/25/2008	Micropurge	Micropurge Bladder Pump	Approximately 2 gallons	BTEX, Semi-Vols, and Metals
	1/8/2009	Micropurge	Micropurge Bladder Pump	Approximately 2 gallons	BTEX only
MW-6D	6/25/2008	Micropurge	Micropurge Bladder Pump	Approximately 2 gallons	BTEX, Semi-Vols, and Metals
	1/8/2009	Micropurge	Micropurge Bladder Pump	Approximately 2 gallons	BTEX only
MW-7	6/24/2008	Micropurge	Micropurge Bladder Pump	Approximately 2 gallons	BTEX, Semi-Vols, and Metals
	1/8/2009	NS	NS	NS	NS
MW-9S	6/26/2008	Micropurge	Micropurge Bladder Pump	Approximately 2 gallons	BTEX, Semi-Vols, and Metals
	1/8/2009	Micropurge	Micropurge Bladder Pump	Approximately 2 gallons	BTEX only
MW-12	1/7/2009	Micropurge	Micropurge Bladder Pump	Approximately 2 gallons	Boron only
MW-14	6/26/2008	Micropurge	Micropurge Bladder Pump	Approximately 2 gallons	BTEX, Semi-Vols, and Metals
	1/8/2009	NS	NS	NS	NS
MW-15	6/26/2008	Micropurge	Micropurge Bladder Pump	Approximately 2 gallons	BTEX, Semi-Vols, and Metals
	1/8/2009	NS	NS	NS	NS
River	6/25/2008	NA	Teflon Dipper	NA	BTEX, Semi-Vols, and Metals
Upstream	1/8/2009	NA	Teflon Dipper	NA	BTEX only
River	6/25/2008	NA	Teflon Dipper	NA	BTEX, Semi-Vols, and Metals
Downstream	1/8/2009	NA	Teflon Dipper	NA	BTEX only

Total volume purged during semi-annual monitoring event in June 2008:	18 gallons
Total volume purged during annual monitoring event in January 2009:	8 gallons
Total volume purged during semi-annual and annual monitoring events:	26 gallons

NS Not sampled during an odd-numbered year.
NA Not applicable

Table 2
Brickland Refinery
Monitoring Well Groundwater Elevations (Feet, MSL)

Well ID	6/18/2003	12/16/2003	6/16/2004	12/16/2004	6/15/2005	12/14/2005	6/13/2006	12/14/2006	6/13/2007	12/11/2007	6/25/2008	1/7/2009
MW-1	3725.55	3723.69	3725.56	3723.6	3726.5	3724.01	3725.89	3724.29	3726.74	3724.57	3726.88	3724.4
MW-2	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99
MW-3S	3724.65	3722.69	3724.61	3722.71	3725.56	3723.1	3725.02	3723.34	3725.82	3723.49	3725.99	3723.53
MW-3D	3724.57	3722.61	3724.62	3722.64	3725.49	3723.04	3724.96	3723 29	3725.78	3723.57	3725.96	3723.5
MW-4	3724.87	3722.88	3724.76	3722.96	3725.75	3723.37	3725.21	3723.62	3726.06	3723.77	3726.26	3723.82
MW-5	3724.91	3722.85	3724.83	3722.98	3725.68	3723.38	3725.15	3723.65	3726.02	3723.84	3726.14	3723.85
MW-6S	3724.4	3722.38	3724.4	3722.45	3725.21	3722.9	3724.76	3722.99	3725.53	3723.13	3725.7	3723.29
MW-6D	3724.36	3722.33	3724.38	3722.41	3725.22	3722.86	3724.74	3722.98	3725.58	3723.28	3725.76	3723.25
MW-7	3724.76	3722.69	3724.75	3722.82	3725.53	3723.24	3725.06	3723.45	3725.92	3723.78	3726.05	3723.64
MW-8	3724.67	3722.63	3724.62	3722.84	3725.28	3723.25	3724.91	3723.46	3725.53	3723.67	3725.79	3723.62
MW-9S	3724.04	3722.02	3723.97	3722.18	3724.85	3722.65	3724.39	3722.89	3725.4	3723.17	3725.41	3723.17
MW-9D	Dry	Dry	Dry	Dry	Dry	Plugged 7/05	Plugged 7/05	Plugged 7/05	Plugged 7/05	Plugged 7/05	Plugged 7/05	Plugged 7/05
MW-10	3725.67	3722.31	3724.41	3722.56	3725.24	3723.11	3724.53	3723.29	3725.83	3723.54	3732.54	3723.47
MW-11	3724.51	3721.17	3724.42	3722.74	3725.24	3723.21	3724.65	3723.43	3725.77	3723.62	3725.74	3723.53
MW-12	3725.93	3724.09	3725.9	3723.86	3726.74	3724.4	3726.24	3724.66	3727.1	3724.8	3726.95	3724.79
MW-13	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99
MW-14	3725.3	3722.79	3724.81	3722.88	3725.67	3723.3	3725.17	3723.55	3726.03	3723.82	3726.13	3723.77
MW-15	3724.35	3722.38	3724.28	3722.58	3725.16	3723.04	3724.69	3723.42	3725.75	3723.57	3725.73	3723.58
MW-16	3724.17	3722.14	3724.13	3722.34	3725	3722.78	3724.48	3723.05	3725.53	3723.29	3725.51	3723.28
MW-17	3724.67	3722.61	3724.67	3722.71	3725.53	3723.15	3725.06	3723.33	3725.93	3723.63	3726	3723.63

Notes: MSL = Mean Sea Level

Table 3
Brickland Refinery
BTEX Concentrations (µg/L) in Monitoring Wells and River Surface Water Samples
June 2003 through January 2009

Well	Date	Benzene	Toluene	Ethylbenzene	Xylenes
MW-3S	6/19/2003	ND	ND	ND	ND
	12/17/2003	ND	ND	ND	ND
	6/16/2004	ND	ND	ND	ND
	12/16/2004	ND	ND	ND	ND
	6/15/2005	ND	ND	ND	ND
	12/16/2005	ND	ND	ND	ND
	6/15/2006	ND	ND	ND	ND
	12/14/2006	ND	ND	ND	ND
	6/14/2007	ND	ND	ND	ND
	12/17/2007	ND	ND	ND	ND
	6/24/2008	ND	ND	ND	ND
	1/8/2009	ND	ND	ND	ND
MW-3D	6/19/2003	ND	ND	ND	ND
	12/17/2003	ND, ND	ND, ND	ND, ND	ND, ND
	6/16/2004	ND	ND	ND	ND
	12/16/2004	ND	ND	ND	ND
	6/15/2005	ND	ND	ND	ND
	12/16/2005	ND	ND	ND	ND
	6/15/2006	ND	ND	ND	ND
	12/14/2006	ND	ND	ND	ND
	6/14/2007	ND	ND	ND	ND
	12/17/2007	ND	ND	ND	ND
	6/24/2008	ND	ND	ND	ND
	1/8/2009	ND	ND	ND	ND
MW-4	6/28/2002	**100, 87**	ND,ND	ND,ND	ND,ND
	12/6/2002	NS	NS	NS	NS
	6/19/2003	NS	NS	NS	NS
	12/17/2003	NS	NS	NS	NS
	6/16/2004	**45**	ND	ND	ND
	12/16/2004	ND	ND	ND	ND
	6/14/2006	ND	ND	ND	ND
	12/14/2006	ND	ND	ND	ND
	6/14/2007	NS	NS	NS	NS
	12/17/2007	NS	NS	NS	NS
	6/24/2008	ND	ND	ND	ND
	1/8/2009	ND	ND	ND	ND
MW-6S	6/19/2003	ND	ND	ND	**8.7**
	12/17/2003	ND	ND	ND	ND
	6/16/2004	ND, ND	ND, ND	ND, ND	ND, ND
	12/16/2004	ND, ND	ND, ND	ND, ND	ND, ND
	6/15/2005	**0.8**	ND	ND	**0.86**
	12/16/2005	ND	ND	ND	ND
	6/15/2006	ND, ND	ND, ND	ND, ND	ND, ND
	12/14/2006	**11 , 6.1**	ND, ND	**7.3** , ND	**1.6**, ND
	6/14/2007	ND, ND	ND, ND	**8.0 , 9.2**	**1.5**, ND
	12/17/2007	ND, ND	ND, ND	**2.2** , ND	ND, ND
	6/25/2008	ND	ND	ND	ND
	1/8/2009	ND	ND	ND	ND

Table 3
Brickland Refinery
BTEX Concentrations (µg/L) in Monitoring Wells and River Surface Water Samples
June 2003 through January 2009

Well	Date	Benzene	Toluene	Ethylbenzene	Xylenes
MW-6D	6/19/2003	ND	ND	ND	ND
	12/17/2003	ND	ND	ND	ND
	6/16/2004	ND	ND	ND	ND
	12/16/2004	ND	ND	ND	ND
	6/15/2005	ND	ND	ND	ND
	12/16/2005	ND	ND	ND	ND
	6/15/2006	ND	ND	ND	ND
	12/14/2006	ND	ND	ND	ND
	6/14/2007	ND	ND	ND	ND
	12/17/2007	ND	ND	ND	ND
	6/25/2008	ND	ND	ND	ND
	1/8/2009	ND	ND	ND	ND
MW-7	6/28/2002	ND	ND	ND	ND
	12/6/2002	NS	NS	NS	NS
	6/19/2003	NS	NS	NS	NS
	12/17/2003	NS	NS	NS	NS
	6/16/2004	ND	ND	ND	ND
	12/16/2004	NS	NS	NS	NS
	6/14/2006	ND	ND	ND	ND
	12/14/2006	NS	NS	NS	NS
	6/14/2007	ND	ND	ND	ND
	12/17/2007	NS	NS	NS	NS
	6/24/2008	ND	ND	ND	ND
	1/8/2009	ND	ND	ND	ND
MW-9S	6/19/2003	ND, ND	ND, ND	ND, ND	ND, ND
	12/17/2003	ND	ND	ND	ND
	6/16/2004	ND	ND	ND	ND
	12/16/2004	ND	ND	ND	ND
	6/15/2005	ND	**0.60**	ND	**1.4**
	12/16/2005	ND	ND	ND	ND
	6/15/2006	ND	ND	ND	ND
	12/14/2006	ND	ND	ND	ND
	6/14/2007	ND	ND	ND	ND
	12/17/2007	ND	ND	ND	ND
	6/24/2008	ND	ND	ND	ND
	1/8/2009	ND	ND	ND	ND
MW-14	6/28/2002	**11**	ND	ND	ND
	12/6/2002	NS	NS	NS	NS
	6/19/2003	NS	NS	NS	NS
	12/17/2003	NS	NS	NS	NS
	6/16/2004	**230**	ND	ND	ND
	12/16/2004	NS	NS	NS	NS
	6/14/2006	ND	ND	ND	ND
	12/14/2006	NS	NS	NS	NS
	6/14/2007	NS	NS	NS	NS
	12/17/2007	NS	NS	NS	NS
	6/24/2008	ND	ND	ND	ND
	1/8/2009	ND	ND	ND	ND

Table 3
Brickland Refinery
BTEX Concentrations (µg/L) in Monitoring Wells and River Surface Water Samples
June 2003 through January 2009

Well	Date	Benzene	Toluene	Ethylbenzene	Xylenes
MW-15	6/28/2002	ND	ND	ND	ND
	12/6/2002	NS	NS	NS	NS
	6/19/2003	NS	NS	NS	NS
	12/17/2003	NS	NS	NS	NS
	6/16/2004	ND	ND	ND	ND
	12/16/2004	NS	NS	NS	NS
	6/14/2006	ND	ND	ND	ND
	12/14/2006	NS	NS	NS	NS
	6/14/2007	NS	NS	NS	NS
	12/17/2007	NS	NS	NS	NS
	6/24/2008	ND	ND	ND	ND
	1/8/2009	ND	ND	ND	ND
River Upstream	6/19/2003	ND	ND	ND	ND
	12/17/2003	ND	ND	ND	ND
	6/16/2004	ND	ND	ND	ND
	12/16/2004	ND	ND	ND	ND
	6/15/2005	ND	ND	ND	ND
	12/16/2005	ND	ND	ND	ND
	6/15/2006	ND	ND	ND	ND
	12/14/2006	ND	ND	ND	ND
	6/14/2007	ND	ND	ND	ND
	12/17/2007	ND	ND	ND	ND
	6/24/2008	ND	ND	ND	ND
	1/8/2009	ND	ND	ND	ND
River Downstream	6/19/2003	ND	ND	ND	ND
	12/17/2003	ND	ND	ND	ND
	6/16/2004	ND	ND	ND	ND
	12/16/2004	ND	ND	ND	ND
	6/15/2005	ND	ND	ND	ND
	12/16/2005	ND	ND	ND	ND
	6/15/2006	ND	ND	ND	ND
	12/14/2006	ND	ND	ND	ND
	6/14/2007	ND	ND	ND	ND
	12/17/2007	ND	ND	ND	ND
	6/24/2008	ND	ND	ND	ND
	1/8/2009	ND	ND	ND	ND

Notes: ND = Not detected
NS = Not sampled

Table 4
Brickland Refinery
Total PAH Concentrations (µg/L) in the River and Monitoring Wells

Well ID	12/8/1993	3/25/1994	7/12/1994	9/28/1994	12/13/1994	3/28/1995	6/21/1995	9/1/1995	6/21/1996	6/26/1997	6/25/1998	6/3/1999	6/14/2000	7/27/2001	6/27/2002	6/19/2003	6/16/2004	6/15/2005	6/14/2006	6/14/2007	6/25/2008
MW-3S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-3D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND,ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-6S	ND	ND	ND	ND	ND	ND	**15, 10**	ND	ND	ND	ND	**22, 32**	ND	ND	ND,ND	ND	ND,ND	ND	ND,ND	ND,ND	ND, ND
MW-6D	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-7	--	ND	ND	ND	ND	--	--	--	--	--	--	ND,ND	ND,ND	ND	ND	--	ND	--	ND	--	ND
MW-9S	ND	ND	ND	ND	ND	ND	ND	ND	ND,ND	ND	ND,ND	ND	ND	ND	ND	ND,ND	ND	ND	ND	ND	ND
MW-14	--	--	**570**	**40**	ND	ND	**12**	ND	--	--	--	ND	ND	ND,ND	ND	--	ND	--	ND	--	ND
MW-15	--	--	**117**	**126**	**84**	ND	ND	ND	--	--	--	ND	ND	ND	ND	--	ND	--	ND	--	ND
River-Upstream	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
River-Down	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes: ND = Not Detected
"--" = Not Sampled

Table 5
Brickland Refinery
Metals Concentrations (mg/L)

			MW-3S						
Parameter	NMWQCC Std.	Reference	6/28/2002	6/19/2003	6/16/2004	6/15/2005	6/15/2006	6/14/2007	6/25/2008
Aluminum	5	C	ND	ND	0.13	ND	ND	ND	ND
Antimony	NA	NA	ND	ND	ND	ND	ND	ND	ND
Arsenic	0.1	A	0.008	ND	ND	ND	ND	ND	0.01
Barium	1	A	0.081	0.083	0.085	0.075	ND	0.046	0.045
Beryllium	NA	NA	ND	ND	ND	ND	ND	ND	ND
Boron	0.8	C	**0.88**	**0.94**	**1**	**0.89**	**0.973**	**1.1**	0.67
Cadmium	0.01	A	ND	ND	ND	ND	ND	ND	ND
Chromium	0.05	A	ND	ND	ND	ND	ND	ND	ND
Cobalt	0.05	Cobalt	ND	ND	ND	ND	ND	ND	ND
Copper	1	B	ND	ND	0.013	ND	ND	ND	ND
Iron	1	B	**1.5**	**1.7**	**3.9**	**1.8**	**1.25**	**1.3**	**1.01**
Lead	0.05	A	ND	ND	ND	ND	ND	ND	ND
Manganese	0.2	B	**1.7**	**1.7**	**1.8**	**1.6**	**1.64**	**1.4**	**1.36**
Mercury	0.002	A	NS	ND	ND	ND	ND	NS	ND
Molybdenum	1	C	ND	ND	ND	ND	ND	0.032	0.01
Nickel	0.2	C	ND	ND	ND	ND	ND	ND	ND
Selenium	0.05	A	0.021	ND	ND	ND	ND	ND	ND
Silver	0.05	A	ND	ND	ND	ND	ND	ND	ND
Thallium	NA	NA	ND	ND	ND	ND	ND	ND	ND
Zinc	10	B	ND	ND	ND	ND	ND	ND	ND

			MW-3D						
Parameter	NMWQCC Std.	Reference	6/28/02	6/19/03	6/16/04	6/15/05	6/14/06	6/14/2007	6/25/2008
Aluminum	5	C	ND	ND	0.070	ND	ND	ND	ND
Antimony	NA	NA	ND	ND	ND	ND	ND	ND	ND
Arsenic	0.1	A	ND	ND	ND	ND	ND	ND	ND
Barium	1.0	A	0.060	0.063	0.071	0.062	ND	0.062	0.0606
Beryllium	NA	NA	ND	ND	ND	ND	ND	ND	ND
Boron	0.8	C	**1.500**	**1.500**	**1.800**	**1.2**	**1.43**	**1.6**	**0.911**
Cadmium	0.0100	A	ND	ND	ND	ND	ND	ND	ND
Chromium	0.050	A	ND	ND	ND	ND	ND	ND	ND
Cobalt	0.050	Cobalt	ND	ND	ND	ND	ND	ND	ND
Copper	1.0	B	ND	ND	ND	ND	ND	ND	ND
Iron	1.0	B	**2.300**	**2.100**	**2.300**	**2.3**	**1.92**	**2.2**	**1.59**
Lead	0.05	A	ND	ND	ND	ND	ND	ND	ND
Manganese	0.20	B	**3.800**	**3.300**	**3.700**	**3.3**	**3.05**	**3.4**	**2.62**
Mercury	0.0020	A	NS	ND	ND	ND	ND	NS	ND
Molybdenum	1.0000	C	ND	ND	ND	ND	ND	0.011	0.0088
Nickel	0.2	C	ND	ND	ND	ND	ND	ND	0.00672
Selenium	0.05	A	0.024	ND	ND	ND	ND	ND	0.00565
Silver	0.05	A	ND	ND	ND	ND	ND	ND	ND
Thallium	NA	NA	ND	ND	ND	ND	ND	ND	ND
Zinc	10.0	B	ND	ND	ND	ND	ND	ND	0.00535

Table 5
Brickland Refinery
Metals Concentrations (mg/L)

MW-4									
Parameter	NMWQCC Std.	Reference	8/2/01	6/28/02	6/19/03	6/16/04	6/14/06	6/14/2007	6/24/2008
Aluminum	5	C	0.271	0.36.0.23	*NS	0.12	ND	NS	ND
Antimony	NA	NA	<0.025	ND,ND	*NS	ND	ND	NS	ND
Arsenic	0.1	A	<0.05	0.007,ND	*NS	ND	ND	NS	ND
Barium	1.0	A	0.617	0.083, 0.059	*NS	0.087	ND	NS	0.0315
Beryllium	NA	NA	<0.0025	0.005, 0.005	*NS	ND	ND	NS	ND
Boron	0.8	C	**0.932**	**1.400, 1.400**	*NS	**1.3**	**1.24**	NS	**0.845**
Cadmium	0.0100	A	<0.025	ND,ND	*NS	ND	ND	NS	ND
Chromium	0.050	A	<0.01	0.014,ND	*NS	ND	ND	NS	ND
Cobalt	0.050	Cobalt	<0.025	0.014,ND	*NS	ND	ND	NS	ND
Copper	1.0	B	<0.0125	0.021,ND	*NS	ND	ND	NS	0.00755
Iron	1.0	B	**3.170**	**2.900, 3.100**	*NS	**3.70**	**2.26**	NS	**1.85**
Lead	0.05	A	0.018	ND,ND	*NS	ND	ND	NS	ND
Manganese	0.20	B	**4.310**	**5.800, 5.800**	*NS	**5.5**	**4.36**	NS	**4.52**
Mercury	0.0020	A	<0.0002	NS	*NS	ND	ND	NS	ND
Molybdenum	1.0000	C	<0.050	ND,ND	*NS	ND	ND	NS	ND
Nickel	0.2	C	<0.025	ND,ND	*NS	ND	ND	NS	ND
Selenium	0.05	A	<0.050	0.032, 0.032	*NS	ND	ND	NS	ND
Silver	0.05	A	<0.0125	0.036, ND	*NS	ND	ND	NS	ND
Thallium	NA	NA	<0.050	ND,ND	*NS	ND	ND	NS	ND
Zinc	10.0	B	<0.025	ND,ND	*NS	ND	ND	NS	0.00721

MW-6S									
Parameter	NMWQCC Std.	Reference	6/28/02	6/19/03	6/17/04	06/15/05	6/14/06	6/14/2007	6/25/2008
Aluminum	5	C	0.21	ND	0.14,0.11	0.098	ND,ND	0.13,0.13	ND
Antimony	NA	NA	ND	ND	ND,ND	ND	ND,ND	ND,ND	ND
Arsenic	0.1	A	0.053	ND	ND,ND	ND	ND,ND	0.039,0.030	0.0456
Barium	1.0	A	0.490	0.780	0.65,0.60	0.72	ND,ND	0.11,0.10	0.21
Beryllium	NA	NA	ND	ND	ND,ND	ND	ND,ND	ND,ND	ND
Boron	0.8	C	**1.300**	**1.300**	**1.10,1.10**	**1.1**	**1.97,1.98**	**3.3,3.1**	**1.65**
Cadmium	0.0100	A	ND	ND	ND,ND	ND	ND,ND	ND,ND	ND
Chromium	0.050	A	ND	ND	ND,ND	ND	ND,ND	ND,ND	ND
Cobalt	0.050	Cobalt	ND	ND	ND,ND	ND	ND,ND	ND,ND	ND
Copper	1.0	B	0.044	ND	0.057,0.014	0.016	ND,ND	0.097, 0.088	0.00981
Iron	1.0	B	**3.900**	**2.100**	**7.70,3.80**	**4.7**	**8.42,8.64**	**12.0,12.0**	**6.74**
Lead	0.05	A	ND	ND	ND,ND	ND	ND,ND	ND,ND	ND
Manganese	0.20	B	**1.700**	**3.400**	**1.40,1.50**	**1.6**	**0.999,1.03**	**0.92, 0.88**	**0.782**
Mercury	0.0020	A	NS	ND	ND,ND	ND	ND,ND	NS,NS	ND
Molybdenum	1.0000	C	ND	ND	ND,ND	ND	ND,ND	0.041, 0.038	0.0164
Nickel	0.2	C	ND	ND	ND,ND	ND	ND,ND	ND,ND	0.00588
Selenium	0.05	A	**0.099**	ND	ND,ND	ND	ND,ND	ND,ND	0.014
Silver	0.05	A	ND	ND	ND,ND	ND	ND,ND	ND,ND	ND
Thallium	NA	NA	ND	ND	ND,ND	ND	ND,ND	ND,ND	ND
Zinc	10.0	B	ND	ND	ND,ND	ND	ND,ND	ND,ND	ND

Table 5
Brickland Refinery
Metals Concentrations (mg/L)

			MW-6D						
Parameter	NMWQCC Std.	Reference	6/28/02	6/19/03	6/17/04	6/15/05	6/15/06	6/14/2007	6/24/2008
Aluminum	5	C	0.18	ND	ND	ND	ND	ND	ND
Antimony	NA	NA	ND	ND	ND	ND	ND	ND	ND
Arsenic	0.1	A	ND	ND	ND	ND	ND	ND	ND
Barium	1.0	A	0.050	0.053	0.052	0.055	ND	0.049	0.051
Beryllium	NA	NA	ND	ND	ND	ND	ND	ND	ND
Boron	0.8	C	**1.400**	**1.400**	**1.500**	**1.1**	**1.28**	**1.4**	**0.81**
Cadmium	0.0100	A	ND	ND	ND	ND	ND	ND	ND
Chromium	0.050	A	ND	ND	ND	ND	ND	ND	ND
Cobalt	0.050	Cobalt	ND	ND	ND	ND	ND	ND	ND
Copper	1.0	B	ND	ND	ND	ND	ND	ND	0.01
Iron	1.0	B	**1.000**	0.900	0.910	**1.2**	ND	0.89	0.83
Lead	0.05	A	ND	ND	ND	ND	ND	ND	ND
Manganese	0.20	B	**5.700**	**5.300**	**5.500**	**6.1**	**4.98**	**6.1**	**6.91**
Mercury	0.0020	A	NS	ND	ND	ND	ND	NS	ND
Molybdenum	1.0000	C	ND	ND	ND	ND	ND	0.0073	0.00719
Nickel	0.2	C	ND	ND	ND	ND	ND	ND	ND
Selenium	0.05	A	0.015	ND	ND	ND	ND	ND	ND
Silver	0.05	A	ND	ND	ND	ND	ND	ND	ND
Thallium	NA	NA	ND	ND	ND	ND	ND	ND	ND
Zinc	10.0	B	ND	ND	ND	ND	ND	ND	ND

			MW-7						
Parameter	NMWQCC Std.	Reference	8/2/01	6/28/02	6/19/03	6/16/04	6/14/06	6/14/2007	6/24/2008
Aluminum	5	C	<0.200	0.200	*NS	0.66	ND	NS	ND
Antimony	NA	NA	<0.025	ND	*NS	ND	ND	NS	ND
Arsenic	0.1	A	<0.05	0.047	*NS	ND	ND	NS	0.0129
Barium	1.0	A	0.211	0.210	*NS	0.24	ND	NS	0.212
Beryllium	NA	NA	<0.0025	ND	*NS	ND	0.003	NS	ND
Boron	0.8	C	0.618	0.750	*NS	**0.920**	ND	NS	0.555
Cadmium	0.0100	A	<0.025	ND	*NS	ND	ND	NS	ND
Chromium	0.050	A	<0.01	ND	*NS	ND	ND	NS	ND
Cobalt	0.050	Cobalt	<0.025	ND	*NS	ND	ND	NS	ND
Copper	1.0	B	<0.0125	ND	*NS	0.31	ND	NS	ND
Iron	1.0	B	**3.020**	**2.700**	*NS	**4.90**	**2.93**	NS	**1.35**
Lead	0.05	A	0.022	ND	*NS	**0.190**	ND	NS	ND
Manganese	0.20	B	**1.690**	**1.400**	*NS	**2.00**	**0.910**	NS	**0.712**
Mercury	0.0020	A	<0.0002	NS	*NS	0.00045	ND	NS	ND
Molybdenum	1.0000	C	<0.050	0.011	*NS	0.017	ND	NS	0.0267
Nickel	0.2	C	<0.025	ND	*NS	ND	ND	NS	ND
Selenium	0.05	A	<0.05	**0.090**	*NS	ND	ND	NS	0.00707
Silver	0.05	A	<0.0125	ND	*NS	ND	ND	NS	ND
Thallium	NA	NA	<0.05	ND	*NS	ND	ND	NS	ND
Zinc	10.0	B	0.026	ND	*NS	0.110	ND	NS	ND

Table 5
Brickland Refinery
Metals Concentrations (mg/L)

MW-9S									
Parameter	NMWQCC Std.	Reference	6/28/02	6/19/03	6/16/04	6/15/05	6/15/06	6/14/2007	6/26/2008
Aluminum	5	C	ND	ND	0.061	0.43	ND	ND	ND
Antimony	NA	NA	ND	ND	ND	ND	ND	ND	ND
Arsenic	0.1	A	0.024	ND	ND	ND	ND	ND	ND
Barium	1.0	A	0.130	0.130	0.13	0.13	ND	0.059	0.057
Beryllium	NA	NA	ND	ND	ND	ND	ND	ND	ND
Boron	0.8	C	**1.200**	**1.100**	**1.100**	**1.0**	**0.954**	**1.5**	**1.16**
Cadmium	0.0100	A	ND	ND	ND	ND	ND	ND	ND
Chromium	0.050	A	ND	ND	ND	ND	ND	ND	ND
Cobalt	0.050	Cobalt	ND	ND	ND	ND	ND	ND	ND
Copper	1.0	B	ND	ND	ND	ND	ND	ND	ND
Iron	1.0	B	**6.400**	**6.400**	**8.00**	**9.8**	**6.13**	**4.2**	**4.16**
Lead	0.05	A	ND	ND	ND	ND	ND	ND	ND
Manganese	0.20	B	**2.600**	**2.400**	**3.00**	**2.7**	**2.38**	**1.9**	**2.56**
Mercury	0.0020	A	NS	ND	ND	ND	ND	NS	ND
Molybdenum	1.0000	C	ND	ND	ND	ND	ND	0.01	0.0105
Nickel	0.2	C	ND	ND	ND	ND	ND	ND	ND
Selenium	0.05	A	0.036	ND	ND	ND	ND	ND	ND
Silver	0.05	A	ND	ND	ND	ND	ND	ND	ND
Thallium	NA	NA	ND	ND	ND	ND	ND	ND	ND
Zinc	10.0	B	ND	ND	ND	ND	ND	ND	ND

MW-14									
Parameter	NMWQCC Std.	Reference	8/2/01	6/28/02	6/19/03	6/16/04	6/14/06	6/14/2007	6/26/2008
Aluminum	5	C	3.040	0.200	*NS	0.056	ND	NS	ND
Antimony	NA	NA	<0.025	ND	*NS	ND	ND	NS	ND
Arsenic	0.1	A	<0.05	0.010	*NS	ND	ND	NS	ND
Barium	1.0	A	0.780	0.110	*NS	0.14	ND	NS	0.057
Beryllium	NA	NA	<0.0025	ND	*NS	ND	0.003	NS	ND
Boron	0.8	C	**1.260**	**1.700**	*NS	**1.80**	**1.39**	NS	**0.95**
Cadmium	0.0100	A	<0.025	ND	*NS	ND	ND	NS	ND
Chromium	0.050	A	<0.01	ND	*NS	ND	ND	NS	ND
Cobalt	0.050	Cobalt	0.110	ND	*NS	ND	ND	NS	ND
Copper	1.0	B	<0.0125	ND	*NS	ND	ND	NS	ND
Iron	1.0	B	**10.500**	**7.300**	*NS	**8.30**	**5.24**	NS	**5.32**
Lead	0.05	A	0.015	ND	*NS	ND	ND	NS	ND
Manganese	0.20	B	<0.0002	**7.200**	*NS	**7.10**	**5.32**	NS	**6.25**
Mercury	0.0020	A	<0.002	NS	*NS	ND	ND	NS	ND
Molybdenum	1.0000	C	<0.050	ND	*NS	0.011	ND	NS	0.00825
Nickel	0.2	C	<0.025	ND	*NS	ND	ND	NS	ND
Selenium	0.05	A	<0.05	0.041	*NS	ND	ND	NS	ND
Silver	0.05	A	<0.0125	ND	*NS	ND	ND	NS	ND
Thallium	NA	NA	<0.05	ND	*NS	0.17	ND	NS	ND
Zinc	10.0	B	<0.025	ND	*NS	ND	ND	NS	ND

Table 5
Brickland Refinery
Metals Concentrations (mg/L)

MW-15									
Parameter	NMWQCC Std.	Reference	8/2/01	6/28/02	6/19/03	6/16/04	6/14/06	6/14/2007	6/26/2008
Aluminum	5	C	<0.200	0.24	*NS	ND	ND	NS	ND
Antimony	NA	NA	<0.025	ND	*NS	ND	ND	NS	ND
Arsenic	0.1	A	<0.05	0.014	*NS	ND	ND	NS	ND
Barium	1.0	A	0.158	0.170	*NS	0.14	ND	NS	0.072
Beryllium	NA	NA	<0.0025	0.006	*NS	ND	0.003	NS	ND
Boron	0.8	C	**1.000**	**1.500**	*NS	**1.500**	**1.40**	NS	**1.15**
Cadmium	0.0100	A	<0.025	ND	*NS	ND	ND	NS	ND
Chromium	0.050	A	<0.01	ND	*NS	ND	ND	NS	ND
Cobalt	0.050	Cobalt	<0.025	ND	*NS	ND	ND	NS	ND
Copper	1.0	B	0.020	ND	*NS	ND	ND	NS	ND
Iron	1.0	B	**1.860**	**2.000**	*NS	**2.300**	**3.67**	NS	**1.59**
Lead	0.05	A	0.012	ND	*NS	ND	ND	NS	ND
Manganese	0.20	B	**2.100**	**2.300**	*NS	**2.300**	**3.01**	NS	**1.59**
Mercury	0.0020	A	<0.0002	NS	*NS	ND	ND	NS	ND
Molybdenum	1.0000	C	<0.050	ND	*NS	ND	ND	NS	0.00904
Nickel	0.2	C	<0.025	ND	*NS	ND	ND	NS	ND
Selenium	0.05	A	<0.050	0.038	*NS	ND	ND	NS	ND
Silver	0.05	A	<0.0125	ND	*NS	ND	ND	NS	ND
Thallium	NA	NA	<0.050	ND	*NS	ND	ND	NS	ND
Zinc	10.0	B	<0.025	ND	*NS	ND	ND	NS	ND

River-Upstream									
Parameter	NMWQCC Std.	Reference	6/28/02	6/19/03	6/17/04	6/15/05	6/14/06	6/14/2007	6/25/2008
Aluminum	5	C	1.2	3.2	**5.20**	**8.8**	**5.14**	**16**	**5.98**
Antimony	NA	NA	ND	ND	ND	ND	ND	ND	ND
Arsenic	0.1	A	0.005	ND	ND	ND	ND	ND	ND
Barium	1.0	A	0.083	0.110	0.14	0.14	ND	0.24	0.137
Beryllium	NA	NA	ND	ND	ND	ND	0.003	ND	ND
Boron	0.8	C	0.190	0.200	0.220	0.16	ND	ND	0.13
Cadmium	0.0100	A	ND	ND	ND	ND	ND	ND	ND
Chromium	0.050	A	ND	ND	ND	ND	ND	ND	ND
Cobalt	0.050	Cobalt	ND	ND	ND	ND	ND	ND	ND
Copper	1.0	B	0.015	ND	ND	0.0072	ND	ND	ND
Iron	1.0	B	0.850	**2.100**	**3.500**	**5.7**	**2.85**	**9.3**	**3.41**
Lead	0.05	A	ND	ND	ND	ND	ND	0.0071	ND
Manganese	0.20	B	0.180	0.180	**0.240**	**0.20**	ND	**0.3**	0.16
Mercury	0.0020	A	NS	ND	ND	ND	ND	NS	ND
Molybdenum	1.0000	C	0.010	0.012	ND	ND	ND	0.0082	0.0054
Nickel	0.2	C	ND	ND	ND	ND	ND	ND	ND
Selenium	0.05	A	ND	ND	ND	ND	ND	ND	ND
Silver	0.05	A	ND	ND	ND	ND	ND	ND	ND
Thallium	NA	NA	ND	ND	ND	ND	ND	ND	ND
Zinc	10.0	B	ND	ND	ND	ND	ND	0.036	ND

Table 5
Brickland Refinery
Metals Concentrations (mg/L)

			River-Downstream						
Parameter	NMWQCC Std.	Reference	6/28/02	6/19/03	6/17/04	6/15/05	6/14/06	6/14/2007	6/25/2008
Aluminum	5	C	2.1	3.000	**5.50**	**8.7**	**5.65**	**16**	**5.98**
Antimony	NA	NA	ND	ND	ND	ND	ND	ND	ND
Arsenic	0.1	A	0.006	ND	ND	ND	ND	ND	ND
Barium	1.0	A	0.094	0.110	0.14	0.14	ND	0.24	0.006
Beryllium	NA	NA	ND	ND	ND	ND	0.003	ND	ND
Boron	0.8	C	0.200	0.210	0.220	0.16	ND	0.2	0.13
Cadmium	0.0100	A	ND	ND	ND	ND	ND	ND	ND
Chromium	0.050	A	ND	ND	ND	ND	ND	ND	ND
Cobalt	0.050	Cobalt	ND	ND	ND	ND	ND	ND	ND
Copper	1.0	B	ND	ND	ND	0.0070	ND	ND	ND
Iron	1.0	B	**1.800**	**2.100**	**3.600**	**5.8**	**3.06**	**9**	**3.52**
Lead	0.05	A	ND	ND	ND	ND	ND	0.0057	ND
Manganese	0.20	B	**0.220**	**0.200**	**0.240**	**0.20**	ND	**0.3**	0.17
Mercury	0.0020	A	NS	ND	ND	ND	ND	NS	ND
Molybdenum	1.0000	C	ND	0.010	ND	ND	ND	0.0084	0.00535
Nickel	0.2	C	ND	ND	ND	ND	ND	ND	ND
Selenium	0.05	A	ND	ND	ND	ND	ND	ND	ND
Silver	0.05	A	ND	ND	ND	ND	ND	ND	ND
Thallium	NA	NA	ND	ND	ND	ND	ND	ND	ND
Zinc	10.0	B	ND	ND	ND	ND	ND	0.038	0.02

NOTES

mg/L = Milligrams per liter

Concentrations in **shaded boldface** type during the current year indicate levels exceed New Mexico Water Quality Control Commission (NMWQCC) standards

A = standard is from NMWQCC Regulatory Standards Section 3103A - Human Health Standard

NS (*NS) = sample was not collected/analyzed for this constituent (not collected in odd-numbered years).

B = standard is from NMWQCC Regulatory Standards Section 3103B - Domestic Water Supply

ND = concentration was below laboratory detection limits.

C = standard is from NMWQCC Regulatory Standards Section 3103C - Irrigation Use

NA = no NMWQCC standard established.

ND,ND or 0.13,0.13 are the laboratory results for the primary and duplicate (QA/QC) samples, respectively.

Table 6
Brickland Refinery
LNAPL Thickness Measurements (Feet)

Well ID	Jun-03	Dec-03	Jun-04	Dec-04	Jun-05	Dec-05	Jun-06	Dec-06	Jun-07	Dec-07	Jun-08	Jan-09
MW-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-2	A	A	A	A	A	A	A	A	A	A	A	A
MW-3S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-3D	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-6S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-6D	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-9S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-10	0.00	0.13	0.08	0.05	0.10	0.00	Trace	Trace	0.00	Trace	0.00	0.00
MW-11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-13	A	A	A	A	A	A	A	A	A	A	A	A
MW-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Trace	0.00
WP-14	Tar	Tar	Tar	Tar	Tar	Tar	Tar	Tar	Tar	Tar	Trace	0.00
WP-25	Dry	Dry	Dry	Dry	Dry	Dry	0.70	0.52	0.54	0.52	0.45	0.08
WP-26S	0.35	0.60	0.63	0.66	0.66	0.52	0.58	0.47	0.48	0.35	0.73	0.38
WP-26D	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP-27S	0.01	0.00	0.00	0.00	0.00	0.00	Trace	0.02	0.00	Trace	0.00	0.01
WP-27D	0.12	0.26	0.06	0.11	0.00	0.04	0.00	0.04	0.00	0.03	0.00	0.00
WP-30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP-31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Dry	0.00	Dry	0.00
WP-32	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Trace	Dry	Dry	NM
WP-33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

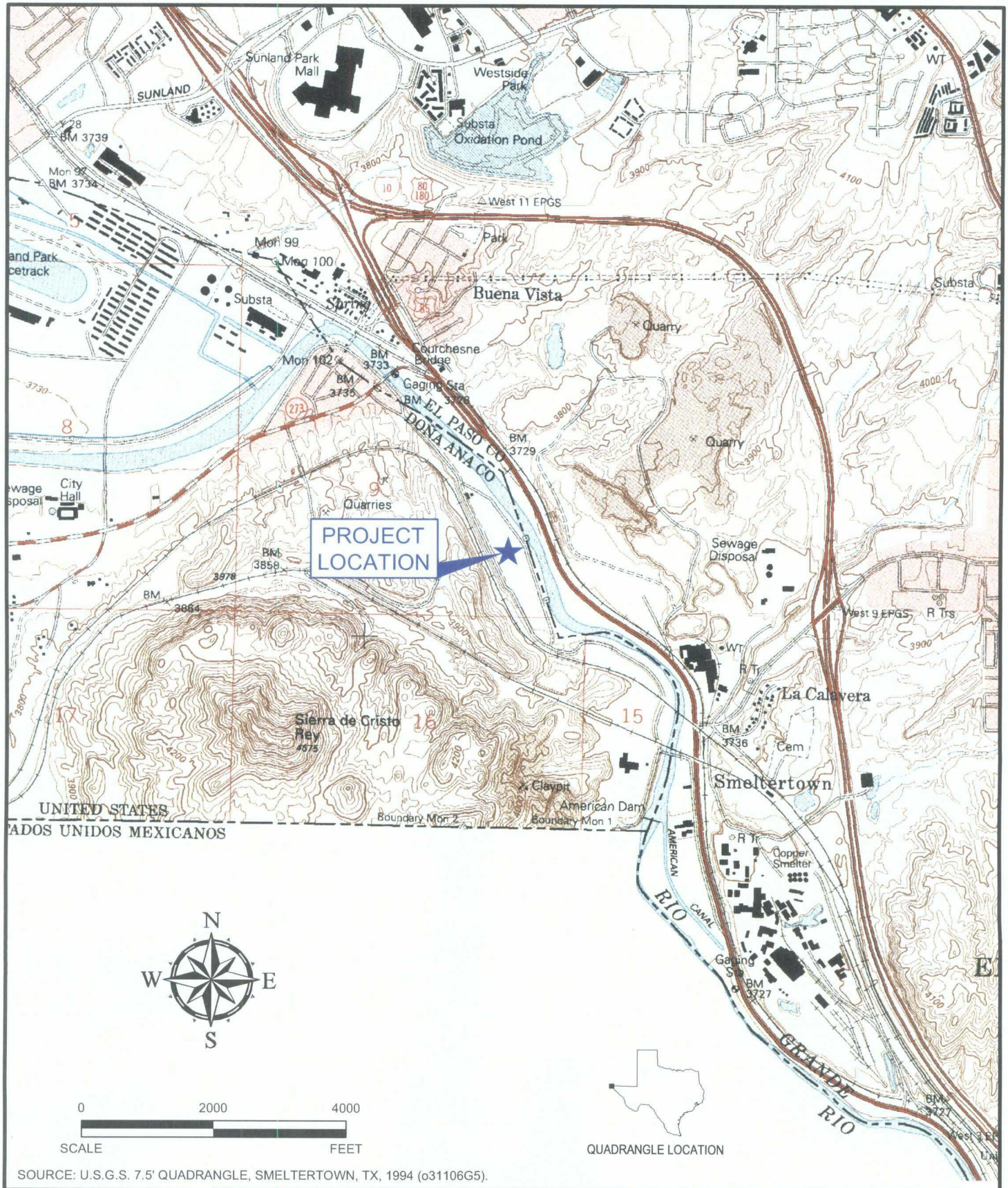
NOTES

Tar = Thickness measurement not obtainable because of presence of thick tar-like substance in well point.

A = Plugged and Abandoned

Dry = Monitoring point was dry

Figures



SOURCE: U.S.G.S. 7.5' QUADRANGLE, SMELTERTOWN, TX, 1994 (o31106G5).

Environmental Resources Management

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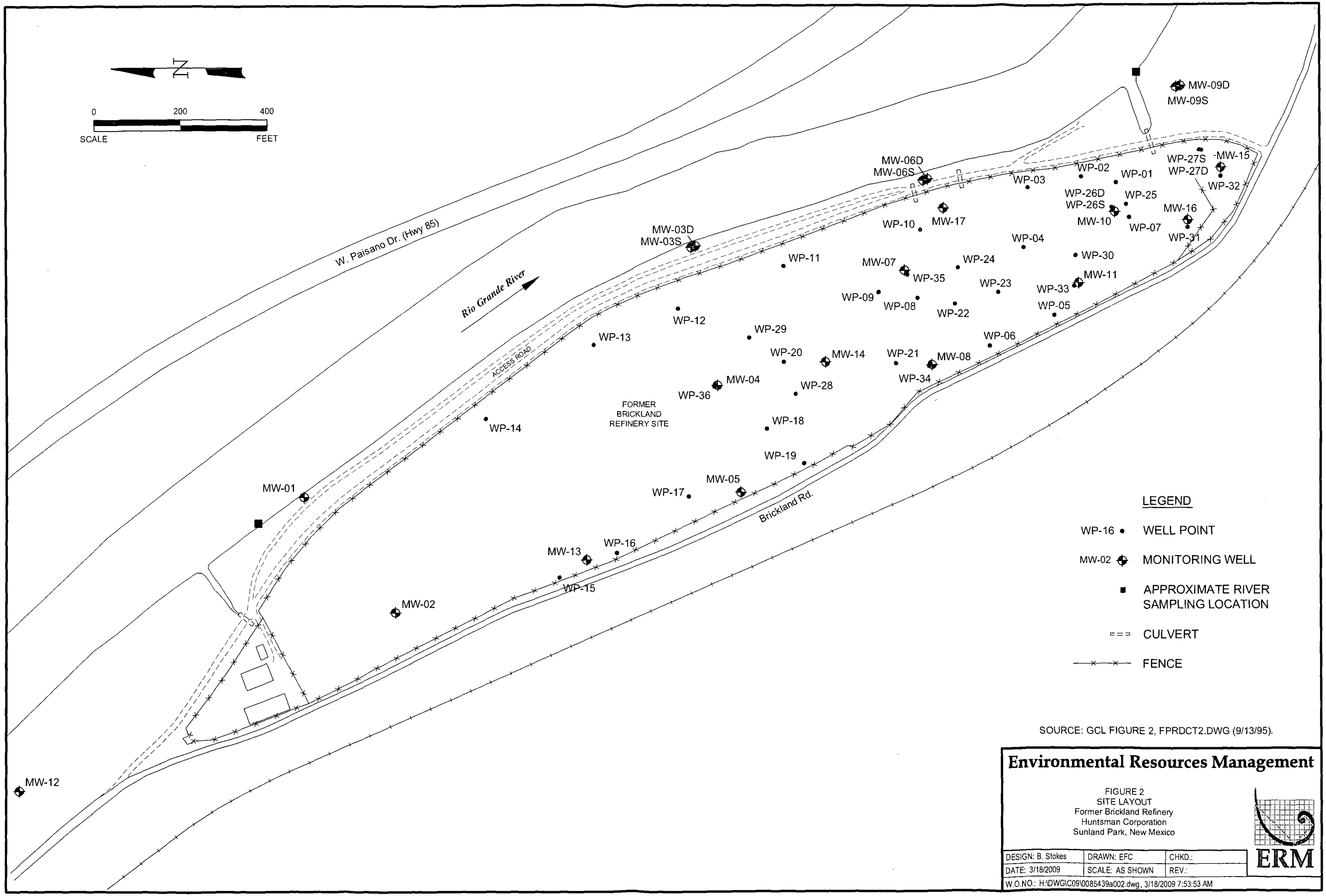
DATE: 2/3/2009	SCALE: AS SHOWN	REV.:
PROJ. NO.: H:\DWG\B09\0085439_site.dwg, 2/3/2009 2:59:51 PM		

FIGURE 1
SITE LOCATION MAP
Brickland Refinery Site
Sunland Park, New Mexico

ERM



SOURCE: GCL FIGURE 2, FPRDCT2.DWG (9/13/95).

Environmental Resources Management

FIGURE 2
SITE LAYOUT
Former Brickland Refinery
Huntsman Corporation
Sunland Park, New Mexico

DESIGN: B. Stokes	DRAWN: EFC	CHKD.:
DATE: 3/18/2009	SCALE: AS SHOWN	REV.:

W.O.NO.: H:\DWG\C09\0085439a002.dwg, 3/18/2009 7:53:53 AM

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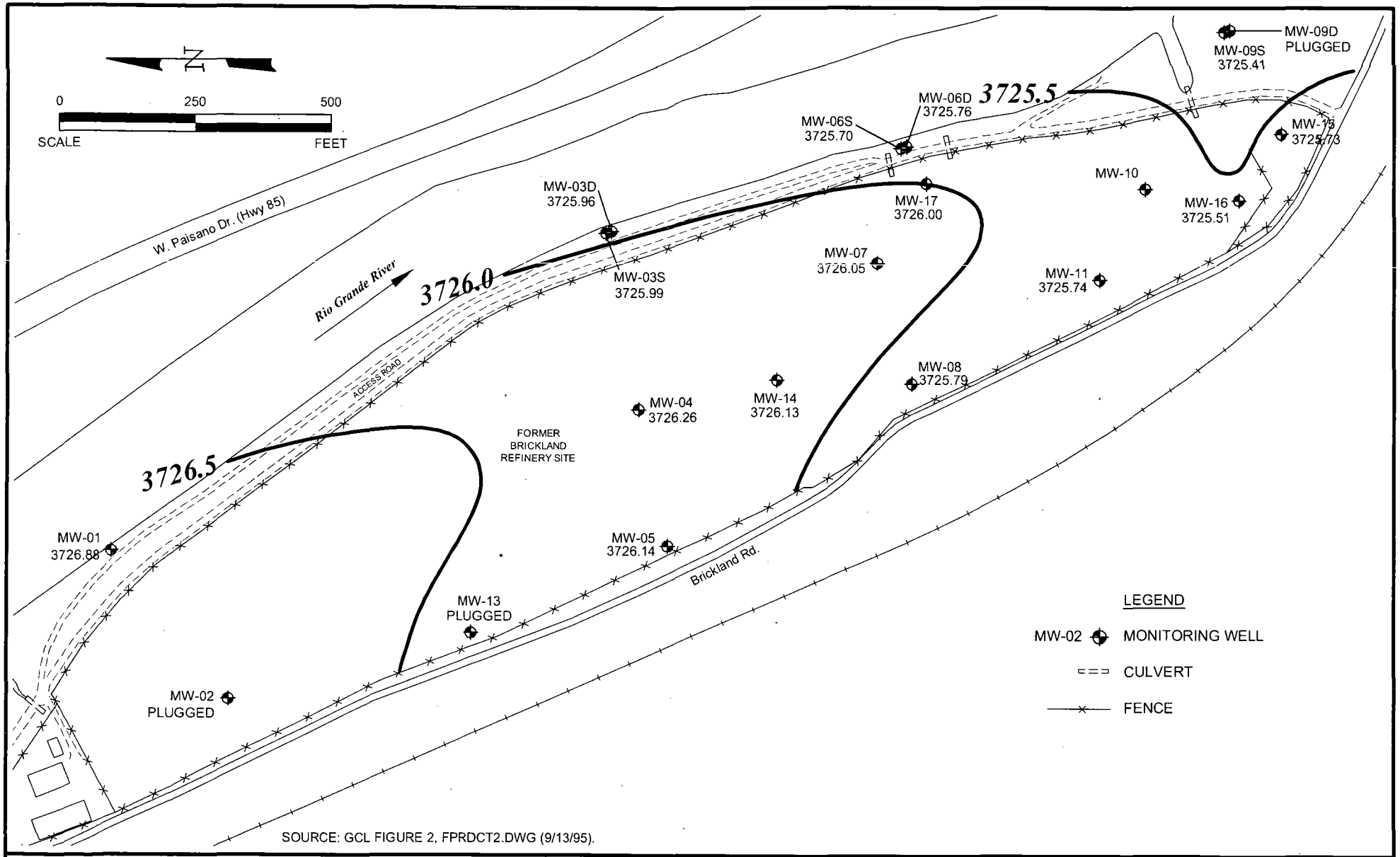

SOURCE: GCL FIGURE 2, FPRDCT2.DWG (9/13/95).

Environmental Resources Management

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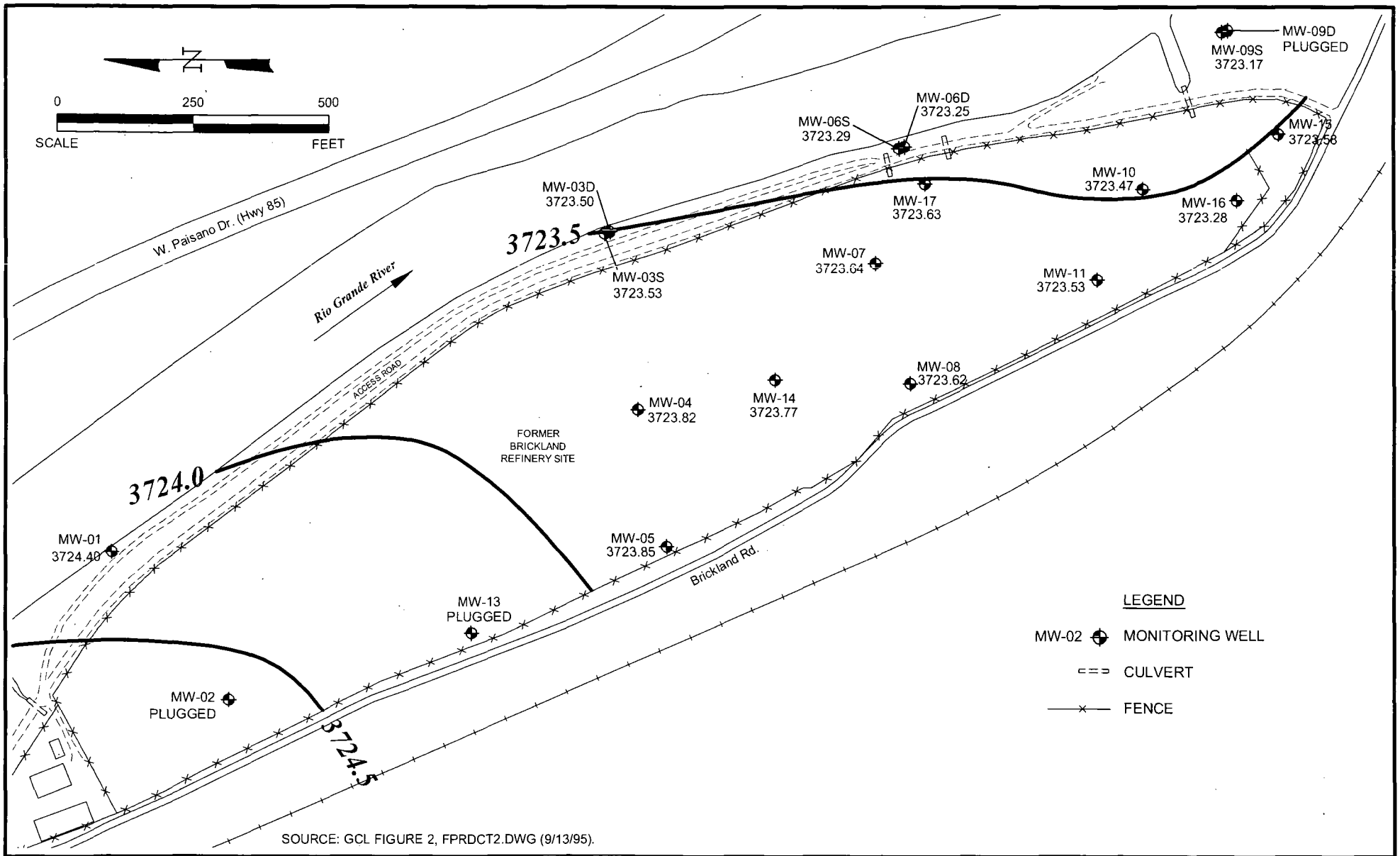
FIGURE 3
GROUNDWATER ELEVATION CONTOUR MAP - JUNE 24, 2009
Former Brickland Refinery
Huntsman Corporation
Sunland Park, New Mexico

ERM



SOURCE: GCL FIGURE 2, FPRDCT2.DWG (9/13/95).

Environmental Resources Management

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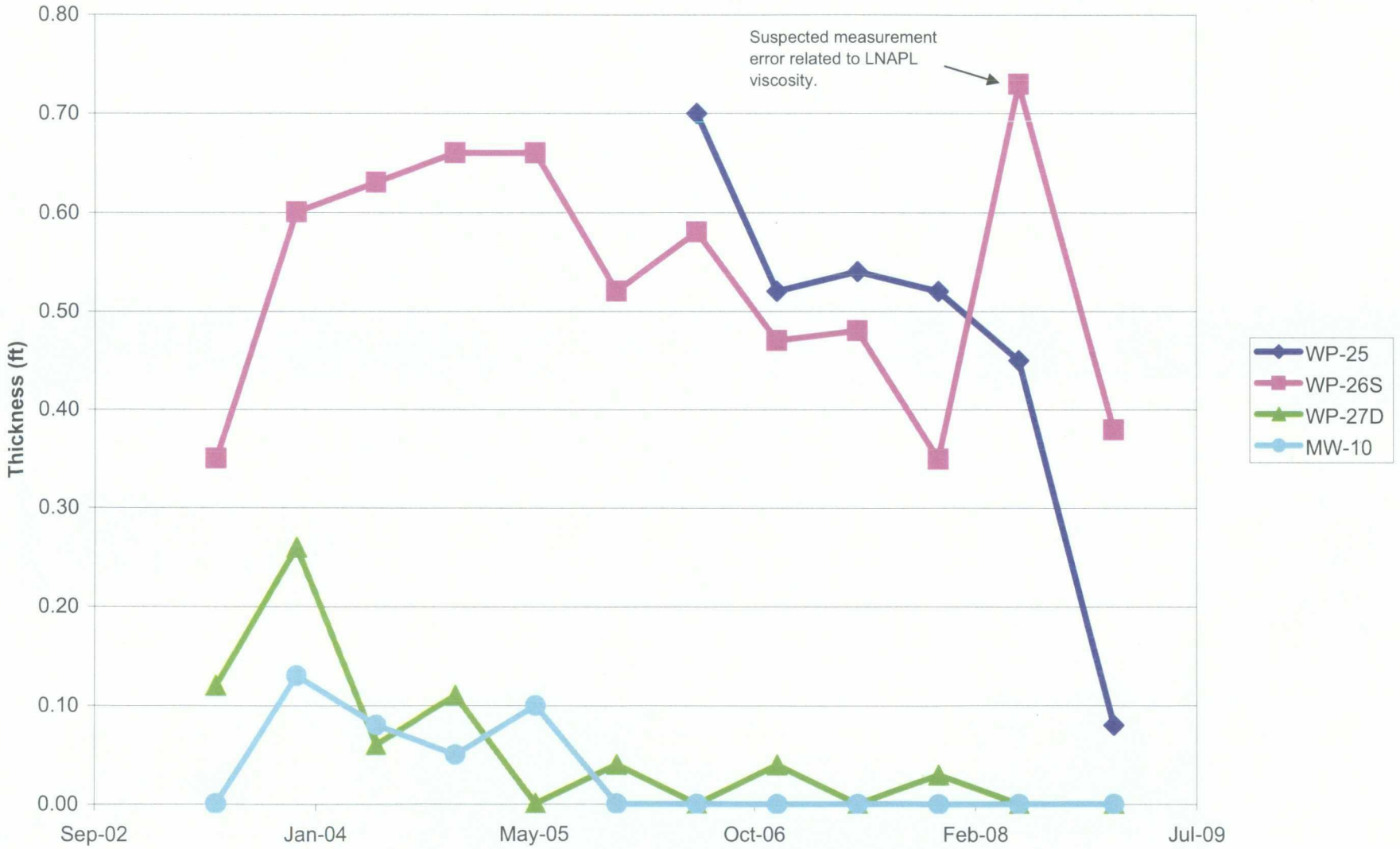
FIGURE 4
GROUNDWATER ELEVATION CONTOUR MAP - JANUARY 7, 2009
Former Brickland Refinery
Huntsman Corporation
Sunland Park, New Mexico

ERM

Figure 5 - LNAPL Thickness



Field Data

Appendix A

March 19, 2009
Project No. 0085439

Environmental Resources Management Southwest, Inc.
206 E. 9th St., Suite 1700
Austin, Texas 78701
(512) 459-4700

LOW FLOW SAMPLING SHEET

Well: MW-7
Location: HUNTSMAN

Date: 6/24/08
Samplers: RANDOLPH ORTIZ-LUNA

Well Information

Date	Time	DTW (ft-toc)	Well TD (ft-toc)	Well Dia (in)	Screened Interval	PID Well (ppmv)	PID BZ Zone (ppmv)	LNAPL (ft)	DNAPL (ft)	Comments
6/24/08	10:09	2.91	15.50	4	UNK	0.0	0.0	—	—	

Well Purging Record

Date	Time	Cum Vol Purged (L)	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	DTW (ft-toc)	Comments
6/24/08	1310	Initial	7.03	27.00	6.887	1.47	-88.7	3.09	3.2	
	1315		7.04	26.28	6.846	1.33	-92.2	—	3.7	0.3 L/m
	1320		7.05	27.22	6.897	1.06	-93	1.48	3.91	0.2 L/m
	1325		7.05	27.36	6.924	0.99	-91.6	—	3.98	0.15 L/m
	1330		7.04	27.44	6.972	0.87	-93.8	1.04	3.48	0.15 L/m
	1335		7.05	27.45	7.02	0.81	-99.8	1.35	4.04	0.15 L/m
	1340		7.05	27.55	7.07	0.79	-101.8	0.89	4.15	4.14
	1345		7.05	27.43	7.12	0.76	-101.9	3.26	4.15	
	1350		7.05	27.46	7.19	0.73	-102.6	0.91	4.16	
	1355		7.04	28.14	7.43	0.71	-104.2	1.29	4.19	
PURGED		~2 GALS								

WATER IS CLEAR TO LIGHT YELLOW - ORGANIC ODOR

Sampling Record

Date	Time	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Sample ID	Analysis	Preserv	Comments
6/24/08	1355							MW-7	BTEX	HCl	ice
									PAH	—	
									FILTERED METALS	HNO_3	
6/24/08	1246			DISTILLED WATER			FB-1		METALS		

LOW FLOW SAMPLING SHEET

Well: MW-35 Date: 6/24/08

Location: HUNTSMAN Samplers: RANDALL ROLLINS

Well Information

Date	Time	DTW (ft-toc)	Well TD (ft-toc)	Well Dia (in)	Screened Interval	PID Well (ppmv)	PID BZ Zone (ppmv)	LNAPL (ft)	DNAPL (ft)	Comments
6/24/08	11:08	4.01	16.50	4	UNK	0.0	0.0	-	-	

Well Purging Record

Date	Time	Cum Vol Purged (L)	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	DTW (ft-toc)	Comments
6/24/08	1520	Initial	7.29	25.38	10.20	1.42	-61.8	3.7	4.51	~~1.0 L/m~~ 0.1
	1525		7.25	23.35	9.78	0.81	-70.4	3.7	4.71	4.65 ~~2.0 L/m~~ 0.2
	1535		7.26	23.08	9.65	0.89	-72.7	1.1	4.81	~~1.5 L/m~~ 0.15 L/m
	1540		7.28	22.79	9.59	0.81	-73.3	2.1	4.85	0.15 L/m
	1545		7.27	22.69	9.53	0.90	-73.7	1.7	4.90	
	1550		7.27	22.72	9.53	0.81	-75.9	0.95	4.91	
	1555		7.28	22.74	9.52	0.76	-77.4	1.2	4.92	
	~	1.25 GALS								
	PURGED WATER: CLEAR NO ~~ODOR~~ ODOR									

Sampling Record

Date	Time	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Sample ID	Analysis	Preserv	Comments
6/24/08	1555							MW-35	BTEX	HCl	ICE
									PAH		
	1625			CLEAN WATER LEVEL				FB-1	FILTERED METALS	HNO_3	
						DISTILLED WATER					

- BTEX HCl
- METALS HNO_3

Revised:07/10/2007

ERM-El Paso

Well: MW-4 Date: 6/25/08

Location: HUNTSMAN Samplers: RANDALL ORTLUND

Well Information

Date	Time	DTW (ft-toc)	Well TD (ft-toc)	Well Dia (in)	Screened Interval	PID Well (ppmv)	PID BZ Zone (ppmv)	LNAPL (ft)	DNAPL (ft)	Comments
6/24/08	1020	2.60	18.00	4	UNK	0.0	0.0	—	—	

Well Purging Record

Date	Time	Cum Vol Purged (L)	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L) †	Redox Potential (mV) †	Turbidity (NTU) †	DTW (ft-toc)	Comments
6/25/08	0750	Initial	7.02	25.55	12.32	1.50	-123.2	1.9	3.15	~~FS~~ 0.15 L/m
	755		7.02	24.81	12.27	0.95	-127.7	1.5	3.18	
	0802		7.03	24.20	12.13	0.67	-128.0	0.15	3.21	
	0808		7.03	24.08	12.09	0.60	-127.6	0.85	3.22	0.20 L/m
	0812		7.02	23.74	12.03	0.54	-122.9	0.0	3.25	
	0817		7.02	23.55	11.97	0.49	-125.0	0.0	3.29	
	0822		7.02	23.35	11.94	0.49	-119.7	0.0	3.29	
		~2 GALS PURGED								
PURGED WELL WATER CLEAR; SLIGHT HC TYPE ODOR										

† = X

Sampling Record

Date	Time	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Sample ID	Analysis	Preserv	Comments
6/25/08	~~0825~~							MW-4	BTEX	HCl	ICE
	0830								Paid	—	
							FILTERED		METALS	HNO_3	
	0845	SUBMT PICKED UP						FB-2			
									METALS	HNO_3	

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LOW FLOW SAMPLING SHEET

Well: RIVER UPSTREAM
Location: RIO GRANDE BUNSEN

Date: 6/25/08
Samplers: RANDOLPH ORTLUND

Well Information

Date	Time	DTW (ft-toc)	Well TD (ft-toc)	Well Dia (in)	Screened Interval	PID Well (ppmv)	PID BZ Zone (ppmv)	LNAPL (ft)	DNAPL (ft)	Comments

Well Purging Record

Date	Time	Cum Vol Purged (L)	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	DTW (ft-toc)	Comments
		Initial								
6/25/08	0800		8.64	29.36	0.99	3.42	-32.4	75	NA	WATER SEEN SEEPING BOTTOM IN TRE

Sampling Record

Date	Time	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Sample ID	Analysis	Preserv	Comments

LOW FLOW SAMPLING SHEET

Well: RIVER DOWNSTREAM Date: 6/25/08
Location: RIO GRANDE HUNTSMAN Samplers: RANDOLPH ORRUNO

Well Information

Date	Time	DTW (ft-toc)	Well TD (ft-toc)	Well Dia (in)	Screened Interval	PID Well (ppmv)	PID BZ Zone (ppmv)	LNAPL (ft)	DNAPL (ft)	Comments

Well Purging Record

Date	Time	Cum Vol Purged (L)	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	DTW (ft-toc)	Comments
6/25/08	0830	Initial	8.55	29.39	0.696	3.53	10.3	65	NA	See sampled bottom of DBR

Sampling Record

Date	Time	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Sample ID	Analysis	Preserv	Comments

LOW FLOW SAMPLING SHEET

Well: MW-6D
Location: BUNKMAN

Date: 6/25/08
Samplers: RANDOLPH OSTLUND

Well Information

Date	Time	DTW (ft-toc)	Well TD (ft-toc)	Well Dia (in)	Screened Interval	PID Well (ppmv)	PID BZ Zone (ppmv)	LNAPL (ft)	DNAPL (ft)	Comments
6/24/08	1056	4.86	38.0	4	NA	0.0	0.0	—	—	

Well Purging Record

Date	Time	Cum Vol Purged (L)	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	DTW (ft-toc)	Comments
6/25/08	0930	Initial	7.30	28.73	18.91	1.37	-24.5	4.4	4.82	0.24 L/m
	0940		7.25	25.71	17.69	0.73	-13.3	2.4	4.83	0.25 L/m
	0945		7.25	25.69	17.63	0.55	-10.5	2.0	4.83	
	0950		7.26	25.41	17.50	0.45	-13.2	1.9	4.83	0.25 L/m
	0955		7.27	25.03	17.37	0.44	-13.2	1.3	4.83	
	1000		7.27	24.87	17.29	0.42	-13.2	1.3	4.83	
		PURGED ~ 1.5 GALS								
		PURGE WATER CLEAR - FAINT ORGANIC ODOR								

Sampling Record

Date	Time	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Sample ID	Analysis	Preserv	Comments
6/25/08	1020							MW-6D	BTEX	HCl	ICE
									PAH	—	
							FILTERED		METALS	HNO3	

Revised: 07/10/2007

NA = NOT AVAILABLE

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LOW FLOW SAMPLING SHEET

Well: MW-3D
Location: HUNTSMAN
Date: 6/25/08
Samplers: RANDOLPH DENNIS

Well Information

Date	Time	DTW (ft-toc)	Well TD (ft-toc)	Well Dia (in)	Screened Interval	PID Well (ppmv)	PID BZ Zone (ppmv)	LNAPL (ft)	DNAPL (ft)	Comments
6/24/08	1107	4.04	37.50	4	NA	0.0	0.0	-	-	

Well Purging Record

Date	Time	Cum Vol Purged (L)	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	DTW (ft-toc)	Comments
6/25/08	1050	Initial	7.14	22.64	15.60	1.16	-25.6	6.2	3.95	0.2 L/M
	11 00		7.12	22.46	15.41	0.81	-41.0	7.3	3.96	
	11:05		7.12	22.58	15.41	0.63	-45.8	6.2	3.97	
	11:10		7.12	22.45	15.32	0.53	-47.4	3.6	3.97	
	11 15		7.13	22.61	15.33	0.48	-51.1	2.6	3.97	
	11:20		7.13	22.59	15.32	0.45	-53.3	1.9	3.97	
	11:25		7.13	22.70	15.31	0.41	-52.9	1.5	3.98	
	11:30		7.14	22.34	15.19	0.40	-55.5	2.0	3.96	
	11.35		7.14	22.30	15.14	0.40	-56.2	1.3	3.98	
		~	2 CASES PURGED							
	PURGED WATER		CLEAR; NO ODOR							

Sampling Record

Date	Time	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Sample ID	Analysis	Preserv	Comments
6/25/08	11:45							MW-3D	BTEX	HCl	ICE
									PAH	-	
							FILTERED	METALS		HNO_3	

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N.A - NOT AVAILABLE

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LOW FLOW SAMPLING SHEET

Well: ~~AW-9~~ PID MW-65
Location: HUNTSMAN
Date: 6/25/08
Samplers: RANDOLPH ORTLUND

Well Information

Date	Time	DTW (ft-toc)	Well TD (ft-toc)	Well Dia (in)	Screened Interval	PID Well (ppmv)	PID BZ Zone (ppmv)	LNAPL (ft)	DNAPL (ft)	Comments
6/24/08	~~1053~~ PID 1100	~~4.60~~ 4.95	~~17.50~~ 17.00	4	~~NA~~	0.0	0.0	—	—	

Well Purging Record

Date	Time	Cum Vol Purged (L)	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	DTW (ft-toc)	Comments
6/25/08	1405	Initial	7.04	25.64	11.16	1.34	-110.6	2.0	4.90	0.35 m/L
	1418		7.02	24.93	10.83	1.10	-129.1	4.0	~~5.35~~	5.65
	1428		7.04	28.73	11.62	1.04	-130.0	2.1	~~5.51~~	0.20 m/L
	1422		7.04	28.36	11.48	1.02	-132.6	1.3	5.61	
	1432		7.03	28.30	11.41	1.03	-133.2	2.3	5.73	
	1439		7.01	28.12	11.31	1.05	-134.5	1.7	5.82	
	1448		7.01	27.77	11.26	1.05	-134.9	1.9	5.88	
		~2 1/4 GALLONS PURGED								
		PURGE WATER LIGHT BROWN (ICE ORG) COLOR; ORGANIC DIRT ~~SAND~~ ODOR								

Sampling Record

Date	Time	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Sample ID	Analysis	Preserv	Comments
6/25/08	MW-65							MW-65	BTEX	HCl	ICE
1500	DUP-1	DUPLICATE MW-65						DUP-1	PAH's	—	
1450							FILTERED METALS			HNO3	
1545	FB-2	FB-2 VOA's DISTILLED H2O						FB-2	BTEX	HCl	

NA NOT AVAILABLE (UNKNOWN)

LOW FLOW SAMPLING SHEET

Well: MW-15 Date: 6/25/08

Location: HUNTSMAN Samplers: RANDALL ORTEGA

Well Information

Date	Time	DTW (ft-toc)	Well TD (ft-toc)	Well Dia (in)	Screened Interval	PID Well (ppmv)	PID BZ Zone (ppmv)	LNAPL (ft)	DNAPL (ft)	Comments
6/24/08	0947	12.89	~~13.47~~ 35.20	4	NA	0.0	0.0	—	—	

Well Purging Record

Date	Time	Cum Vol Purged (L)	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	DTW (ft-toc)	Comments
~~6/25/08~~	735	Initial							13.30	0.25 L/m
6/26/08	745		7.28	24.90	9.99	2.02	-108.2	13	13.35	
	750		7.27	24.69	10.16	1.46	-119.1	3.6	13.36	
	755		7.26	24.69	10.17	1.17	-127.2	1.8	13.36	0.35 L/m
	800		7.24	24.66	9.95	1.01	-140.6	0.35	13.36	
	805		7.25	24.55	9.109	0.88	-153.6	0.25	13.36	
	808		7.26	24.71	8.38	0.84	-155.2	0.15	13.36	
	813		7.22	24.65	7.05	0.82	-149.0	0.00	13.37	
	818		7.22	25.52	6.514	0.76	-137.0	0.00	13.35	
	820		7.23	24.68	6.46	0.74	-133.2	0.00	13.34	
		~ 3 FACS	PURGED							
	PURGE WATER: CLEAR TO VERY LIGHT YELLOW; ORGANIC ODOR									

Sampling Record

Date	Time	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Sample ID	Analysis	Preserv	Comments
6/26/08	0820							MW-15	BTEX	HCl	ICE
									PAH'S	—	
							FILTERED	METALS		HNO_3	

LOW FLOW SAMPLING SHEET

Well: ~~MW-65~~ MW-95 Date: 6/26/08

Location: HUNTSMAN Samplers: RANDOLPH ORTUNO

Well Information

Date	Time	DTW (ft-toc)	Well TD (ft-toc)	Well Dia (in)	Screened Interval	PID Well (ppmv)	PID BZ Zone (ppmv)	LNAPL (ft)	DNAPL (ft)	Comments
6/24/08	1053	4.60	15.50	4	UNK	0.0	0.0	—	—	

Well Purging Record

Date	Time	Cum Vol Purged (L)	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	DTW (ft-toc)	Comments
6/26/08	0926	Initial							~~5.04~~	5.25 0.25L/m
	0940		7.34	22.84	10.16	1.75	-111.3	10	5.30	
	0945		7.31	22.51	10.09	1.67	-116.0	5.5	5.29	
	0950		7.25	21.64	9.84	1.11	-124.8	4.4	5.26	0.45L/m
	0955		7.29	21.42	9.65	0.91	-130.5	1.8	5.30	
1000	~~0950~~		7.31	21.43	9.52	0.71	-134.7	1.6	5.30	
	1005		7.34	21.48	9.35	0.64	-138.0	0.65	5.30	
	1011		7.35	21.58	9.23	0.74	-140.4	1.0	5.31	
	1015		7.36	21.62	9.18	0.70	-141.4	0.25	5.31	
	1020		7.36	21.67	9.15	0.66	-142.7	~~2.5~~ RPD 0.30	5.31	
		~3 CASE PURGED								
PURGE - CLEAR TO VERY LIGHT YELLOW, ORGANIC ODOR										

Sampling Record

Date	Time	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Sample ID	Analysis	Preserv	Comments
6/26/08	1020							MW-95	BTEX	HCl	Ice
									PAH	-	
									FILTERED METALS	HNO_3	

Revised:07/10/2007

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LOW FLOW SAMPLING SHEET

Well: MW-14 Date: 6/26/08

Location: HUNTSMAN Samplers: RANDOLPH ORTLUND

Well Information

Date	Time	DTW (ft-toc)	Well TD (ft-toc)	Well Dia (in)	Screened Interval	PID Well (ppmv)	PID BZ Zone (ppmv)	LNAPL (ft)	DNAPL (ft)	Comments
6/24/08	1015	4.33	26.10	4	NNR	0.0	0.0	—	—	

Well Purging Record

Date	Time	Cum Vol Purged (L)	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L) *	Redox Potential (mV) *	Turbidity (NTU) *	DTW (ft-toc)	Comments
6/26/08	1107	Initial	6.88	24.00	16.68	2.06	-70.3	1.4	4.95	0.35 L/M
	1110		6.95	23.45	16.56	1.08	-83.9	0.00	4.93	
	1115		6.95	23.57	16.57	0.99	-84.2	0.00	4.93	
	1120		6.95	23.56	16.59	1.00	-83.8	0.00	4.93	
	1125		6.95	23.68	16.14	0.86	-84.7	0.00	4.94	
	1130		6.95	23.68	15.92	0.82	-84.7	0.00	4.94	
	1138		6.95	23.91	15.71	0.78	-84.8	0.00	4.94	
		PURGED ~ 2.5 GALS								
		PURGE WATER: CLEAR TO LIGHT YELLOW; ORGANIC DIRT ODOR								

Sampling Record

Date	Time	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Sample ID	Analysis	Preserv	Comments
6/26/08	1145							MW-14	BTEX	HCl	ICE
									PAHS	—	
							FILTERED	METALS		HNO_3	

MONITOR WELLS

Huntsman Wells Gauging Information

Well ID	Date	Time	PID	Depth to Product (ft)	Depth to Water (ft)	(1) Product Thickness (ft)	(2) Well Bailed Yes/No	Comments
6 MW-1	6/24/08	11:15	0.0	ND	4.69	NA		NS
2						NA		PLUGGED 6/99
10 3S		11:08	0.0	NA	4.01	NA		NO-m (5)
8 3D		11:07	0.0	NA	4.04	NA		NO-m (5)
14 4		10:20	0.0	NA	2.60	NA		NS-m (5)
4 5		10:25	0.0	NA	3.56	NA		NS
16 6S		11:00	0.0	NA	4.95	NA		BTEX-m/DUP (5)
9 6D		10:56	0.0	NA	4.86	NA		NO-m (5)
12 7		10:09	0.0	NA	2.91	NA		NS-m (5)
3 8		10:29	0.0	NA	3.43	NA		NS
13 9S		10:53	0.0	NA	4.60	NA		X 6/15/05-m (5)
9D								PLUGGED 7/05
17 10								SHEEN/PUMP
7 11		10:02	0.0	NA	5.66	NA		NS
5 12	✓	11:20	0.0	NA	3.40	NA		NS

(1) Product Thickness = (depth to water) - (depth to product)
(2) See Well Bailing field form
Note: Water Equals Non Product Liquids

Data Collector: SERGIO MARTINEZ AND BRAD STOKES

MONITOR WELLS

Huntsman Wells Gauging Information

Well ID	Date	Time	PID	Depth to Product (ft)	Depth to Water (ft)	(1) Product Thickness (ft)	(2) Well Bailed Yes/No	Comments
MW-13	6/24/08							PLUGGED 6/99
15 14		10.15	0.0	NA	4.33	NA		NS-B (5)
11 15		9.47	0.0	NA	12.89	NA		NS (5)
2 16		8.58	0.0	NA	11.27	NA		NS
1 17		8.47	0.0	NA	5.98	NA		NS

(1) Product Thickness = (depth to water) - (depth to product).
(2) See Well Bailing field form.
Note: Water Equals Non Product Liquids

Data Collector: SERGIO MARTINEZ AND BRAD STOKES

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WELL POINTS

Huntsman Wells Gauging Information

Well ID	Date	Time	PID	Depth to Product (ft)	Depth to Water (ft)	(1) Product Thickness (ft)	(2) Well Bailed Yes/No	Comments
WP-1	6/24/08	9:25	3.1 (0.4 ~ BZ)	NA	7.78			
2		9:28	0.0	NA	5.90			
3		9:32	0.0	NA	5.42			
7		9:20	0.0	TRACE	8.97	~0.005		
14		10:36	2.5	TRACE	4.12	~0.005		TAR
25		9:17	1.0	6.90	7.35	0.45		DRY? .52
26S		9:10	1.4	6.77	7.50	0.73		0.47
26D		9:08	0.0	NA	7.46			
27S		9:47	0.0	NA	11.64			0.02
27D		9:49	0.0	NA	11.50			0.04
30		10:00	0.0	NA	10.87			
31								
32								DRY
33	↓	10:03	0.0	NA	7.30			

(1) Product Thickness = (depth to water) - (depth to product)
(2) See Well Bailing field form
Note: Water Equals Non Product Liquids

BZ = Breathing Zone

Data Collector: SERGIO MARTINEZ AND BRAD STOKES

Huntsman Well Balling Information

Well ID	Date	Time	PID	Pre Balling Depth to Product (ft)	Pre Balling Depth to Water (ft)	(1a) Pre Balling Product Thickness (ft)	Post Balling Depth to Product (ft)	Post Balling Depth to Water (ft)	(1b) Post Balling Product Thickness (ft)	(2), (3) Removed Product/Water (Ounces)	Comments
265	6/25/08	14:50	0.0	6.80		0.73	INITIAL THICKNESS				THICK BLACK
		15:00		7.53		0.73	REMOVED BY BAILER				OIL LIKE GEAR OIL 90 WEIGHT
		15:10		8.10		0.73	REMOVED				
		15:20		10.25		0.73	REMOVED				
		15:30		10.43		0.73	REMOVED				
		15:35		10.45		NOT ALL REMOVED HIT BOTTOM					hit Bottom of well
											Interface Probe had 1/4 to 1/2 inch of oil on End
265	6/26/08	10:00	0.0	7.70							~~has not developed 83%~~ Accr [illegible]

(1a,b) Product Thickness = (depth to water) - (depth to product)
(2) Removed Product = ((1a) Pre Balling Product Thickness - (1b) Post Balling Product Thickness) X (Conversion Factor)
(3) Water Removed is Estimated

Conversion Factor = 21.76 for 2" dia well (0.17 gal/linear ft X 128 oz/gal)
Conversion Factor = 84.48 for 4" dia well (0.66 gal/linear ft X 128 oz/gal)
Conversion Factor = 192.0 for 6" dia well (1.50 gal/linear ft X 128 oz/gal)

Note: Water Equals Non Product Liquids

Data Collector: Jerry Scawson

Revised:06/23/2008

Daily Safety Meeting

ERM

Date	Meeting Facilitator	Project Name	Project Number
1/7/09	KANDOLPH ORTLAND	HUNTSMAN	85439

AWARENESS ISSUES (special EHS concerns, pollution prevention, recent incidents)

- S/T/F - LOOSE GRAVEL, SLOPES, UNEVEN GRND, LOOSE SAND BUSHES, BURROWS HOLES, ROCKS, PPE, DEBRIS
- DRIVING - BIG PICTURE, DEFENSIVE, LOWS, CLEAN WINDOWS AND MIRRORS, BACK-IN, E-BRAKE, 360 WALK AROUND EYE CONTACT, PEDESTRIANS, WORKERS, OTHER DRIVERS
- VOCS - MONITOR PID, MPLYNO
- NAPL - NITRILE GLOVES, GLASSES, SPILL KIT, PPE, EYEWASH

OTHER ISSUES (HASP changes, new JHAs, attendee comments)

BUCKETS W/ LIDS, DRUMS, TRUCK

- PINCH POINTS / LOOSE - PAY ATTN TO TASK, GLOVES RIGHT TOOL

HASP/JHA / DAILY ACTIVITY / PSC CARDS

DISCUSSION OF DAILY ACTIVITIES/TASKS AND SAFETY MEASURES

OPEN FLUID WELLS
GW SAMPLE
NAPL BAILING
RIVER SAMPLING (SPLITTER)

OPPORTUNITIES/SUGGESTIONS FOR IMPROVEMENT

BORDER PATROL - ILLEGAL IMMIGRANTS

ATTENDEES (Print name and initial)

KANDOLPH ORTLAND	
SAC MORALES SAM	

ERM

Daily Safety Meeting

Date	Meeting Facilitator	Project Name	Project Number
1/8/09	RANDOLPH ORTLAND	HUNTSMAN	85439

AWARENESS ISSUES (special EHS concerns, pollution prevention, recent incidents)

S/T/F - LOOSE SAND GRAVEL, SLOPES, UNEVEN GROUND, BUSHES
BURROWS, ROCKS, DEBRIS, [illegible]
DRIVING - BIG PICTURE, DEFENSIVE, LOWS, CLEAN WINDOWS & MIRRORS
BACK-IN, E-BRAKE, 360 WALK AROUND, EYE CONTACT PEDS, WORKERS
OTHER DRIVERS, LOOSE SAND
VOCS - MONITOR PID, UPWIND
PPE - NITRILE GLOVES, PLASTIC, [illegible], PPE, EYEWASH

OTHER ISSUES (HASP changes, new JHAs, attendee comments)

BUCKETS W/ LIDS, DRINKING WATER
PINCH POINTS / LIFTING - PROPER TECHNIQUE, GLOVES, [illegible]

HASP / JHA / DAILY ACTIVITIES / ASC CARDS

DISCUSSION OF DAILY ACTIVITIES/TASKS AND SAFETY MEASURES

GW SAMPLE WELLS, RIVER

OPPORTUNITIES/SUGGESTIONS FOR IMPROVEMENT

SPOTTER W/ BACK UP FOR RIVER SAMPLING

WILD DOGS - STAY BUSY
BORDER PATROL - ILLEGAL IMMIGRANT

ATTENDEES (Print name and initial)

RANDOLPH ORTLAND RKO	
SAL MERCER SM	

Huntsman Wells Gauging Information (Well Points)

Well ID	Date	Time	PID	Depth to Product (ft)	Depth to Water (ft)	(1) Product Thickness (ft)	(2) Well Bailed Yes/No	RIVER LEVELS LOW Comments
WP-1	1-7-09	1657	18.0	N/A	9.91	N/A	N	
WP-2	1-7-09	1702	7.0	N/A	8.15	N/A		
WP-3	1-7-09	1710	0.0	N/A	7.45	N/A		
WP-7	1-7-09	1643	0.0	N/A	9.73	N/A		
WP-14	1-7-09	1812	0.8	N/A	5.38	N/A		YES TAR at bottom of well
WP-25	1-7-09	1639	11.00	7.17	7.25	0.08		
WP-26S	1-7-09	1634	10.0	8.48	8.86	0.38		
WP-26D	1-7-09	1627	6.00	N/A	9.78	N/A		
WP-27S	1-7-09	1653	17.0	13.50	13.51	0.01		
WP-27D	1-7-09	1656	0.8	N/A	13.54	N/A		
WP-30	1-7-09	1717	0.0	N/A	10.87	N/A		
WP-31	—	—	—	—	—	—		WAS UNABLE TO REMOVE WELL CAP
WP-32	1-7-09	1648	6.0	—	—	—		DRY YES
WP-33	1-7-09	1724	0.5	N/A	9.05	N/A		
MW-10	1-7-09	1417	1.0	N/A	9.07	N/A		Recovery well w/pump

(1) Product Thickness = (depth to water) - (depth to product)
(2) See Well Bailing field form
Note: Water Equals Non Product Liquids

Data Collector: SAL MORALES / RANDY ROTUNNO

Huntsman Wells Gauging Information (Monitor Wells)

RIVER LEVELS LOW

Well ID	Date	Time	PID	Depth to Product (ft)	Depth to Water (ft)	(1) Product Thickness (ft)	Comments
MW-1	1.7.09	1429	0.0	N/A	6.17	N/A	N/S
MW-2	—	—	—	—	—	—	P&A 6/99
2 MW-3S	1.7.09	1248	0.0	N/A	6.47	N/A	S
3 MW-3D	1.7.09	1252	0.7	N/A	6.50	N/A	S
MW-4	1.7.09	1323	0.0	N/A	5.04	N/A	~~S~~ N/S
L MW-5	1.7.09	1318	0.0	N/A	5.85	N/A	N/S
6 MW-6S	1.7.09	1309	0.0	N/A	7.36	N/A	S
5 MW-6D	1.7.09	1305	0.5	N/A	7.37	N/A	S
MW-7	1.7.09	1331	0.0	N/A	5.32	N/A	S N/S
MW-8	1.7.09	1341	0.0	N/A	5.60	N/A	N/S
4 MW-9S	1.7.09	1300	0.0	N/A	6.84	N/A	S
MW-9D	—	—	—	—	—	—	P&A 7/05
P MW-10	1.7.09	1417	1.0	N/A	9.07	N/A	Sheen recovery well w/pump
MW-11	1.7.09	1344	0.0	N/A	7.87	N/A	N/S
1 MW-12	1.7.09	1237	0.0	N/A	5.56	N/A	~~N/S~~ S

(1) Product Thickness = (depth to water) - (depth to product)
Notes: Water Equals Non Product Liquids; S-well sampled; N/S-well not sampled

Data Collector: SERGIO MORALES / RANDOLPH ORTUNO

Revised: 12/18/2008

Huntsman Wells Gauging Information (Monitor Wells)

Well ID	Date	Time	PID	Depth to Product (ft)	Depth to Water (ft)	(1) Product Thickness (ft)	Comments
MW-13	—	—	—	—	—	—	P&A 6/99
MW-14	1.7.09	1328	0.0	N/A	16.69	N/A	~~S~~ N/S
MW-15	1.7.09	1400	0.3	N/A	15.04	N/A	~~S~~ N/S
MW-16	1.7.09	1352	0.0	N/A	13.50	N/A	N/S
MW-17	1.7.09	1335	0.0	N/A	8.35	N/A	N/S

(1) Product Thickness = (depth to water) - (depth to product)
Notes: Water Equals Non Product Limits; S-well sampled; N/S-well not sampled

Data Collector: _____

Revised 12/19/2008

LOW FLOW SAMPLING SHEET

Well: MW-12 Date: 1/7/09

Location: ILLINOIS, MAN Samplers: RANDALL ORTLUND

Well Information

Date	Time	DTW (ft-toc)	Well TD (ft-toc)	Well Dia (in)	Screened Interval	PID Well (ppmv)	PID BZ Zone (ppmv)	LNAPL (ft)	DNAPL (ft)	Comments
1/7/09	1237	5.56	26.89	4	UNK	0.0	0.0	-	-	USED PURSTABLE BLADDER PUMP FOR LOW FLOW PURGE AND SAMPLE

Well Purging Record

PUMP SET @ 15' BTOC

Date	Time	Cum Vol Purged (L)	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	DTW (ft-toc)	Comments
1/7/09	1612	Initial	6.80	17.77	27172	5.60	223	2.85	5.52	.35 L/m 20 psi
	1617		6.78	18.65	27478	2.82	222	1.55	5.55	.35 L/m 15/5 cycle
	1622		6.80	18.72	27491	2.43	222	1.43	5.55	↓
	1627		6.80	18.73	27499	2.19	221	2.38	5.53	
	1632		6.81	18.73	27517	2.16	222	1.70	5.53	.3 L/m 10 psi
	1637		6.80	18.76	27515	2.06	222	1.48	5.53	15/5 cycle
	1642		6.80	18.72	27558	1.99	222	1.50	5.53	
	1645		6.81	18.81	27512	2.04	222	1.58	5.53	
~	3 GALS PURGED									
	PURGE WATER CLEAR + NO ODOR PRESENT									

Sampling Record

Date	Time	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Sample ID	Analysis	Preserv	Comments
1/7/09	1645								BORON	HNO_3	PCB
1/7/09	1600	CLEAN WATER LEVEL			EB-1	(DISTILLED WATER)			BTEX	HCl	PCB
1/7/09	1300	RPD 1/7/09			FB-1	(DISTILLED WATER)			BTEX	HCl	PCB

PLACED @ MW-3S

LOW FLOW SAMPLING SHEET

Well: MW-35 Date: 1/8/09

Location: HANKSMAN Samplers: RANDALL ORTLUND

Well Information

Date	Time	DTW (ft-toc)	Well TD (ft-toc)	Well Dia (in)	Screened Interval	PID Well (ppmv)	PID BZ Zone (ppmv)	LNAPL (ft)	DNAPL (ft)	Comments
1/7/09	1248	6.47	16.50	4	UNK	0.0	0.0	-	-	0.2-0.3 L/m
										DEDICATED PUMP

Well Purging Record

Date	Time	Cum Vol Purged (L)	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	DTW (ft-toc)	Comments
						X	X	X		
1/8/09	1055	Initial	7.28	16.57	10481	4.90	220	10	6.45	0.3 mL 15/5 CYCLE
	1102		7.33	16.90	10416	3.63	219	4.1	6.59	6.68 6.78 10 PSI
	1107		7.32	17.16	10324	3.53	219	4.2	6.87	0.2 mL 25/5 CYCLE
	1112		7.30	17.35	10320	3.04	218	3.9	6.98	0.2 mL
	1117		7.31	17.01	10340	2.96	218	3.9	7.16	0.175 mL 30/5 CYCLE
	1123		7.30	17.15	10339	2.82	218	3.7	7.18	
	1128		7.30	17.34	10347	2.70	219	3.4 / 4.5	7.20	
	1133		7.28	17.39	10357	2.53	218	1.7	7.25	CHANGED TURBIDITY VIAL
	1138		7.27	17.42	10364	2.45	218	2.7	7.27	
	1143		7.25	17.52	10363	2.32	218	2.7	7.29	
	~2 GALS PURGED									
					TO VERY LIGHT YELLOW COLOR					
	PURGE WATER CLEAR AND NO APPARENT ODOR									

Sampling Record

Date	Time	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Sample ID	Analysis	Preserv	Comments
1/8/09	~~1145~~ 1145							MW-35	BTEX	HCl	ICE
	~~1145~~										
1/7/09	1300+1700	FB-1	(DISTILLED WATER)					FB-1	BTEX	HCl	~~ICE~~

LOW FLOW SAMPLING SHEET

Well: MW-3D
Location: HUNTSMAN
Date: 1/8/09
Samplers: RANDOLPH ORELLANA

Well Information

Date	Time	DTW (ft-toc)	Well TD (ft-toc)	Well Dia (in)	Screened Interval	PID Well (ppmv)	PID BZ Zone (ppmv)	LNAPL (ft)	DNAPL (ft)	Comments
1/7/09	1252	6.50	37.50	4	N/A	0.7	0.0	—	—	
										DEDICATED PUMP

Well Purging Record

Date	Time	Cum Vol Purged (L)	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L) X	Redox Potential (mV) X	Turbidity (NTU) X	DTW (ft-toc)	Comments 10 PSI
1/8/09	1205	Initial	7.05	17.33	18016	2.89	183	2.7	6.52	SLOW 30/5 CYCLE
	1210		7.03	17.88	18269	1.37	127	3.1	6.54	0.2L/m 20/10 20 PSI
	1215		7.03	18.10	18373	0.80	98	2.6	6.55	
	1220		7.04	18.21	18379	0.48	73	2.3	6.54	
	1226		7.04	18.27	18360	0.39	57	2.3	6.54	0.2L/m 20/10 2CPSI
	1232		7.04	18.34	18352	0.35	50	2.36	6.55	
	1237		7.02	18.36	18329	0.32	48	2.57	6.55	
	~2 GALS	PURGED								
	PURGE WATER CLEAR TO VERY LIGHT YELLOW TINGE COLOR NO APPARENT ODOR									

Sampling Record

Date	Time	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Sample ID	Analysis	Preserv	Comments
1/8/09	1240							MW-3D	BTEX	HCl	ICE

Revised:07/10/2007

N/A NOT AVAILABLE

LOW FLOW SAMPLING SHEET

Well: MW-9S
Location: HUNTSMAN

Date: 1/8/09
Samplers: RANDALL ORTLUND

Well Information

Date	Time	DTW (ft-toc)	Well TD (ft-toc)	Well Dia (in)	Screened Interval	PID Well (ppmv)	PID BZ Zone (ppmv)	LNAPL (ft)	DNAPL (ft)	Comments
1/7/09	1300	6.84	15.50	4	UNK	0.0	0.0	—	—	
										DEDICATED PUMP

Well Purging Record

Date	Time	Cum Vol Purged (L)	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L) X	Redox Potential (mV) X	Turbidity (NTU) X	DTW (ft-toc)	Comments
1/8/09	1307	Initial	6.87	18.64	10640	2.72	165	12	6.75	0.15 m/L 20/10 ~~20~~ PSI
	1316		6.83	18.12	10508	0.81	160	12	6.75	0.2 m/L
	1321		6.83	19.17	10637	0.51	142	8.7	6.75	
	1326		6.81	19.16	10606	0.42	120	8.3	6.77	
	1332		6.82	19.23	10644	0.38	101	6.6	6.76	
	1337		6.84	19.35	10696	0.36	87	5.6	6.76	
	1342		6.83	19.39	10734	0.33	75	5.2	6.77	
	1347		6.83	19.39	10789	0.32	63	4.3	6.79	
	~2 GALS PURGED									
		PURGE WATER CLEAR TO SLIGHT YELLOW TINT COLOR - SLIGHT ORGANIC ODOR								

Sampling Record

Date	Time	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Sample ID	Analysis	Preserv	Comments
1/8/09	1350							MW-9S	BTEX	HCl	ICE
	1420	FB-2 RINSE SAMPLER DIPPER DISTILLED WATER						FB-2	BTEX	HCl	ICE

LOW FLOW SAMPLING SHEET

Well: RIVER UPSTREAM
Location: HANCOCK - RIO GRANDE

Date: 1/8/09
Samplers: RANDALL ARTUNDO

Well Information

Date	Time	DTW (ft-toc)	Well TD (ft-toc)	Well Dia (in)	Screened Interval	PID Well (ppmv)	PID BZ Zone (ppmv)	LNAPL (ft)	DNAPL (ft)	Comments

Well Purging Record

Date	Time	Cum Vol Purged (L)	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	DTW (ft-toc)	Comments
1/8/09	1500	Initial	8.31	15.94	2691	11.23	161	11	JUST	BELOW SURFACE
		CLEAR WATER LITTLE SEDIMENT (SAND) NO ODOR OR COLOR								

Sampling Record

Date	Time	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Sample ID	Analysis	Preserv	Comments
1/8/09	1500				RIVER-UPSTREAM				BTEX	ICE HCl	ICE

LOW FLOW SAMPLING SHEET

Well: MW-6D
Location: HUNTSMAN

Date: 1/8/09
Samplers: RAMIREZ CRAWFORD

Well Information

Date	Time	DTW (ft-toc)	Well TD (ft-toc)	Well Dia (in)	Screened Interval	PID Well (ppmv)	PID BZ Zone (ppmv)	LNAPL (ft)	DNAPL (ft)	Comments
1/7/09	1305	7.37	38.0	4	NA	0.5	6.0	-	-	DEDICATED PUMP 0.25 L/m

Well Purging Record

Date	Time	Cum Vol Purged (L)	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	DTW (ft-toc)	Comments
1/8/09	1515	Initial	7.15	19.01	19100	3.40	192	2.3	7.28	0.2L/m 20/10 cycle 20psi
	1526		7.14	19.30	19586	1.85	166	2.4	7.29	0.25L/m 15/10 cycle 20psi
	1532		7.07	19.87	19616	0.96	120	1.9	7.29	
	1537		7.03	19.93	19637	0.65	97	2.0	7.29	
	1542		6.98	20.01	19644	0.53	83	1.6	7.27	
	1547		6.99	19.89	19645	0.46	74	1.7	7.27	
	1552		7.03	19.68	19662	0.41	63	1.8	7.27	
	1555		7.07	19.55	19648	0.39	58	1.6	7.27	
		~2 GALS PURGED								
		PURGE WATER CLEAR - NO APPARENT ODOR								

Sampling Record

Date	Time	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Sample ID	Analysis	Preserv	Comments
1/8/09	1555							MW-6D	BTEX	HCl	DUP
1/8/09	1115	FB-2 (DISTILLED WATER) TO 1535						FB-2	BTEX	HCl	

NA - NOT AVAILABLE

LOW FLOW SAMPLING SHEET

Well: MW-65 Date: 1/8/09

Location: HUNTSMAN Samplers: RANDALL CROSLAND

Well Information

Date	Time	DTW (ft-toc)	Well TD (ft-toc)	Well Dia (in)	Screened Interval	PID Well (ppmv)	PID BZ Zone (ppmv)	LNAPL (ft)	DNAPL (ft)	Comments
1/7/09	1309	7.36	17.00	4	NA	0.0	0.0	—	—	DEDICATED PUMP 0.20 m/L

Well Purging Record

Date	Time	Cum Vol Purged (L)	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	DTW (ft-toc)	Comments
1/8/09	1610	Initial	7.11	18.90	17693	1.11	49	3.2	7.28	0.25L/m 15/10 10psi
	1620		7.24	18.68	16880	0.80	76	4.2	7.85	
	1625		7.25	18.56	16882	0.54	97	4.3	8.15	25/5
	1630		7.25	18.41	16885	0.42	111	4.1	8.62	0.1L/M
	1638		7.25	17.74	17005	0.33	124	4.2	8.72	
	1643		7.24	17.21	16890	0.31	127	4.4	8.85	
	1648		7.25	17.11	16891	0.29	132	3.8	8.93	
	1653		7.25	17.06	16884	0.28	134	4.1	9.00	
	~1.75 GALS PURGED									
	PURGE WATER LIGHT ICE TEA COLOR - APPARENT EARTHY (DIRT) ~~ODOR~~ ODOR									

Sampling Record

Date	Time	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Sample ID	Analysis	Preserv	Comments
1/8/09	1655							MW-65	BTEX	HCl	ICE
	↓	DUP-1 DUPLICATE MW-65						DUP-1	↓	↓	↓
								MS/MSD	↓	↓	↓
	↓										

LOW FLOW SAMPLING SHEET

Well: RIVER DOWNSTREAM
Location: RIO GRANDE - HUNTSMAN

Date: 1/8/09
Samplers: KENNETH OSBURN

Well Information

Date	Time	DTW (ft-toc)	Well TD (ft-toc)	Well Dia (in)	Screened Interval	PID Well (ppmv)	PID BZ Zone (ppmv)	LNAPL (ft)	DNAPL (ft)	Comments

Well Purging Record

Date	Time	Cum Vol Purged (L)	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	DTW (ft-toc)	Comments
1/8/09	1715	Initial	8.59	12.73	2726	9.98	~~275~~ 126	~~120~~ 17	N/A	
CLEAR WATER SLIGHTLY CLOUDY LIGHT SEDIMENT (SAND) NO APPARENT ODOR										

Sampling Record

Date	Time	pH (std units)	Temp (c)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Sample ID	Analysis	Preserv	Comments
1/8/09	1715		RIVER - DOWNSTREAM						BTEX	~~ICE~~ HCL	TOC

Laboratory Data Reports

Appendix B

March 19, 2009
Project No. 0085439

Environmental Resources Management Southwest, Inc.
206 E. 9th St., Suite 1700
Austin, Texas 78701
(512) 459-4700

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

14-Jul-08

Brad Stokes
ERM Southwest, Inc.
442 Bermuda
Corpus Christi, TX 78411

Tel: (361) 737-9203
Fax:

Re: Huntsman Brickland Refinery

Work Order : **0806640**

Dear Brad,

ALS Laboratory Group received 20 samples on 6/27/2008 07:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 67.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Lora Terrill

Electronically approved by: Glenda H. Ramos

Lora Terrill
VP Lab Operations

ACCREDITED IN ACCORDANCE WITH nelac

Certificate No: T104704231-08-TX

ALS Laboratory Group

Date: 14-Jul-08

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: **0806640**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
0806640-01	MW-7	Water		6/24/2008 13:35	6/27/2008 07:30	☐
0806640-02	FB-1	Water		6/24/2008 12:46	6/27/2008 07:30	☐
0806640-03	MW-3S	Water		6/24/2008 15:55	6/27/2008 07:30	☐
0806640-04	EB-1	Water		6/24/2008 16:25	6/27/2008 07:30	☐
0806640-05	MW-4	Water		6/25/2008 08:30	6/27/2008 07:30	☐
0806640-06	FB-2	Water		6/25/2008 15:45	6/27/2008 07:30	☐
0806640-06	FB-2	Water		6/25/2008 20:45	6/27/2008 07:30	☐
0806640-07	MW-6D	Water		6/25/2008 10:20	6/27/2008 07:30	☐
0806640-08	MW-3D	Water		6/25/2008 11:45	6/27/2008 07:30	☐
0806640-09	MW-6S	Water		6/25/2008 14:50	6/27/2008 07:30	☐
0806640-10	Dup-1	Water		6/25/2008 15:00	6/27/2008 07:30	☐
0806640-11	MW-15	Water		6/26/2008 08:20	6/27/2008 07:30	☐
0806640-12	MW-9S	Water		6/26/2008 10:20	6/27/2008 07:30	☐
0806640-13	MW-14	Water		6/26/2008 11:45	6/27/2008 07:30	☐
0806640-14	Trip Blank-1	Water		6/26/2008 18:00	6/27/2008 07:30	☐
0806640-15	EB-2	Water		6/26/2008 17:30	6/27/2008 07:30	☐
0806640-16	EB-3	Water		6/26/2008 17:45	6/27/2008 07:30	☐
0806640-17	River-Upstream	Water		6/25/2008 08:21	6/27/2008 07:30	☐
0806640-18	River-Downstream	Water		6/25/2008 07:50	6/27/2008 07:30	☐
0806640-19	Sample A	Water		6/25/2008	6/27/2008 07:30	☐
0806640-20	Sample B	Water		6/25/2008	6/27/2008 07:30	☐

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0806640

Case Narrative

Batch R65181 BTEX MS is an unrelated sample.

Batch 30539 Semivolatiles LCS/LCSD RPD above control limit for 4 compounds where the individual recoveries are in control.

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Sample ID: MW-7
Collection Date: 6/24/2008 01:35 PM

Work Order: 0806640
Lab ID: 0806640-01
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX, WATER			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	7/6/2008 10:16 PM
Toluene	ND		0.0010	mg/L	1	7/6/2008 10:16 PM
Ethylbenzene	ND		0.0010	mg/L	1	7/6/2008 10:16 PM
Xylenes, Total	ND		0.0030	mg/L	1	7/6/2008 10:16 PM
Surr: 4-Bromofluorobenzene	*109*		*77-129*	*%REC*	1	7/6/2008 10:16 PM
Surr: Trifluorotoluene	*124*		*75-130*	*%REC*	1	7/6/2008 10:16 PM
MERCURY, DISSOLVED -SW7470A			**SW7470**		Prep Date: **7/7/2008**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	7/7/2008 04:42 PM
ICP METALS, DISSOLVED - SW6020A			**SW6020**		Prep Date: **7/3/2008**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	7/3/2008 08:56 PM
Antimony	ND		0.00500	mg/L	1	7/3/2008 08:56 PM
Arsenic	**0.0129**		**0.00500**	**mg/L**	1	7/3/2008 08:56 PM
Barium	**0.212**		**0.00500**	**mg/L**	1	7/3/2008 08:56 PM
Beryllium	ND		0.00200	mg/L	1	7/3/2008 08:56 PM
Boron	**0.555**		**0.0200**	**mg/L**	1	7/3/2008 08:56 PM
Cadmium	ND		0.00200	mg/L	1	7/3/2008 08:56 PM
Chromium	ND		0.00500	mg/L	1	7/3/2008 08:56 PM
Cobalt	ND		0.00500	mg/L	1	7/3/2008 08:56 PM
Copper	ND		0.00500	mg/L	1	7/3/2008 08:56 PM
Iron	**1.35**		**0.200**	**mg/L**	1	7/3/2008 08:56 PM
Lead	ND		0.00500	mg/L	1	7/3/2008 08:56 PM
Manganese	**0.712**		**0.00500**	**mg/L**	1	7/3/2008 08:56 PM
Molybdenum	**0.0267**		**0.00500**	**mg/L**	1	7/3/2008 08:56 PM
Nickel	ND		0.00500	mg/L	1	7/3/2008 08:56 PM
Selenium	**0.00707**		**0.00500**	**mg/L**	1	7/3/2008 08:56 PM
Silver	ND		0.00500	mg/L	1	7/3/2008 08:56 PM
Thallium	ND		0.00200	mg/L	1	7/3/2008 08:56 PM
Zinc	ND		0.00500	mg/L	1	7/3/2008 08:56 PM
LOW-LEVEL PAH			**SW8270**		Prep Date: **6/30/2008**	Analyst: **LG**
Acenaphthene	ND		0.00020	mg/L	1	7/8/2008 03:08 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/8/2008 03:08 PM
Anthracene	ND		0.00020	mg/L	1	7/8/2008 03:08 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/8/2008 03:08 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/8/2008 03:08 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 03:08 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/8/2008 03:08 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 03:08 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0806640
Sample ID: MW-7
Lab ID: 0806640-01
Collection Date: 6/24/2008 01:35 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	ND		0.00020	mg/L	1	7/8/2008 03:08 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/8/2008 03:08 PM
Fluoranthene	ND		0.00020	mg/L	1	7/8/2008 03:08 PM
Fluorene	ND		0.00020	mg/L	1	7/8/2008 03:08 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/8/2008 03:08 PM
Naphthalene	ND		0.00020	mg/L	1	7/8/2008 03:08 PM
Phenanthrene	ND		0.00020	mg/L	1	7/8/2008 03:08 PM
Pyrene	ND		0.00020	mg/L	1	7/8/2008 03:08 PM
Surr: 2-Fluorobiphenyl	*48.8*		*48-115*	*%REC*	1	7/8/2008 03:08 PM
Surr: 4-Terphenyl-d14	*66.3*		*47-117*	*%REC*	1	7/8/2008 03:08 PM
Surr: Nitrobenzene-d5	*45.1*		*44-115*	*%REC*	1	7/8/2008 03:08 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
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S - Spike Recovery outside accepted recovery limits
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ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0806640
Sample ID: FB-1
Lab ID: 0806640-02
Collection Date: 6/24/2008 12:46 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL - SW 7470A			**SW7470**		Prep Date: **7/7/2008**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	7/7/2008 06:25 PM
ICP METALS, TOTAL - SW6020A			**SW6020**		Prep Date: **7/2/2008**	Analyst: **SKS**
Aluminum	**0.0105**		**0.0100**	**mg/L**	1	7/3/2008 06:26 PM
Antimony	ND		0.00500	mg/L	1	7/3/2008 06:26 PM
Arsenic	ND		0.00500	mg/L	1	7/3/2008 06:26 PM
Barium	ND		0.00500	mg/L	1	7/3/2008 06:26 PM
Beryllium	ND		0.00200	mg/L	1	7/3/2008 06:26 PM
Boron	ND		0.0500	mg/L	1	7/3/2008 06:26 PM
Cadmium	ND		0.00200	mg/L	1	7/3/2008 06:26 PM
Chromium	ND		0.00500	mg/L	1	7/3/2008 06:26 PM
Cobalt	ND		0.00500	mg/L	1	7/3/2008 06:26 PM
Copper	ND		0.00500	mg/L	1	7/3/2008 06:26 PM
Iron	ND		0.200	mg/L	1	7/3/2008 06:26 PM
Lead	ND		0.00500	mg/L	1	7/3/2008 06:26 PM
Manganese	ND		0.00500	mg/L	1	7/3/2008 06:26 PM
Molybdenum	ND		0.00500	mg/L	1	7/3/2008 06:26 PM
Nickel	ND		0.00500	mg/L	1	7/3/2008 06:26 PM
Selenium	ND		0.00500	mg/L	1	7/3/2008 06:26 PM
Silver	ND		0.00500	mg/L	1	7/3/2008 06:26 PM
Thallium	ND		0.00200	mg/L	1	7/3/2008 06:26 PM
Zinc	ND		0.00500	mg/L	1	7/3/2008 06:26 PM

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E - Value above quantitation range
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n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0806640
Sample ID: MW-3S
Lab ID: 0806640-03
Collection Date: 6/24/2008 03:55 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX, WATER			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	7/2/2008 04:36 PM
Toluene	ND		0.0010	mg/L	1	7/2/2008 04:36 PM
Ethylbenzene	ND		0.0010	mg/L	1	7/2/2008 04:36 PM
Xylenes, Total	ND		0.0030	mg/L	1	7/2/2008 04:36 PM
Surr: 4-Bromofluorobenzene	*101*		*77-129*	*%REC*	1	7/2/2008 04:36 PM
Surr: Trifluorotoluene	*89.6*		*75-130*	*%REC*	1	7/2/2008 04:36 PM
MERCURY, DISSOLVED -SW7470A			**SW7470**		Prep Date: **7/7/2008**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	7/7/2008 04:44 PM
ICP METALS, DISSOLVED - SW6020A			**SW6020**		Prep Date: **7/3/2008**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	7/3/2008 09:02 PM
Antimony	ND		0.00500	mg/L	1	7/3/2008 09:02 PM
Arsenic	**0.00625**		**0.00500**	**mg/L**	1	7/3/2008 09:02 PM
Barium	**0.0452**		**0.00500**	**mg/L**	1	7/3/2008 09:02 PM
Beryllium	ND		0.00200	mg/L	1	7/3/2008 09:02 PM
Boron	**0.673**		**0.0200**	**mg/L**	1	7/3/2008 09:02 PM
Cadmium	ND		0.00200	mg/L	1	7/3/2008 09:02 PM
Chromium	ND		0.00500	mg/L	1	7/3/2008 09:02 PM
Cobalt	ND		0.00500	mg/L	1	7/3/2008 09:02 PM
Copper	ND		0.00500	mg/L	1	7/3/2008 09:02 PM
Iron	**1.01**		**0.200**	**mg/L**	1	7/3/2008 09:02 PM
Lead	ND		0.00500	mg/L	1	7/3/2008 09:02 PM
Manganese	**1.36**		**0.00500**	**mg/L**	1	7/3/2008 09:02 PM
Molybdenum	**0.00910**		**0.00500**	**mg/L**	1	7/3/2008 09:02 PM
Nickel	ND		0.00500	mg/L	1	7/3/2008 09:02 PM
Selenium	ND		0.00500	mg/L	1	7/3/2008 09:02 PM
Silver	ND		0.00500	mg/L	1	7/3/2008 09:02 PM
Thallium	ND		0.00200	mg/L	1	7/3/2008 09:02 PM
Zinc	ND		0.00500	mg/L	1	7/3/2008 09:02 PM
LOW-LEVEL PAH			**SW8270**		Prep Date: **6/30/2008**	Analyst: **LG**
Acenaphthene	ND		0.00020	mg/L	1	7/8/2008 03:28 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/8/2008 03:28 PM
Anthracene	ND		0.00020	mg/L	1	7/8/2008 03:28 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/8/2008 03:28 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/8/2008 03:28 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 03:28 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/8/2008 03:28 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 03:28 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
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S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
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ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0806640
Sample ID: MW-3S
Lab ID: 0806640-03
Collection Date: 6/24/2008 03:55 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	ND		0.00020	mg/L	1	7/8/2008 03:28 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/8/2008 03:28 PM
Fluoranthene	ND		0.00020	mg/L	1	7/8/2008 03:28 PM
Fluorene	ND		0.00020	mg/L	1	7/8/2008 03:28 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/8/2008 03:28 PM
Naphthalene	ND		0.00020	mg/L	1	7/8/2008 03:28 PM
Phenanthrene	ND		0.00020	mg/L	1	7/8/2008 03:28 PM
Pyrene	ND		0.00020	mg/L	1	7/8/2008 03:28 PM
Surr: 2-Fluorobiphenyl	*62.4*		*48-115*	*%REC*	1	7/8/2008 03:28 PM
Surr: 4-Terphenyl-d14	*80.0*		*47-117*	*%REC*	1	7/8/2008 03:28 PM
Surr: Nitrobenzene-d5	*56.3*		*44-115*	*%REC*	1	7/8/2008 03:28 PM

Qualifiers:

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B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0806640
Sample ID: EB-1
Lab ID: 0806640-04
Collection Date: 6/24/2008 04:25 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX, WATER			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	7/2/2008 05:03 PM
Toluene	ND		0.0010	mg/L	1	7/2/2008 05:03 PM
Ethylbenzene	ND		0.0010	mg/L	1	7/2/2008 05:03 PM
Xylenes, Total	ND		0.0030	mg/L	1	7/2/2008 05:03 PM
Surr: 4-Bromofluorobenzene	*103*		*77-129*	*%REC*	1	7/2/2008 05:03 PM
Surr: Trifluorotoluene	*92.3*		*75-130*	*%REC*	1	7/2/2008 05:03 PM
MERCURY, TOTAL - SW 7470A			**SW7470**		Prep Date: **7/7/2008**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	7/7/2008 06:27 PM
ICP METALS, TOTAL - SW6020A			**SW6020**		Prep Date: **7/2/2008**	Analyst: **SKS**
Aluminum	**0.0124**		**0.0100**	**mg/L**	1	7/3/2008 06:32 PM
Antimony	ND		0.00500	mg/L	1	7/3/2008 06:32 PM
Arsenic	ND		0.00500	mg/L	1	7/3/2008 06:32 PM
Barium	ND		0.00500	mg/L	1	7/3/2008 06:32 PM
Beryllium	ND		0.00200	mg/L	1	7/3/2008 06:32 PM
Boron	ND		0.0500	mg/L	1	7/3/2008 06:32 PM
Cadmium	ND		0.00200	mg/L	1	7/3/2008 06:32 PM
Chromium	ND		0.00500	mg/L	1	7/3/2008 06:32 PM
Cobalt	ND		0.00500	mg/L	1	7/3/2008 06:32 PM
Copper	ND		0.00500	mg/L	1	7/3/2008 06:32 PM
Iron	ND		0.200	mg/L	1	7/3/2008 06:32 PM
Lead	ND		0.00500	mg/L	1	7/3/2008 06:32 PM
Manganese	ND		0.00500	mg/L	1	7/3/2008 06:32 PM
Molybdenum	ND		0.00500	mg/L	1	7/3/2008 06:32 PM
Nickel	ND		0.00500	mg/L	1	7/3/2008 06:32 PM
Selenium	ND		0.00500	mg/L	1	7/3/2008 06:32 PM
Silver	ND		0.00500	mg/L	1	7/3/2008 06:32 PM
Thallium	ND		0.00200	mg/L	1	7/3/2008 06:32 PM
Zinc	ND		0.00500	mg/L	1	7/3/2008 06:32 PM

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E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Sample ID: MW-4
Collection Date: 6/25/2008 08:30 AM

Work Order: 0806640
Lab ID: 0806640-05
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX, WATER			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	7/7/2008 11:06 AM
Toluene	ND		0.0010	mg/L	1	7/7/2008 11:06 AM
Ethylbenzene	ND		0.0010	mg/L	1	7/7/2008 11:06 AM
Xylenes, Total	ND		0.0030	mg/L	1	7/7/2008 11:06 AM
Surr: 4-Bromofluorobenzene	*109*		*77-129*	*%REC*	1	7/7/2008 11:06 AM
Surr: Trifluorotoluene	*94.9*		*75-130*	*%REC*	1	7/7/2008 11:06 AM
MERCURY, DISSOLVED -SW7470A			**SW7470**		Prep Date: **7/7/2008**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	7/7/2008 04:46 PM
ICP METALS, DISSOLVED - SW6020A			**SW6020**		Prep Date: **7/3/2008**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	7/3/2008 09:07 PM
Antimony	ND		0.00500	mg/L	1	7/3/2008 09:07 PM
Arsenic	ND		0.00500	mg/L	1	7/3/2008 09:07 PM
Barium	**0.0315**		**0.00500**	**mg/L**	1	7/3/2008 09:07 PM
Beryllium	ND		0.00200	mg/L	1	7/3/2008 09:07 PM
Boron	**0.845**		**0.0200**	**mg/L**	1	7/3/2008 09:07 PM
Cadmium	ND		0.00200	mg/L	1	7/3/2008 09:07 PM
Chromium	ND		0.00500	mg/L	1	7/3/2008 09:07 PM
Cobalt	ND		0.00500	mg/L	1	7/3/2008 09:07 PM
Copper	**0.00755**		**0.00500**	**mg/L**	1	7/3/2008 09:07 PM
Iron	**1.85**		**0.200**	**mg/L**	1	7/3/2008 09:07 PM
Lead	ND		0.00500	mg/L	1	7/3/2008 09:07 PM
Manganese	**4.52**		**0.500**	**mg/L**	100	7/7/2008 04:47 PM
Molybdenum	ND		0.00500	mg/L	1	7/3/2008 09:07 PM
Nickel	ND		0.00500	mg/L	1	7/3/2008 09:07 PM
Selenium	ND		0.00500	mg/L	1	7/3/2008 09:07 PM
Silver	ND		0.00500	mg/L	1	7/3/2008 09:07 PM
Thallium	ND		0.00200	mg/L	1	7/3/2008 09:07 PM
Zinc	**0.00721**		**0.00500**	**mg/L**	1	7/3/2008 09:07 PM
LOW-LEVEL PAH			**SW8270**		Prep Date: **6/30/2008**	Analyst: **LG**
Acenaphthene	ND		0.00020	mg/L	1	7/8/2008 03:49 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/8/2008 03:49 PM
Anthracene	ND		0.00020	mg/L	1	7/8/2008 03:49 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/8/2008 03:49 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/8/2008 03:49 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 03:49 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/8/2008 03:49 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 03:49 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
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H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Sample ID: MW-4
Collection Date: 6/25/2008 08:30 AM

Work Order: 0806640
Lab ID: 0806640-05
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	ND		0.00020	mg/L	1	7/8/2008 03:49 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/8/2008 03:49 PM
Fluoranthene	ND		0.00020	mg/L	1	7/8/2008 03:49 PM
Fluorene	ND		0.00020	mg/L	1	7/8/2008 03:49 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/8/2008 03:49 PM
Naphthalene	ND		0.00020	mg/L	1	7/8/2008 03:49 PM
Phenanthrene	ND		0.00020	mg/L	1	7/8/2008 03:49 PM
Pyrene	ND		0.00020	mg/L	1	7/8/2008 03:49 PM
Surr: 2-Fluorobiphenyl	*61.1*		*48-115*	*%REC*	1	7/8/2008 03:49 PM
Surr: 4-Terphenyl-d14	*79.6*		*47-117*	*%REC*	1	7/8/2008 03:49 PM
Surr: Nitrobenzene-d5	*55.1*		*44-115*	*%REC*	1	7/8/2008 03:49 PM

Qualifiers:

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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0806640
Sample ID: FB-2
Lab ID: 0806640-06
Collection Date: 6/25/2008 03:45 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX, WATER			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	7/3/2008 12:16 AM
Toluene	ND		0.0010	mg/L	1	7/3/2008 12:16 AM
Ethylbenzene	ND		0.0010	mg/L	1	7/3/2008 12:16 AM
Xylenes, Total	ND		0.0030	mg/L	1	7/3/2008 12:16 AM
Surr: 4-Bromofluorobenzene	*101*		*77-129*	*%REC*	1	7/3/2008 12:16 AM
Surr: Trifluorotoluene	*93.4*		*75-130*	*%REC*	1	7/3/2008 12:16 AM
MERCURY, TOTAL - SW 7470A			**SW7470**		Prep Date: **7/7/2008**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	7/7/2008 06:29 PM
ICP METALS, TOTAL - SW6020A			**SW6020**		Prep Date: **7/2/2008**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	7/3/2008 06:38 PM
Antimony	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Arsenic	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Barium	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Beryllium	ND		0.00200	mg/L	1	7/3/2008 06:38 PM
Boron	ND		0.0500	mg/L	1	7/3/2008 06:38 PM
Cadmium	ND		0.00200	mg/L	1	7/3/2008 06:38 PM
Chromium	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Cobalt	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Copper	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Iron	ND		0.200	mg/L	1	7/3/2008 06:38 PM
Lead	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Manganese	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Molybdenum	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Nickel	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Selenium	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Silver	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Thallium	ND		0.00200	mg/L	1	7/3/2008 06:38 PM
Zinc	ND		0.00500	mg/L	1	7/3/2008 06:38 PM

Qualifiers:

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B - Analyte detected in the associated Method Blank
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S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Sample ID: FB-2
Collection Date: 6/25/2008 08:45 PM

Work Order: 0806640
Lab ID: 0806640-06
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX, WATER			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	7/3/2008 12:16 AM
Toluene	ND		0.0010	mg/L	1	7/3/2008 12:16 AM
Ethylbenzene	ND		0.0010	mg/L	1	7/3/2008 12:16 AM
Xylenes, Total	ND		0.0030	mg/L	1	7/3/2008 12:16 AM
Surr: 4-Bromofluorobenzene	*101*		*77-129*	*%REC*	1	7/3/2008 12:16 AM
Surr: Trifluorotoluene	*93.4*		*75-130*	*%REC*	1	7/3/2008 12:16 AM
MERCURY, TOTAL - SW 7470A			**SW7470**		Prep Date: **7/7/2008**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	7/7/2008 06:29 PM
ICP METALS, TOTAL - SW6020A			**SW6020**		Prep Date: **7/2/2008**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	7/3/2008 06:38 PM
Antimony	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Arsenic	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Barium	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Beryllium	ND		0.00200	mg/L	1	7/3/2008 06:38 PM
Boron	ND		0.0500	mg/L	1	7/3/2008 06:38 PM
Cadmium	ND		0.00200	mg/L	1	7/3/2008 06:38 PM
Chromium	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Cobalt	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Copper	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Iron	ND		0.200	mg/L	1	7/3/2008 06:38 PM
Lead	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Manganese	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Molybdenum	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Nickel	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Selenium	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Silver	ND		0.00500	mg/L	1	7/3/2008 06:38 PM
Thallium	ND		0.00200	mg/L	1	7/3/2008 06:38 PM
Zinc	ND		0.00500	mg/L	1	7/3/2008 06:38 PM

Qualifiers:

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S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Sample ID: MW-6D
Collection Date: 6/25/2008 10:20 AM

Work Order: 0806640
Lab ID: 0806640-07
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX, WATER			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	7/2/2008 05:31 PM
Toluene	ND		0.0010	mg/L	1	7/2/2008 05:31 PM
Ethylbenzene	ND		0.0010	mg/L	1	7/2/2008 05:31 PM
Xylenes, Total	ND		0.0030	mg/L	1	7/2/2008 05:31 PM
Surr: 4-Bromofluorobenzene	*99.6*		*77-129*	*%REC*	1	7/2/2008 05:31 PM
Surr: Trifluorotoluene	*92.2*		*75-130*	*%REC*	1	7/2/2008 05:31 PM
MERCURY, DISSOLVED -SW7470A			**SW7470**		Prep Date: **7/7/2008**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	7/7/2008 04:48 PM
ICP METALS, DISSOLVED - SW6020A			**SW6020**		Prep Date: **7/3/2008**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	7/3/2008 09:19 PM
Antimony	ND		0.00500	mg/L	1	7/3/2008 09:19 PM
Arsenic	ND		0.00500	mg/L	1	7/3/2008 09:19 PM
Barium	**0.0508**		**0.00500**	**mg/L**	1	7/3/2008 09:19 PM
Beryllium	ND		0.00200	mg/L	1	7/3/2008 09:19 PM
Boron	**0.805**		**0.0200**	**mg/L**	1	7/3/2008 09:19 PM
Cadmium	ND		0.00200	mg/L	1	7/3/2008 09:19 PM
Chromium	ND		0.00500	mg/L	1	7/3/2008 09:19 PM
Cobalt	ND		0.00500	mg/L	1	7/3/2008 09:19 PM
Copper	**0.00809**		**0.00500**	**mg/L**	1	7/3/2008 09:19 PM
Iron	**0.830**		**0.200**	**mg/L**	1	7/3/2008 09:19 PM
Lead	ND		0.00500	mg/L	1	7/3/2008 09:19 PM
Manganese	**6.91**		**0.500**	**mg/L**	100	7/7/2008 04:54 PM
Molybdenum	**0.00719**		**0.00500**	**mg/L**	1	7/3/2008 09:19 PM
Nickel	ND		0.00500	mg/L	1	7/3/2008 09:19 PM
Selenium	ND		0.00500	mg/L	1	7/3/2008 09:19 PM
Silver	ND		0.00500	mg/L	1	7/3/2008 09:19 PM
Thallium	ND		0.00200	mg/L	1	7/3/2008 09:19 PM
Zinc	ND		0.00500	mg/L	1	7/3/2008 09:19 PM
LOW-LEVEL PAH			**SW8270**		Prep Date: **6/30/2008**	Analyst: **LG**
Acenaphthene	ND		0.00020	mg/L	1	7/8/2008 06:54 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/8/2008 06:54 PM
Anthracene	ND		0.00020	mg/L	1	7/8/2008 06:54 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/8/2008 06:54 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/8/2008 06:54 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 06:54 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/8/2008 06:54 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 06:54 PM

Qualifiers:

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P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0806640
Sample ID: MW-6D
Lab ID: 0806640-07
Collection Date: 6/25/2008 10:20 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	ND		0.00020	mg/L	1	7/8/2008 06:54 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/8/2008 06:54 PM
Fluoranthene	ND		0.00020	mg/L	1	7/8/2008 06:54 PM
Fluorene	ND		0.00020	mg/L	1	7/8/2008 06:54 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/8/2008 06:54 PM
Naphthalene	ND		0.00020	mg/L	1	7/8/2008 06:54 PM
Phenanthrene	ND		0.00020	mg/L	1	7/8/2008 06:54 PM
Pyrene	ND		0.00020	mg/L	1	7/8/2008 06:54 PM
Surr: 2-Fluorobiphenyl	*65.7*		*48-115*	*%REC*	1	7/8/2008 06:54 PM
Surr: 4-Terphenyl-d14	*75.8*		*47-117*	*%REC*	1	7/8/2008 06:54 PM
Surr: Nitrobenzene-d5	*58.6*		*44-115*	*%REC*	1	7/8/2008 06:54 PM

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ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0806640
Sample ID: MW-3D
Lab ID: 0806640-08
Collection Date: 6/25/2008 11:45 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX, WATER			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	7/2/2008 05:58 PM
Toluene	ND		0.0010	mg/L	1	7/2/2008 05:58 PM
Ethylbenzene	ND		0.0010	mg/L	1	7/2/2008 05:58 PM
Xylenes, Total	ND		0.0030	mg/L	1	7/2/2008 05:58 PM
Surr: 4-Bromofluorobenzene	*97.7*		*77-129*	*%REC*	1	7/2/2008 05:58 PM
Surr: Trifluorotoluene	*89.7*		*75-130*	*%REC*	1	7/2/2008 05:58 PM
MERCURY, DISSOLVED -SW7470A			**SW7470**		Prep Date: **7/7/2008**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	7/7/2008 04:50 PM
ICP METALS, DISSOLVED - SW6020A			**SW6020**		Prep Date: **7/3/2008**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	7/3/2008 09:25 PM
Antimony	ND		0.00500	mg/L	1	7/3/2008 09:25 PM
Arsenic	ND		0.00500	mg/L	1	7/3/2008 09:25 PM
Barium	**0.0606**		**0.00500**	**mg/L**	1	7/3/2008 09:25 PM
Beryllium	ND		0.00200	mg/L	1	7/3/2008 09:25 PM
Boron	**0.911**		**0.0200**	**mg/L**	1	7/3/2008 09:25 PM
Cadmium	ND		0.00200	mg/L	1	7/3/2008 09:25 PM
Chromium	ND		0.00500	mg/L	1	7/3/2008 09:25 PM
Cobalt	ND		0.00500	mg/L	1	7/3/2008 09:25 PM
Copper	ND		0.00500	mg/L	1	7/3/2008 09:25 PM
Iron	**1.59**		**0.200**	**mg/L**	1	7/3/2008 09:25 PM
Lead	ND		0.00500	mg/L	1	7/3/2008 09:25 PM
Manganese	**2.62**		**0.500**	**mg/L**	100	7/7/2008 05:00 PM
Molybdenum	**0.00880**		**0.00500**	**mg/L**	1	7/3/2008 09:25 PM
Nickel	**0.00672**		**0.00500**	**mg/L**	1	7/3/2008 09:25 PM
Selenium	**0.00565**		**0.00500**	**mg/L**	1	7/3/2008 09:25 PM
Silver	ND		0.00500	mg/L	1	7/3/2008 09:25 PM
Thallium	ND		0.00200	mg/L	1	7/3/2008 09:25 PM
Zinc	**0.00535**		**0.00500**	**mg/L**	1	7/3/2008 09:25 PM
LOW-LEVEL PAH			**SW8270**		Prep Date: **6/30/2008**	Analyst: **LG**
Acenaphthene	ND		0.00020	mg/L	1	7/8/2008 04:09 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/8/2008 04:09 PM
Anthracene	ND		0.00020	mg/L	1	7/8/2008 04:09 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/8/2008 04:09 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/8/2008 04:09 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 04:09 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/8/2008 04:09 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 04:09 PM

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S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery **Work Order:** 0806640
Sample ID: MW-3D **Lab ID:** 0806640-08
Collection Date: 6/25/2008 11:45 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	ND		0.00020	mg/L	1	7/8/2008 04:09 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/8/2008 04:09 PM
Fluoranthene	ND		0.00020	mg/L	1	7/8/2008 04:09 PM
Fluorene	ND		0.00020	mg/L	1	7/8/2008 04:09 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/8/2008 04:09 PM
Naphthalene	ND		0.00020	mg/L	1	7/8/2008 04:09 PM
Phenanthrene	ND		0.00020	mg/L	1	7/8/2008 04:09 PM
Pyrene	ND		0.00020	mg/L	1	7/8/2008 04:09 PM
Surr: 2-Fluorobiphenyl	*54.1*		*48-115*	*%REC*	1	7/8/2008 04:09 PM
Surr: 4-Terphenyl-d14	*68.6*		*47-117*	*%REC*	1	7/8/2008 04:09 PM
Surr: Nitrobenzene-d5	*50.2*		*44-115*	*%REC*	1	7/8/2008 04:09 PM

Qualifiers:

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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
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P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0806640
Sample ID: MW-6S
Lab ID: 0806640-09
Collection Date: 6/25/2008 02:50 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX, WATER			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	7/7/2008 12:04 AM
Toluene	ND		0.0010	mg/L	1	7/7/2008 12:04 AM
Ethylbenzene	ND		0.0010	mg/L	1	7/7/2008 12:04 AM
Xylenes, Total	ND		0.0030	mg/L	1	7/7/2008 12:04 AM
Surr: 4-Bromofluorobenzene	*128*		*77-129*	*%REC*	1	7/7/2008 12:04 AM
Surr: Trifluorotoluene	*118*		*75-130*	*%REC*	1	7/7/2008 12:04 AM
MERCURY, DISSOLVED -SW7470A			**SW7470**		Prep Date: **7/7/2008**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	7/7/2008 04:52 PM
ICP METALS, DISSOLVED - SW6020A			**SW6020**		Prep Date: **7/3/2008**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	7/3/2008 09:31 PM
Antimony	ND		0.00500	mg/L	1	7/3/2008 09:31 PM
Arsenic	**0.0456**		**0.00500**	**mg/L**	1	7/3/2008 09:31 PM
Barium	**0.210**		**0.00500**	**mg/L**	1	7/3/2008 09:31 PM
Beryllium	ND		0.00200	mg/L	1	7/3/2008 09:31 PM
Boron	**1.65**		**0.0200**	**mg/L**	1	7/3/2008 09:31 PM
Cadmium	ND		0.00200	mg/L	1	7/3/2008 09:31 PM
Chromium	ND		0.00500	mg/L	1	7/3/2008 09:31 PM
Cobalt	ND		0.00500	mg/L	1	7/3/2008 09:31 PM
Copper	**0.00981**		**0.00500**	**mg/L**	1	7/3/2008 09:31 PM
Iron	**6.74**		**0.200**	**mg/L**	1	7/3/2008 09:31 PM
Lead	ND		0.00500	mg/L	1	7/3/2008 09:31 PM
Manganese	**0.782**		**0.00500**	**mg/L**	1	7/3/2008 09:31 PM
Molybdenum	**0.0164**		**0.00500**	**mg/L**	1	7/3/2008 09:31 PM
Nickel	**0.00588**		**0.00500**	**mg/L**	1	7/3/2008 09:31 PM
Selenium	**0.0140**		**0.00500**	**mg/L**	1	7/3/2008 09:31 PM
Silver	ND		0.00500	mg/L	1	7/3/2008 09:31 PM
Thallium	ND		0.00200	mg/L	1	7/3/2008 09:31 PM
Zinc	ND		0.00500	mg/L	1	7/3/2008 09:31 PM
LOW-LEVEL PAH			**SW8270**		Prep Date: **6/30/2008**	Analyst: **LG**
Acenaphthene	ND		0.00020	mg/L	1	7/8/2008 07:15 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/8/2008 07:15 PM
Anthracene	ND		0.00020	mg/L	1	7/8/2008 07:15 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/8/2008 07:15 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/8/2008 07:15 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 07:15 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/8/2008 07:15 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 07:15 PM

Qualifiers:

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B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Sample ID: MW-6S
Collection Date: 6/25/2008 02:50 PM

Work Order: 0806640
Lab ID: 0806640-09
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	ND		0.00020	mg/L	1	7/8/2008 07:15 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/8/2008 07:15 PM
Fluoranthene	ND		0.00020	mg/L	1	7/8/2008 07:15 PM
Fluorene	ND		0.00020	mg/L	1	7/8/2008 07:15 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/8/2008 07:15 PM
Naphthalene	ND		0.00020	mg/L	1	7/8/2008 07:15 PM
Phenanthrene	ND		0.00020	mg/L	1	7/8/2008 07:15 PM
Pyrene	ND		0.00020	mg/L	1	7/8/2008 07:15 PM
Surr: 2-Fluorobiphenyl	*56.0*		*48-115*	*%REC*	1	7/8/2008 07:15 PM
Surr: 4-Terphenyl-d14	*75.5*		*47-117*	*%REC*	1	7/8/2008 07:15 PM
Surr: Nitrobenzene-d5	*66.0*		*44-115*	*%REC*	1	7/8/2008 07:15 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Sample ID: Dup-1
Collection Date: 6/25/2008 03:00 PM

Work Order: 0806640
Lab ID: 0806640-10
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX, WATER			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	7/7/2008 12:30 AM
Toluene	ND		0.0010	mg/L	1	7/7/2008 12:30 AM
Ethylbenzene	ND		0.0010	mg/L	1	7/7/2008 12:30 AM
Xylenes, Total	ND		0.0030	mg/L	1	7/7/2008 12:30 AM
Surr: 4-Bromofluorobenzene	*126*		*77-129*	*%REC*	1	7/7/2008 12:30 AM
Surr: Trifluorotoluene	*116*		*75-130*	*%REC*	1	7/7/2008 12:30 AM
MERCURY, DISSOLVED -SW7470A			**SW7470**		Prep Date: **7/7/2008**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	7/7/2008 04:54 PM
ICP METALS, DISSOLVED - SW6020A			**SW6020**		Prep Date: **7/3/2008**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	7/3/2008 09:37 PM
Antimony	ND		0.00500	mg/L	1	7/3/2008 09:37 PM
Arsenic	**0.0448**		**0.00500**	**mg/L**	1	7/3/2008 09:37 PM
Barium	**0.196**		**0.00500**	**mg/L**	1	7/3/2008 09:37 PM
Beryllium	ND		0.00200	mg/L	1	7/3/2008 09:37 PM
Boron	**1.60**		**0.0200**	**mg/L**	1	7/3/2008 09:37 PM
Cadmium	ND		0.00200	mg/L	1	7/3/2008 09:37 PM
Chromium	ND		0.00500	mg/L	1	7/3/2008 09:37 PM
Cobalt	ND		0.00500	mg/L	1	7/3/2008 09:37 PM
Copper	**0.00904**		**0.00500**	**mg/L**	1	7/3/2008 09:37 PM
Iron	**6.33**		**0.200**	**mg/L**	1	7/3/2008 09:37 PM
Lead	ND		0.00500	mg/L	1	7/3/2008 09:37 PM
Manganese	**0.734**		**0.00500**	**mg/L**	1	7/3/2008 09:37 PM
Molybdenum	**0.0165**		**0.00500**	**mg/L**	1	7/3/2008 09:37 PM
Nickel	**0.00554**		**0.00500**	**mg/L**	1	7/3/2008 09:37 PM
Selenium	**0.0164**		**0.00500**	**mg/L**	1	7/3/2008 09:37 PM
Silver	ND		0.00500	mg/L	1	7/3/2008 09:37 PM
Thallium	ND		0.00200	mg/L	1	7/3/2008 09:37 PM
Zinc	ND		0.00500	mg/L	1	7/3/2008 09:37 PM
LOW-LEVEL PAH			**SW8270**		Prep Date: **6/30/2008**	Analyst: **LG**
Acenaphthene	ND		0.00020	mg/L	1	7/8/2008 07:35 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/8/2008 07:35 PM
Anthracene	ND		0.00020	mg/L	1	7/8/2008 07:35 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/8/2008 07:35 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/8/2008 07:35 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 07:35 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/8/2008 07:35 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 07:35 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0806640
Sample ID: Dup-1
Lab ID: 0806640-10
Collection Date: 6/25/2008 03:00 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	ND		0.00020	mg/L	1	7/8/2008 07:35 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/8/2008 07:35 PM
Fluoranthene	ND		0.00020	mg/L	1	7/8/2008 07:35 PM
Fluorene	ND		0.00020	mg/L	1	7/8/2008 07:35 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/8/2008 07:35 PM
Naphthalene	ND		0.00020	mg/L	1	7/8/2008 07:35 PM
Phenanthrene	ND		0.00020	mg/L	1	7/8/2008 07:35 PM
Pyrene	ND		0.00020	mg/L	1	7/8/2008 07:35 PM
Surr: 2-Fluorobiphenyl	*72.9*		*48-115*	*%REC*	1	7/8/2008 07:35 PM
Surr: 4-Terphenyl-d14	*94.3*		*47-117*	*%REC*	1	7/8/2008 07:35 PM
Surr: Nitrobenzene-d5	*73.4*		*44-115*	*%REC*	1	7/8/2008 07:35 PM

Qualifiers:

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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Sample ID: MW-15
Collection Date: 6/26/2008 08:20 AM

Work Order: 0806640
Lab ID: 0806640-11
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX, WATER			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	7/2/2008 06:25 PM
Toluene	ND		0.0010	mg/L	1	7/2/2008 06:25 PM
Ethylbenzene	ND		0.0010	mg/L	1	7/2/2008 06:25 PM
Xylenes, Total	ND		0.0030	mg/L	1	7/2/2008 06:25 PM
Surr: 4-Bromofluorobenzene	*101*		*77-129*	*%REC*	1	7/2/2008 06:25 PM
Surr: Trifluorotoluene	*90.7*		*75-130*	*%REC*	1	7/2/2008 06:25 PM
MERCURY, DISSOLVED -SW7470A			**SW7470**		Prep Date: **7/7/2008**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	7/7/2008 04:56 PM
ICP METALS, DISSOLVED - SW6020A			**SW6020**		Prep Date: **7/3/2008**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	7/3/2008 10:01 PM
Antimony	ND		0.00500	mg/L	1	7/3/2008 10:01 PM
Arsenic	ND		0.00500	mg/L	1	7/3/2008 10:01 PM
Barium	**0.0715**		**0.00500**	**mg/L**	1	7/7/2008 06:04 PM
Beryllium	ND		0.00200	mg/L	1	7/3/2008 10:01 PM
Boron	**1.15**		**0.0200**	**mg/L**	1	7/3/2008 10:01 PM
Cadmium	ND		0.00200	mg/L	1	7/7/2008 06:04 PM
Chromium	ND		0.00500	mg/L	1	7/3/2008 10:01 PM
Cobalt	ND		0.00500	mg/L	1	7/3/2008 10:01 PM
Copper	ND		0.00500	mg/L	1	7/3/2008 10:01 PM
Iron	**1.59**		**0.200**	**mg/L**	1	7/3/2008 10:01 PM
Lead	ND		0.00500	mg/L	1	7/3/2008 10:01 PM
Manganese	**1.59**		**0.00500**	**mg/L**	1	7/3/2008 10:01 PM
Molybdenum	**0.00904**		**0.00500**	**mg/L**	1	7/3/2008 10:01 PM
Nickel	ND		0.00500	mg/L	1	7/3/2008 10:01 PM
Selenium	ND		0.00500	mg/L	1	7/3/2008 10:01 PM
Silver	ND		0.00500	mg/L	1	7/3/2008 10:01 PM
Thallium	ND		0.00200	mg/L	1	7/3/2008 10:01 PM
Zinc	ND		0.00500	mg/L	1	7/3/2008 10:01 PM
LOW-LEVEL PAH			**SW8270**		Prep Date: **6/30/2008**	Analyst: **LG**
Acenaphthene	ND		0.00020	mg/L	1	7/8/2008 04:30 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/8/2008 04:30 PM
Anthracene	ND		0.00020	mg/L	1	7/8/2008 04:30 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/8/2008 04:30 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/8/2008 04:30 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 04:30 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/8/2008 04:30 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 04:30 PM

Qualifiers:

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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery **Work Order:** 0806640
Sample ID: MW-15 **Lab ID:** 0806640-11
Collection Date: 6/26/2008 08:20 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	ND		0.00020	mg/L	1	7/8/2008 04:30 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/8/2008 04:30 PM
Fluoranthene	ND		0.00020	mg/L	1	7/8/2008 04:30 PM
Fluorene	ND		0.00020	mg/L	1	7/8/2008 04:30 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/8/2008 04:30 PM
Naphthalene	ND		0.00020	mg/L	1	7/8/2008 04:30 PM
Phenanthrene	ND		0.00020	mg/L	1	7/8/2008 04:30 PM
Pyrene	ND		0.00020	mg/L	1	7/8/2008 04:30 PM
Surr: 2-Fluorobiphenyl	*69.9*		*48-115*	*%REC*	1	7/8/2008 04:30 PM
Surr: 4-Terphenyl-d14	*85.0*		*47-117*	*%REC*	1	7/8/2008 04:30 PM
Surr: Nitrobenzene-d5	*64.3*		*44-115*	*%REC*	1	7/8/2008 04:30 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Sample ID: MW-9S
Collection Date: 6/26/2008 10:20 AM

Work Order: 0806640
Lab ID: 0806640-12
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX, WATER			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	7/6/2008 10:43 PM
Toluene	ND		0.0010	mg/L	1	7/6/2008 10:43 PM
Ethylbenzene	ND		0.0010	mg/L	1	7/6/2008 10:43 PM
Xylenes, Total	ND		0.0030	mg/L	1	7/6/2008 10:43 PM
Surr: 4-Bromofluorobenzene	*108*		*77-129*	*%REC*	1	7/6/2008 10:43 PM
Surr: Trifluorotoluene	*95.9*		*75-130*	*%REC*	1	7/6/2008 10:43 PM
MERCURY, DISSOLVED -SW7470A			**SW7470**		Prep Date: **7/7/2008**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	7/7/2008 05:09 PM
ICP METALS, DISSOLVED - SW6020A			**SW6020**		Prep Date: **7/3/2008**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	7/3/2008 10:07 PM
Antimony	ND		0.00500	mg/L	1	7/3/2008 10:07 PM
Arsenic	ND		0.00500	mg/L	1	7/3/2008 10:07 PM
Barium	**0.0571**		**0.00500**	**mg/L**	1	7/7/2008 06:11 PM
Beryllium	ND		0.00200	mg/L	1	7/3/2008 10:07 PM
Boron	**1.16**		**0.0200**	**mg/L**	1	7/3/2008 10:07 PM
Cadmium	ND		0.00200	mg/L	1	7/7/2008 06:11 PM
Chromium	ND		0.00500	mg/L	1	7/3/2008 10:07 PM
Cobalt	ND		0.00500	mg/L	1	7/3/2008 10:07 PM
Copper	ND		0.00500	mg/L	1	7/3/2008 10:07 PM
Iron	**4.16**		**0.200**	**mg/L**	1	7/3/2008 10:07 PM
Lead	ND		0.00500	mg/L	1	7/3/2008 10:07 PM
Manganese	**2.56**		**0.500**	**mg/L**	100	7/7/2008 05:07 PM
Molybdenum	**0.0105**		**0.00500**	**mg/L**	1	7/3/2008 10:07 PM
Nickel	ND		0.00500	mg/L	1	7/3/2008 10:07 PM
Selenium	ND		0.00500	mg/L	1	7/3/2008 10:07 PM
Silver	ND		0.00500	mg/L	1	7/3/2008 10:07 PM
Thallium	ND		0.00200	mg/L	1	7/3/2008 10:07 PM
Zinc	ND		0.00500	mg/L	1	7/3/2008 10:07 PM
LOW-LEVEL PAH			**SW8270**		Prep Date: **6/30/2008**	Analyst: **LG**
Acenaphthene	ND		0.00020	mg/L	1	7/8/2008 04:51 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/8/2008 04:51 PM
Anthracene	ND		0.00020	mg/L	1	7/8/2008 04:51 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/8/2008 04:51 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/8/2008 04:51 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 04:51 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/8/2008 04:51 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 04:51 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0806640
Sample ID: MW-9S
Lab ID: 0806640-12
Collection Date: 6/26/2008 10:20 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	ND		0.00020	mg/L	1	7/8/2008 04:51 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/8/2008 04:51 PM
Fluoranthene	ND		0.00020	mg/L	1	7/8/2008 04:51 PM
Fluorene	ND		0.00020	mg/L	1	7/8/2008 04:51 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/8/2008 04:51 PM
Naphthalene	ND		0.00020	mg/L	1	7/8/2008 04:51 PM
Phenanthrene	ND		0.00020	mg/L	1	7/8/2008 04:51 PM
Pyrene	ND		0.00020	mg/L	1	7/8/2008 04:51 PM
Surr: 2-Fluorobiphenyl	*68.7*		*48-115*	*%REC*	1	7/8/2008 04:51 PM
Surr: 4-Terphenyl-d14	*83.1*		*47-117*	*%REC*	1	7/8/2008 04:51 PM
Surr: Nitrobenzene-d5	*65.6*		*44-115*	*%REC*	1	7/8/2008 04:51 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0806640
Sample ID: MW-14
Lab ID: 0806640-13
Collection Date: 6/26/2008 11:45 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX, WATER			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	7/6/2008 11:10 PM
Toluene	ND		0.0010	mg/L	1	7/6/2008 11:10 PM
Ethylbenzene	ND		0.0010	mg/L	1	7/6/2008 11:10 PM
Xylenes, Total	ND		0.0030	mg/L	1	7/6/2008 11:10 PM
Surr: 4-Bromofluorobenzene	*108*		*77-129*	*%REC*	1	7/6/2008 11:10 PM
Surr: Trifluorotoluene	94.9		*75-130*	*%REC*	1	7/6/2008 11:10 PM
MERCURY, DISSOLVED -SW7470A			**SW7470**		Prep Date: **7/7/2008**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	7/7/2008 05:11 PM
ICP METALS, DISSOLVED - SW6020A			**SW6020**		Prep Date: **7/3/2008**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	7/3/2008 10:13 PM
Antimony	ND		0.00500	mg/L	1	7/3/2008 10:13 PM
Arsenic	ND		0.00500	mg/L	1	7/3/2008 10:13 PM
Barium	**0.0572**		**0.00500**	**mg/L**	1	7/7/2008 06:17 PM
Beryllium	ND		0.00200	mg/L	1	7/3/2008 10:13 PM
Boron	**0.945**		**0.0200**	**mg/L**	1	7/3/2008 10:13 PM
Cadmium	ND		0.00200	mg/L	1	7/7/2008 06:17 PM
Chromium	ND		0.00500	mg/L	1	7/3/2008 10:13 PM
Cobalt	ND		0.00500	mg/L	1	7/3/2008 10:13 PM
Copper	ND		0.00500	mg/L	1	7/3/2008 10:13 PM
Iron	**5.32**		**0.200**	**mg/L**	1	7/3/2008 10:13 PM
Lead	ND		0.00500	mg/L	1	7/3/2008 10:13 PM
Manganese	**6.25**		**0.500**	**mg/L**	100	7/7/2008 05:13 PM
Molybdenum	**0.00825**		**0.00500**	**mg/L**	1	7/3/2008 10:13 PM
Nickel	ND		0.00500	mg/L	1	7/3/2008 10:13 PM
Selenium	ND		0.00500	mg/L	1	7/3/2008 10:13 PM
Silver	ND		0.00500	mg/L	1	7/3/2008 10:13 PM
Thallium	ND		0.00200	mg/L	1	7/3/2008 10:13 PM
Zinc	ND		0.00500	mg/L	1	7/3/2008 10:13 PM
LOW-LEVEL PAH			**SW8270**		Prep Date: **6/30/2008**	Analyst: **LG**
Acenaphthene	ND		0.00020	mg/L	1	7/8/2008 05:11 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/8/2008 05:11 PM
Anthracene	ND		0.00020	mg/L	1	7/8/2008 05:11 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/8/2008 05:11 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/8/2008 05:11 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 05:11 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/8/2008 05:11 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 05:11 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0806640
Sample ID: MW-14
Lab ID: 0806640-13
Collection Date: 6/26/2008 11:45 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	ND		0.00020	mg/L	1	7/8/2008 05:11 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/8/2008 05:11 PM
Fluoranthene	ND		0.00020	mg/L	1	7/8/2008 05:11 PM
Fluorene	ND		0.00020	mg/L	1	7/8/2008 05:11 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/8/2008 05:11 PM
Naphthalene	ND		0.00020	mg/L	1	7/8/2008 05:11 PM
Phenanthrene	ND		0.00020	mg/L	1	7/8/2008 05:11 PM
Pyrene	ND		0.00020	mg/L	1	7/8/2008 05:11 PM
Surr: 2-Fluorobiphenyl	*66.6*		*48-115*	*%REC*	1	7/8/2008 05:11 PM
Surr: 4-Terphenyl-d14	*79.7*		*47-117*	*%REC*	1	7/8/2008 05:11 PM
Surr: Nitrobenzene-d5	*62.7*		*44-115*	*%REC*	1	7/8/2008 05:11 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Sample ID: Trip Blank-1
Collection Date: 6/26/2008 06:00 PM

Work Order: 0806640
Lab ID: 0806640-14
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX, WATER			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	7/3/2008 01:36 AM
Toluene	ND		0.0010	mg/L	1	7/3/2008 01:36 AM
Ethylbenzene	ND		0.0010	mg/L	1	7/3/2008 01:36 AM
Xylenes, Total	ND		0.0030	mg/L	1	7/3/2008 01:36 AM
Surr: 4-Bromofluorobenzene	*100*		*77-129*	*%REC*	1	7/3/2008 01:36 AM
Surr: Trifluorotoluene	*94.3*		*75-130*	*%REC*	1	7/3/2008 01:36 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Sample ID: EB-2
Collection Date: 6/26/2008 05:30 PM

Work Order: 0806640
Lab ID: 0806640-15
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX, WATER			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	7/3/2008 12:42 AM
Toluene	ND		0.0010	mg/L	1	7/3/2008 12:42 AM
Ethylbenzene	ND		0.0010	mg/L	1	7/3/2008 12:42 AM
Xylenes, Total	ND		0.0030	mg/L	1	7/3/2008 12:42 AM
Surr: 4-Bromofluorobenzene	*102*		*77-129*	*%REC*	1	7/3/2008 12:42 AM
Surr: Trifluorotoluene	*93.7*		*75-130*	*%REC*	1	7/3/2008 12:42 AM
MERCURY, TOTAL - SW 7470A			**SW7470**		Prep Date: **7/7/2008**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	7/7/2008 06:31 PM
ICP METALS, TOTAL - SW6020A			**SW6020**		Prep Date: **7/2/2008**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	7/3/2008 06:44 PM
Antimony	ND		0.00500	mg/L	1	7/3/2008 06:44 PM
Arsenic	ND		0.00500	mg/L	1	7/3/2008 06:44 PM
Barium	ND		0.00500	mg/L	1	7/3/2008 06:44 PM
Beryllium	ND		0.00200	mg/L	1	7/3/2008 06:44 PM
Boron	ND		0.0500	mg/L	1	7/3/2008 06:44 PM
Cadmium	ND		0.00200	mg/L	1	7/3/2008 06:44 PM
Chromium	ND		0.00500	mg/L	1	7/3/2008 06:44 PM
Cobalt	ND		0.00500	mg/L	1	7/3/2008 06:44 PM
Copper	ND		0.00500	mg/L	1	7/3/2008 06:44 PM
Iron	ND		0.200	mg/L	1	7/3/2008 06:44 PM
Lead	ND		0.00500	mg/L	1	7/3/2008 06:44 PM
Manganese	ND		0.00500	mg/L	1	7/3/2008 06:44 PM
Molybdenum	ND		0.00500	mg/L	1	7/3/2008 06:44 PM
Nickel	ND		0.00500	mg/L	1	7/3/2008 06:44 PM
Selenium	ND		0.00500	mg/L	1	7/3/2008 06:44 PM
Silver	ND		0.00500	mg/L	1	7/3/2008 06:44 PM
Thallium	ND		0.00200	mg/L	1	7/3/2008 06:44 PM
Zinc	ND		0.00500	mg/L	1	7/3/2008 06:44 PM
LOW-LEVEL PAH			**SW8270**		Prep Date: **6/30/2008**	Analyst: **LG**
Acenaphthene	ND		0.00020	mg/L	1	7/8/2008 05:32 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/8/2008 05:32 PM
Anthracene	ND		0.00020	mg/L	1	7/8/2008 05:32 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/8/2008 05:32 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/8/2008 05:32 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 05:32 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/8/2008 05:32 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/8/2008 05:32 PM

Qualifiers:

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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0806640
Sample ID: EB-2
Lab ID: 0806640-15
Collection Date: 6/26/2008 05:30 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	ND		0.00020	mg/L	1	7/8/2008 05:32 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/8/2008 05:32 PM
Fluoranthene	ND		0.00020	mg/L	1	7/8/2008 05:32 PM
Fluorene	ND		0.00020	mg/L	1	7/8/2008 05:32 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/8/2008 05:32 PM
Naphthalene	ND		0.00020	mg/L	1	7/8/2008 05:32 PM
Phenanthrene	ND		0.00020	mg/L	1	7/8/2008 05:32 PM
Pyrene	ND		0.00020	mg/L	1	7/8/2008 05:32 PM
Surr: 2-Fluorobiphenyl	*71.1*		*48-115*	*%REC*	1	7/8/2008 05:32 PM
Surr: 4-Terphenyl-d14	*76.8*		*47-117*	*%REC*	1	7/8/2008 05:32 PM
Surr: Nitrobenzene-d5	*63.4*		*44-115*	*%REC*	1	7/8/2008 05:32 PM

Qualifiers:

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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Sample ID: EB-3
Collection Date: 6/26/2008 05:45 PM

Work Order: 0806640
Lab ID: 0806640-16
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX, WATER			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	7/3/2008 01:09 AM
Toluene	ND		0.0010	mg/L	1	7/3/2008 01:09 AM
Ethylbenzene	ND		0.0010	mg/L	1	7/3/2008 01:09 AM
Xylenes, Total	ND		0.0030	mg/L	1	7/3/2008 01:09 AM
Surr: 4-Bromofluorobenzene	*100*		*77-129*	*%REC*	1	7/3/2008 01:09 AM
Surr: Trifluorotoluene	*91.4*		*75-130*	*%REC*	1	7/3/2008 01:09 AM
MERCURY, TOTAL - SW 7470A			**SW7470**		Prep Date: **7/7/2008**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	7/7/2008 06:33 PM
ICP METALS, TOTAL - SW6020A			**SW6020**		Prep Date: **7/2/2008**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	7/3/2008 06:50 PM
Antimony	ND		0.00500	mg/L	1	7/3/2008 06:50 PM
Arsenic	ND		0.00500	mg/L	1	7/3/2008 06:50 PM
Barium	ND		0.00500	mg/L	1	7/3/2008 06:50 PM
Beryllium	ND		0.00200	mg/L	1	7/3/2008 06:50 PM
Boron	ND		0.0500	mg/L	1	7/3/2008 06:50 PM
Cadmium	ND		0.00200	mg/L	1	7/3/2008 06:50 PM
Chromium	ND		0.00500	mg/L	1	7/3/2008 06:50 PM
Cobalt	ND		0.00500	mg/L	1	7/3/2008 06:50 PM
Copper	ND		0.00500	mg/L	1	7/3/2008 06:50 PM
Iron	ND		0.200	mg/L	1	7/3/2008 06:50 PM
Lead	ND		0.00500	mg/L	1	7/3/2008 06:50 PM
Manganese	ND		0.00500	mg/L	1	7/3/2008 06:50 PM
Molybdenum	ND		0.00500	mg/L	1	7/3/2008 06:50 PM
Nickel	ND		0.00500	mg/L	1	7/3/2008 06:50 PM
Selenium	ND		0.00500	mg/L	1	7/3/2008 06:50 PM
Silver	ND		0.00500	mg/L	1	7/3/2008 06:50 PM
Thallium	ND		0.00200	mg/L	1	7/3/2008 06:50 PM
Zinc	ND		0.00500	mg/L	1	7/3/2008 06:50 PM
LOW-LEVEL PAH			**SW8270**		Prep Date: **6/30/2008**	Analyst: **LG**
Acenaphthene	ND		0.00020	mg/L	1	7/9/2008 03:30 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/9/2008 03:30 PM
Anthracene	ND		0.00020	mg/L	1	7/9/2008 03:30 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/9/2008 03:30 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/9/2008 03:30 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/9/2008 03:30 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/9/2008 03:30 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/9/2008 03:30 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery **Work Order:** 0806640
Sample ID: EB-3 **Lab ID:** 0806640-16
Collection Date: 6/26/2008 05:45 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	ND		0.00020	mg/L	1	7/9/2008 03:30 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/9/2008 03:30 PM
Fluoranthene	ND		0.00020	mg/L	1	7/9/2008 03:30 PM
Fluorene	ND		0.00020	mg/L	1	7/9/2008 03:30 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/9/2008 03:30 PM
Naphthalene	ND		0.00020	mg/L	1	7/9/2008 03:30 PM
Phenanthrene	ND		0.00020	mg/L	1	7/9/2008 03:30 PM
Pyrene	ND		0.00020	mg/L	1	7/9/2008 03:30 PM
Surr: 2-Fluorobiphenyl	*62.1*		*48-115*	*%REC*	1	7/9/2008 03:30 PM
Surr: 4-Terphenyl-d14	*79.4*		*47-117*	*%REC*	1	7/9/2008 03:30 PM
Surr: Nitrobenzene-d5	*56.2*		*44-115*	*%REC*	1	7/9/2008 03:30 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Sample ID: River-Upstream
Collection Date: 6/25/2008 08:21 AM

Work Order: 0806640
Lab ID: 0806640-17
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX, WATER			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	7/6/2008 06:41 PM
Toluene	ND		0.0010	mg/L	1	7/6/2008 06:41 PM
Ethylbenzene	ND		0.0010	mg/L	1	7/6/2008 06:41 PM
Xylenes, Total	ND		0.0030	mg/L	1	7/6/2008 06:41 PM
Surr: 4-Bromofluorobenzene	*102*		*77-129*	*%REC*	1	7/6/2008 06:41 PM
Surr: Trifluorotoluene	*97.9*		*75-130*	*%REC*	1	7/6/2008 06:41 PM
MERCURY, TOTAL - SW 7470A			**SW7470**		Prep Date: **7/7/2008**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	7/7/2008 06:35 PM
ICP METALS, TOTAL - SW6020A			**SW6020**		Prep Date: **7/2/2008**	Analyst: **SKS**
Aluminum	**5.98**		**1.00**	**mg/L**	100	7/3/2008 03:58 PM
Antimony	ND		0.00500	mg/L	1	7/3/2008 06:57 PM
Arsenic	ND		0.00500	mg/L	1	7/3/2008 06:57 PM
Barium	**0.137**		**0.00500**	**mg/L**	1	7/3/2008 06:57 PM
Beryllium	ND		0.00200	mg/L	1	7/3/2008 06:57 PM
Boron	**0.128**		**0.0500**	**mg/L**	1	7/3/2008 06:57 PM
Cadmium	ND		0.00200	mg/L	1	7/3/2008 06:57 PM
Chromium	ND		0.00500	mg/L	1	7/3/2008 06:57 PM
Cobalt	ND		0.00500	mg/L	1	7/3/2008 06:57 PM
Copper	ND		0.00500	mg/L	1	7/3/2008 06:57 PM
Iron	**3.41**		**0.200**	**mg/L**	1	7/3/2008 06:57 PM
Lead	ND		0.00500	mg/L	1	7/3/2008 06:57 PM
Manganese	**0.159**		**0.00500**	**mg/L**	1	7/3/2008 06:57 PM
Molybdenum	**0.00540**		**0.00500**	**mg/L**	1	7/3/2008 06:57 PM
Nickel	ND		0.00500	mg/L	1	7/3/2008 06:57 PM
Selenium	ND		0.00500	mg/L	1	7/3/2008 06:57 PM
Silver	ND		0.00500	mg/L	1	7/3/2008 06:57 PM
Thallium	ND		0.00200	mg/L	1	7/3/2008 06:57 PM
Zinc	**0.0175**		**0.00500**	**mg/L**	1	7/3/2008 06:57 PM
LOW-LEVEL PAH			**SW8270**		Prep Date: **6/30/2008**	Analyst: **LG**
Acenaphthene	ND		0.00020	mg/L	1	7/9/2008 03:50 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/9/2008 03:50 PM
Anthracene	ND		0.00020	mg/L	1	7/9/2008 03:50 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/9/2008 03:50 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/9/2008 03:50 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/9/2008 03:50 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/9/2008 03:50 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/9/2008 03:50 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery **Work Order:** 0806640
Sample ID: River-Upstream **Lab ID:** 0806640-17
Collection Date: 6/25/2008 08:21 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	ND		0.00020	mg/L	1	7/9/2008 03:50 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/9/2008 03:50 PM
Fluoranthene	ND		0.00020	mg/L	1	7/9/2008 03:50 PM
Fluorene	ND		0.00020	mg/L	1	7/9/2008 03:50 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/9/2008 03:50 PM
Naphthalene	ND		0.00020	mg/L	1	7/9/2008 03:50 PM
Phenanthrene	ND		0.00020	mg/L	1	7/9/2008 03:50 PM
Pyrene	ND		0.00020	mg/L	1	7/9/2008 03:50 PM
Surr: 2-Fluorobiphenyl	*53.3*		*48-115*	*%REC*	1	7/9/2008 03:50 PM
Surr: 4-Terphenyl-d14	*71.6*		*47-117*	*%REC*	1	7/9/2008 03:50 PM
Surr: Nitrobenzene-d5	*49.6*		*44-115*	*%REC*	1	7/9/2008 03:50 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Sample ID: River-Downstream
Collection Date: 6/25/2008 07:50 AM

Work Order: 0806640
Lab ID: 0806640-18
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX, WATER			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	7/6/2008 07:08 PM
Toluene	ND		0.0010	mg/L	1	7/6/2008 07:08 PM
Ethylbenzene	ND		0.0010	mg/L	1	7/6/2008 07:08 PM
Xylenes, Total	ND		0.0030	mg/L	1	7/6/2008 07:08 PM
Surr: 4-Bromofluorobenzene	*110*		*77-129*	*%REC*	1	7/6/2008 07:08 PM
Surr: Trifluorotoluene	*96.5*		*75-130*	*%REC*	1	7/6/2008 07:08 PM
MERCURY, TOTAL - SW 7470A			**SW7470**		Prep Date: **7/7/2008**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	7/7/2008 06:37 PM
ICP METALS, TOTAL - SW6020A			**SW6020**		Prep Date: **7/2/2008**	Analyst: **SKS**
Aluminum	**5.71**		**1.00**	**mg/L**	100	7/3/2008 04:04 PM
Antimony	ND		0.00500	mg/L	1	7/3/2008 07:03 PM
Arsenic	**0.00552**		**0.00500**	**mg/L**	1	7/3/2008 07:03 PM
Barium	**0.142**		**0.00500**	**mg/L**	1	7/3/2008 07:03 PM
Beryllium	ND		0.00200	mg/L	1	7/3/2008 07:03 PM
Boron	**0.131**		**0.0500**	**mg/L**	1	7/3/2008 07:03 PM
Cadmium	ND		0.00200	mg/L	1	7/3/2008 07:03 PM
Chromium	ND		0.00500	mg/L	1	7/3/2008 07:03 PM
Cobalt	ND		0.00500	mg/L	1	7/3/2008 07:03 PM
Copper	ND		0.00500	mg/L	1	7/3/2008 07:03 PM
Iron	**3.52**		**0.200**	**mg/L**	1	7/3/2008 07:03 PM
Lead	ND		0.00500	mg/L	1	7/3/2008 07:03 PM
Manganese	**0.165**		**0.00500**	**mg/L**	1	7/3/2008 07:03 PM
Molybdenum	**0.00535**		**0.00500**	**mg/L**	1	7/3/2008 07:03 PM
Nickel	ND		0.00500	mg/L	1	7/3/2008 07:03 PM
Selenium	ND		0.00500	mg/L	1	7/3/2008 07:03 PM
Silver	ND		0.00500	mg/L	1	7/3/2008 07:03 PM
Thallium	ND		0.00200	mg/L	1	7/3/2008 07:03 PM
Zinc	**0.0179**		**0.00500**	**mg/L**	1	7/3/2008 07:03 PM
LOW-LEVEL PAH			**SW8270**		Prep Date: **6/30/2008**	Analyst: **LG**
Acenaphthene	ND		0.00020	mg/L	1	7/9/2008 04:11 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/9/2008 04:11 PM
Anthracene	ND		0.00020	mg/L	1	7/9/2008 04:11 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/9/2008 04:11 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/9/2008 04:11 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/9/2008 04:11 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/9/2008 04:11 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/9/2008 04:11 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *14-Jul-08*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Sample ID: River-Downstream
Collection Date: 6/25/2008 07:50 AM

Work Order: 0806640
Lab ID: 0806640-18
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	ND		0.00020	mg/L	1	7/9/2008 04:11 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/9/2008 04:11 PM
Fluoranthene	ND		0.00020	mg/L	1	7/9/2008 04:11 PM
Fluorene	ND		0.00020	mg/L	1	7/9/2008 04:11 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/9/2008 04:11 PM
Naphthalene	ND		0.00020	mg/L	1	7/9/2008 04:11 PM
Phenanthrene	ND		0.00020	mg/L	1	7/9/2008 04:11 PM
Pyrene	ND		0.00020	mg/L	1	7/9/2008 04:11 PM
Surr: 2-Fluorobiphenyl	*60.0*		*48-115*	*%REC*	1	7/9/2008 04:11 PM
Surr: 4-Terphenyl-d14	*74.9*		*47-117*	*%REC*	1	7/9/2008 04:11 PM
Surr: Nitrobenzene-d5	*55.8*		*44-115*	*%REC*	1	7/9/2008 04:11 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

Date: *14-Jul-08*

QC BATCH REPORT

Batch ID: **R65114** Instrument ID **BTEX1** Method: **SW8021B**

MBLK Sample ID: **BBLKW1-070208-R65114** Units: **µg/L** Analysis Date: **7/2/2008 08:26 AM**

Client ID: Run ID: **BTEX1_080702A** SeqNo: **1432948** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	*29.98*	1.0	*30*	0	*99.9*	*77-129*	0			
Surr: Trifluorotoluene	*28.64*	1.0	*30*	0	*95.5*	*75-130*	0			

LCS Sample ID: **BLCSW1-070208-R65114** Units: **µg/L** Analysis Date: **7/2/2008 07:59 AM**

Client ID: Run ID: **BTEX1_080702A** SeqNo: **1432947** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.28	1.0	20	0	101	77-126	0			
Toluene	21.35	1.0	20	0	107	80-124	0			
Ethylbenzene	20.67	1.0	20	0	103	76-125	0			
Xylenes, Total	62.19	3.0	60	0	104	79-124	0			
Surr: 4-Bromofluorobenzene	*31.44*	1.0	*30*	0	*105*	*77-129*	0			
Surr: Trifluorotoluene	*28.44*	1.0	*30*	0	*94.8*	*75-130*	0			

MS Sample ID: **0806661-02ZMS** Units: **µg/L** Analysis Date: **7/2/2008 09:46 AM**

Client ID: Run ID: **BTEX1_080702A** SeqNo: **1432950** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.55	1.0	20	0	113	77-126	0			
Toluene	24.35	1.0	20	0	122	80-124	0			
Ethylbenzene	23.76	1.0	20	0	119	76-125	0			
Xylenes, Total	71.27	3.0	60	0	119	79-124	0			
Surr: 4-Bromofluorobenzene	*31.62*	1.0	*30*	0	*105*	*77-129*	0			
Surr: Trifluorotoluene	*27.77*	1.0	*30*	0	*92.6*	*75-130*	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **R65114** Instrument ID **BTEX1** Method: **SW8021B**

MSD Sample ID: **0806661-02ZMSD** Units: **µg/L** Analysis Date: **7/2/2008 10:13 AM**

Client ID: Run ID: **BTEX1_080702A** SeqNo: **1432951** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.71	1.0	20	0	109	77-126	22.55	3.82	20	
Toluene	23.2	1.0	20	0	116	80-124	24.35	4.87	20	
Ethylbenzene	22.59	1.0	20	0	113	76-125	23.76	5.06	20	
Xylenes, Total	67.63	3.0	60	0	113	79-124	71.27	5.24	20	
Surr: 4-Bromofluorobenzene	*31.37*	1.0	*30*	0	*105*	*77-129*	31.62	*0.788*	*20*	
Surr: Trifluorotoluene	*27.73*	1.0	*30*	0	*92.4*	*75-130*	27.77	*0.137*	*20*	

The following samples were analyzed in this batch:

0806640-03A	0806640-04A	0806640-07A
0806640-08A	0806640-11A	

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **R65115** Instrument ID **BTEX1** Method: **SW8021B**

MBLK Sample ID: **BBLKW2-070208-R65115** Units: **µg/L** Analysis Date: **7/2/2008 11:22 PM**
Client ID: Run ID: **BTEX1_080702B** SeqNo: **1432972** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	*30.66*	1.0	*30*	0	*102*	*77-129*	0			
Surr: Trifluorotoluene	*28.32*	1.0	*30*	0	*94.4*	*75-130*	0			

LCS Sample ID: **BLCSW2-070208-R65115** Units: **µg/L** Analysis Date: **7/2/2008 10:28 PM**
Client ID: Run ID: **BTEX1_080702B** SeqNo: **1432971** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.79	1.0	20	0	109	77-126	0			
Toluene	22.71	1.0	20	0	114	80-124	0			
Ethylbenzene	21.8	1.0	20	0	109	76-125	0			
Xylenes, Total	65.91	3.0	60	0	110	79-124	0			
Surr: 4-Bromofluorobenzene	*30.54*	1.0	*30*	0	*102*	*77-129*	0			
Surr: Trifluorotoluene	*28.43*	1.0	*30*	0	*94.8*	*75-130*	0			

MS Sample ID: **0807041-06AMS** Units: **µg/L** Analysis Date: **7/3/2008 07:27 AM**
Client ID: Run ID: **BTEX1_080702B** SeqNo: **1432982** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.98	1.0	20	0	115	77-126	0			
Toluene	24.84	1.0	20	1.926	115	80-124	0			
Ethylbenzene	22.24	1.0	20	0	111	76-125	0			
Xylenes, Total	67.11	3.0	60	0	112	79-124	0			
Surr: 4-Bromofluorobenzene	*31.19*	1.0	*30*	0	*104*	*77-129*	0			
Surr: Trifluorotoluene	*28.06*	1.0	*30*	0	*93.5*	*75-130*	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **R65115** Instrument ID **BTEX1** Method: **SW8021B**

MSD Sample ID: **0807041-06AMSD** Units: **µg/L** Analysis Date: **7/3/2008 07:54 AM**

Client ID: Run ID: **BTEX1_080702B** SeqNo: **1432983** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.03	1.0	20	0	110	77-126	22.98	4.2	20	
Toluene	24.17	1.0	20	1.926	111	80-124	24.84	2.72	20	
Ethylbenzene	21.45	1.0	20	0	107	76-125	22.24	3.64	20	
Xylenes, Total	64.8	3.0	60	0	108	79-124	67.11	3.51	20	
Surr: 4-Bromofluorobenzene	*31.85*	1.0	*30*	0	*106*	*77-129*	31.19	*2.08*	*20*	
Surr: Trifluorotoluene	*28.5*	1.0	*30*	0	*95*	*75-130*	28.06	*1.55*	*20*	

The following samples were analyzed in this batch:

0806640-04A	0806640-06A	0806640-14A
0806640-15A	0806640-16A	

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **R65181** Instrument ID **BTEX1** Method: **SW8021B**

MBLK Sample ID: **BBLKW1-070608-R65181** Units: **µg/L** Analysis Date: **7/6/2008 04:27 PM**
Client ID: Run ID: **BTEX1_080706A** SeqNo: **1434531** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	*31.78*	1.0	*30*	0	*106*	*77-129*	0			
Surr: Trifluorotoluene	*29.25*	1.0	*30*	0	*97.5*	*75-130*	0			

LCS Sample ID: **BLCSW1-070608-R65181** Units: **µg/L** Analysis Date: **7/6/2008 04:00 PM**
Client ID: Run ID: **BTEX1_080706A** SeqNo: **1434530** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.02	1.0	20	0	110	77-126	0			
Toluene	23.39	1.0	20	0	117	80-124	0			
Ethylbenzene	24.75	1.0	20	0	124	76-125	0			
Xylenes, Total	67.14	3.0	60	0	112	79-124	0			
Surr: 4-Bromofluorobenzene	*33.05*	1.0	*30*	0	*110*	*77-129*	0			
Surr: Trifluorotoluene	*30.04*	1.0	*30*	0	*100*	*75-130*	0			

MS Sample ID: **0807050-17AMS** Units: **µg/L** Analysis Date: **7/6/2008 05:48 PM**
Client ID: Run ID: **BTEX1_080706A** SeqNo: **1434534** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	23.41	1.0	20	0	117	77-126	0			
Toluene	24.88	1.0	20	0	124	80-124	0			S
Ethylbenzene	25.48	1.0	20	0	127	76-125	0			S
Xylenes, Total	71.2	3.0	60	0	119	79-124	0			
Surr: 4-Bromofluorobenzene	*32.97*	1.0	*30*	0	*110*	*77-129*	0			
Surr: Trifluorotoluene	*28.99*	1.0	*30*	0	*96.6*	*75-130*	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **R65181** Instrument ID **BTEX1** Method: **SW8021B**

MSD Sample ID: **0807050-17AMSD** Units: **µg/L** Analysis Date: **7/6/2008 06:15 PM**

Client ID: Run ID: **BTEX1_080706A** SeqNo: **1434535** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.67	1.0	20	0	113	77-126	23.41	3.2	20	
Toluene	24.24	1.0	20	0	121	80-124	24.88	2.61	20	
Ethylbenzene	23.97	1.0	20	0	120	76-125	25.48	6.11	20	
Xylenes, Total	68.84	3.0	60	0	115	79-124	71.2	3.37	20	
Surr: 4-Bromofluorobenzene	*33.41*	1.0	*30*	0	*111*	*77-129*	32.97	*1.33*	*20*	
Surr: Trifluorotoluene	*29.14*	1.0	*30*	0	*97.1*	*75-130*	28.99	*0.491*	*20*	

The following samples were analyzed in this batch:

0806640-01A	0806640-09A	0806640-10A
0806640-12A	0806640-13A	0806640-17A
0806640-18A		

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **R65233** Instrument ID **BTEX1** Method: **SW8021B**

MBLK Sample ID: **BBLKW1-070708-R65233** Units: **µg/L** Analysis Date: **7/7/2008 08:52 AM**
Client ID: Run ID: **BTEX1_080707A** SeqNo: **1435704** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	*34*	1.0	*30*	0	*113*	*77-129*	0			
Surr: Trifluorotoluene	*29.35*	1.0	*30*	0	*97.8*	*75-130*	0			

LCS Sample ID: **BLCSW1-070708-R65233** Units: **µg/L** Analysis Date: **7/7/2008 08:25 AM**
Client ID: Run ID: **BTEX1_080707A** SeqNo: **1435703** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.81	1.0	20	0	104	77-126	0			
Toluene	22.18	1.0	20	0	111	80-124	0			
Ethylbenzene	22.41	1.0	20	0	112	76-125	0			
Xylenes, Total	65.11	3.0	60	0	109	79-124	0			
Surr: 4-Bromofluorobenzene	*34.26*	1.0	*30*	0	*114*	*77-129*	0			
Surr: Trifluorotoluene	*29.38*	1.0	*30*	0	*97.9*	*75-130*	0			

MS Sample ID: **0807099-01AMS** Units: **µg/L** Analysis Date: **7/7/2008 10:12 AM**
Client ID: Run ID: **BTEX1_080707A** SeqNo: **1435706** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.08	1.0	20	0	110	77-126	0			
Toluene	23.62	1.0	20	0	118	80-124	0			
Ethylbenzene	23.43	1.0	20	0	117	76-125	0			
Xylenes, Total	68.82	3.0	60	0	115	79-124	0			
Surr: 4-Bromofluorobenzene	*34.57*	1.0	*30*	0	*115*	*77-129*	0			
Surr: Trifluorotoluene	*29.77*	1.0	*30*	0	*99.2*	*75-130*	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **R65233** Instrument ID **BTEX1** Method: **SW8021B**

MSD Sample ID: **0807099-01AMSD** Units: **µg/L** Analysis Date: **7/7/2008 10:39 AM**

Client ID: Run ID: **BTEX1_080707A** SeqNo: **1435707** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.72	1.0	20	0	109	77-126	22.08	1.64	20	
Toluene	23.3	1.0	20	0	116	80-124	23.62	1.4	20	
Ethylbenzene	23.18	1.0	20	0	116	76-125	23.43	1.06	20	
Xylenes, Total	68.3	3.0	60	0	114	79-124	68.82	0.756	20	
Surr: 4-Bromofluorobenzene	*32.24*	1.0	*30*	0	*107*	*77-129*	34.57	*6.99*	*20*	
Surr: Trifluorotoluene	*29.1*	1.0	*30*	0	*97*	*75-130*	29.77	*2.29*	*20*	

The following samples were analyzed in this batch: 0806640-05A

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **30603** Instrument ID **ICP7500** Method: **SW6020**

MBLK Sample ID: **MBLKW2-070208-30603** Units: **mg/L** Analysis Date: **7/2/2008 10:21 PM**

Client ID: Run ID: **ICP7500_080702A** SeqNo: **1433432** Prep Date: **7/2/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Copper	ND	0.0050								
Iron	ND	0.20								
Lead	ND	0.0050								
Manganese	ND	0.0050								
Nickel	ND	0.0050								
Selenium	ND	0.0050								
Silver	ND	0.0050								
Thallium	ND	0.0020								
Zinc	0.002112	0.0050								J

MBLK Sample ID: **MBLKW2-070208-30603** Units: **mg/L** Analysis Date: **7/3/2008 03:15 PM**

Client ID: Run ID: **ICP7500_080703A** SeqNo: **1435036** Prep Date: **7/2/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.003716	0.010								J
Antimony	ND	0.0050								

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **30603** Instrument ID **ICP7500** Method: **SW6020**

LCS Sample ID: **MLCSW2-070208-30603** Units: **mg/L** Analysis Date: **7/2/2008 10:27 PM**
Client ID: Run ID: **ICP7500_080702A** SeqNo: **1433433** Prep Date: **7/2/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05134	0.0050	0.05	0	103	80-120	0			
Barium	0.0486	0.0050	0.05	0	97.2	80-120	0			
Beryllium	0.04911	0.0020	0.05	0	98.2	80-120	0			
Cadmium	0.05202	0.0020	0.05	0	104	80-120	0			
Chromium	0.04611	0.0050	0.05	0	92.2	80-120	0			
Cobalt	0.0479	0.0050	0.05	0	95.8	80-120	0			
Copper	0.04516	0.0050	0.05	0	90.3	80-120	0			
Iron	4.885	0.20	5	0	97.7	80-120	0			
Lead	0.04942	0.0050	0.05	0	98.8	80-120	0			
Manganese	0.04875	0.0050	0.05	0	97.5	80-120	0			
Nickel	0.04933	0.0050	0.05	0	98.7	80-120	0			
Selenium	0.04934	0.0050	0.05	0	98.7	80-120	0			
Silver	0.05032	0.0050	0.05	0	101	80-120	0			
Thallium	0.04021	0.0020	0.05	0	80.4	80-120	0			
Zinc	0.05101	0.0050	0.05	0	102	80-120	0			

LCS Sample ID: **MLCSW2-070208-30603** Units: **mg/L** Analysis Date: **7/3/2008 03:21 PM**
Client ID: Run ID: **ICP7500_080703A** SeqNo: **1435037** Prep Date: **7/2/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.04698	0.010	0.05	0	94	80-120	0			
Antimony	0.05417	0.0050	0.05	0	108	80-120	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **30603** Instrument ID **ICP7500** Method: **SW6020**

MS Sample ID: **0806639-12BMS** Units: **mg/L** Analysis Date: **7/3/2008 04:22 PM**

Client ID: Run ID: **ICP7500_080703A** SeqNo: **1435046** Prep Date: **7/2/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.0748	0.010	0.05	0.03362	82.4	80-120	0			
Antimony	0.05803	0.0050	0.05	-0.0001324	116	80-120	0			
Arsenic	0.0538	0.0050	0.05	-0.001083	110	80-120	0			
Barium	0.04788	0.0050	0.05	-0.0005281	96.8	80-120	0			
Beryllium	0.04752	0.0020	0.05	-0.0007451	96.5	80-120	0			
Cadmium	0.05101	0.0020	0.05	-6.825E-06	102	80-120	0			
Chromium	0.05108	0.0050	0.05	0.0004888	101	80-120	0			
Cobalt	0.05301	0.0050	0.05	0.00002494	106	80-120	0			
Copper	0.04593	0.0050	0.05	-0.000917	93.7	80-120	0			
Iron	4.931	0.20	5	0.04753	97.7	80-120	0			
Lead	0.04859	0.0050	0.05	0.00007657	97	80-120	0			
Manganese	0.05479	0.0050	0.05	0.000432	109	80-120	0			
Nickel	0.04896	0.0050	0.05	-0.0008799	99.7	80-120	0			
Silver	0.05059	0.0050	0.05	-0.001302	104	80-120	0			
Zinc	0.05058	0.0050	0.05	0.005439	90.3	80-120	0			

MS Sample ID: **0806639-12BMS** Units: **mg/L** Analysis Date: **7/7/2008 02:21 PM**

Client ID: Run ID: **ICP7500_080707A** SeqNo: **1435435** Prep Date: **7/2/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.0521	0.0050	0.05	-0.001554	107	80-120	0			
Thallium	0.04179	0.0020	0.05	0.00006147	83.5	80-120	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **30603** Instrument ID **ICP7500** Method: **SW6020**

MSD Sample ID: **0806639-12BMSD** Units: **mg/L** Analysis Date: **7/3/2008 04:28 PM**
Client ID: Run ID: **ICP7500_080703A** SeqNo: **1435047** Prep Date: **7/2/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.0789	0.010	0.05	0.03362	90.6	80-120	0.0748	5.34	15	
Antimony	0.05666	0.0050	0.05	-0.0001324	114	80-120	0.05803	2.39	15	
Arsenic	0.05268	0.0050	0.05	-0.001083	108	80-120	0.0538	2.1	15	
Barium	0.05082	0.0050	0.05	-0.0005281	103	80-120	0.04788	5.96	15	
Beryllium	0.05095	0.0020	0.05	-0.0007451	103	80-120	0.04752	6.97	15	
Cadmium	0.05389	0.0020	0.05	-6.825E-06	108	80-120	0.05101	5.49	15	
Chromium	0.04957	0.0050	0.05	0.0004888	98.2	80-120	0.05108	3	15	
Cobalt	0.05109	0.0050	0.05	0.00002494	102	80-120	0.05301	3.69	15	
Copper	0.04876	0.0050	0.05	-0.000917	99.4	80-120	0.04593	5.98	15	
Iron	5.253	0.20	5	0.04753	104	80-120	4.931	6.32	15	
Lead	0.05203	0.0050	0.05	0.00007657	104	80-120	0.04859	6.84	15	
Manganese	0.05259	0.0050	0.05	0.000432	104	80-120	0.05479	4.1	15	
Nickel	0.05267	0.0050	0.05	-0.0008799	107	80-120	0.04896	7.3	15	
Silver	0.05371	0.0050	0.05	-0.001302	110	80-120	0.05059	5.98	15	
Zinc	0.05648	0.0050	0.05	0.005439	102	80-120	0.05058	11	15	

MSD Sample ID: **0806639-12BMSD** Units: **mg/L** Analysis Date: **7/7/2008 02:27 PM**
Client ID: Run ID: **ICP7500_080707A** SeqNo: **1435436** Prep Date: **7/2/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.05041	0.0050	0.05	-0.001554	104	80-120	0.0521	3.3	15	
Thallium	0.04203	0.0020	0.05	0.00006147	83.9	80-120	0.04179	0.573	15	

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
Q - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **30603** Instrument ID **ICP7500** Method: **SW6020**

DUP Sample ID: **0806639-12BDUP** Units: **mg/L** Analysis Date: **7/3/2008 04:16 PM**

Client ID: Run ID: **ICP7500_080703A** SeqNo: **1435045** Prep Date: **7/2/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.03388	0.010	0	0	0	0-0	0.03362	0.77	25	
Antimony	ND	0.0050	0	0	0	0-0	0	0	25	
Arsenic	ND	0.0050	0	0	0	0-0	0	0	25	
Barium	ND	0.0050	0	0	0	0-0	0	0	25	
Beryllium	ND	0.0020	0	0	0	0-0	0	0	25	
Cadmium	ND	0.0020	0	0	0	0-0	0	0	25	
Chromium	ND	0.0050	0	0	0	0-0	0	0	25	
Cobalt	ND	0.0050	0	0	0	0-0	0	0	25	
Copper	ND	0.0050	0	0	0	0-0	0	0	25	
Iron	ND	0.20	0	0	0	0-0	0	0	25	
Lead	ND	0.0050	0	0	0	0-0	0	0	25	
Manganese	ND	0.0050	0	0	0	0-0	0	0	25	
Nickel	ND	0.0050	0	0	0	0-0	0	0	25	
Selenium	ND	0.0050	0	0	0	0-0	0	0	25	
Silver	ND	0.0050	0	0	0	0-0	0	0	25	
Thallium	ND	0.0020	0	0	0	0-0	0	0	25	
Zinc	0.004821	0.0050	0	0	0	0-0	0.005439	0	25	J

The following samples were analyzed in this batch:

0806640-02A	0806640-04B	0806640-06B
0806640-15B	0806640-16B	0806640-17B
0806640-18B		

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **30635** Instrument ID **ICPMS02** Method: **SW6020** **(Dissolve)**

MBLK Sample ID: **MBLKW3-070308-30635** Units: **mg/L** Analysis Date: **7/7/2008 04:41 PM**

Client ID: Run ID: **ICPMS02_080707A** SeqNo: **1435862** Prep Date: **7/3/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.002878	0.010								J
Antimony	ND	0.0050								
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Beryllium	ND	0.0020								
Boron	0.01794	0.020								J
Cadmium	ND	0.0020								
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Copper	ND	0.0050								
Iron	ND	0.20								
Lead	ND	0.0050								
Manganese	ND	0.0050								
Molybdenum	ND	0.0050								
Nickel	ND	0.0050								
Selenium	ND	0.0050								
Silver	ND	0.0050								
Thallium	ND	0.0020								
Zinc	ND	0.0050								

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **30635** Instrument ID **ICPMS02** Method: **SW6020** **(Dissolve)**

LCS Sample ID: **MLCSW3-070308-30635** Units: **mg/L** Analysis Date: **7/3/2008 08:50 PM**

Client ID: Run ID: **ICPMS03_080703A** SeqNo: **1434717** Prep Date: **7/3/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.04758	0.010	0.05	0	95.2	80-120	0			
Antimony	0.04552	0.0050	0.05	0	91	80-120	0			
Arsenic	0.04744	0.0050	0.05	0	94.9	80-120	0			
Barium	0.04597	0.0050	0.05	0	91.9	80-120	0			
Beryllium	0.04585	0.0020	0.05	0	91.7	80-120	0			
Boron	0.2461	0.020	0.25	0	98.4	80-120	0			
Cadmium	0.04812	0.0020	0.05	0	96.2	80-120	0			
Chromium	0.04444	0.0050	0.05	0	88.9	80-120	0			
Cobalt	0.04592	0.0050	0.05	0	91.8	80-120	0			
Copper	0.04365	0.0050	0.05	0	87.3	80-120	0			
Iron	4.635	0.20	5	0	92.7	80-120	0			
Lead	0.04709	0.0050	0.05	0	94.2	80-120	0			
Manganese	0.04672	0.0050	0.05	0	93.4	80-120	0			
Molybdenum	0.04658	0.0050	0.05	0	93.2	80-120	0			
Nickel	0.04593	0.0050	0.05	0	91.9	80-120	0			
Selenium	0.04301	0.0050	0.05	0	86	80-120	0			
Silver	0.04713	0.0050	0.05	0	94.3	80-120	0			
Thallium	0.04333	0.0020	0.05	0	86.7	80-120	0			
Zinc	0.05152	0.0050	0.05	0	103	80-120	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **30635** Instrument ID **ICPMS02** Method: **SW6020** **(Dissolve)**

MS Sample ID: **0807035-02AMS** Units: **mg/L** Analysis Date: **7/4/2008 12:41 AM**

Client ID: Run ID: **ICPMS03_080703A** SeqNo: **1434744** Prep Date: **7/3/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.05626	0.010	0.05	0.002426	108	75-125	0			
Antimony	0.04548	0.0050	0.05	0	91	75-125	0			
Arsenic	0.0507	0.0050	0.05	0	101	75-125	0			
Barium	0.09986	0.0050	0.05	0.05585	88	75-125	0			
Beryllium	0.0443	0.0020	0.05	0	88.6	75-125	0			
Boron	0.3309	0.020	0.25	0.0839	98.8	75-125	0			
Cadmium	0.04816	0.0020	0.05	0	96.3	75-125	0			
Chromium	0.046	0.0050	0.05	0	92	75-125	0			
Cobalt	0.04607	0.0050	0.05	0.0006407	90.9	75-125	0			
Copper	0.04161	0.0050	0.05	0	83.2	75-125	0			
Iron	4.736	0.20	5	0	94.7	75-125	0			
Lead	0.04727	0.0050	0.05	0	94.5	75-125	0			
Manganese	0.287	0.0050	0.05	0.2481	77.8	75-125	0			O
Molybdenum	0.04784	0.0050	0.05	0.002836	90	75-125	0			
Nickel	0.04767	0.0050	0.05	0.001866	91.6	75-125	0			
Selenium	0.04772	0.0050	0.05	0	95.4	75-125	0			
Silver	0.04342	0.0050	0.05	0	86.8	75-125	0			
Thallium	0.04416	0.0020	0.05	0	88.3	75-125	0			
Zinc	0.05021	0.0050	0.05	0.003244	93.9	75-125	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **30635** Instrument ID **ICPMS02** Method: **SW6020** **(Dissolve)**

MSD Sample ID: **0807035-02AMSD** Units: **mg/L** Analysis Date: **7/4/2008 12:47 AM**

Client ID: Run ID: **ICPMS03_080703A** SeqNo: **1434745** Prep Date: **7/3/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.05621	0.010	0.05	0.002426	108	75-125	0.05626	0.0889	25	
Antimony	0.04635	0.0050	0.05	0	92.7	75-125	0.04548	1.89	25	
Arsenic	0.05064	0.0050	0.05	0	101	75-125	0.0507	0.118	25	
Barium	0.09903	0.0050	0.05	0.05585	86.4	75-125	0.09986	0.835	25	
Beryllium	0.04585	0.0020	0.05	0	91.7	75-125	0.0443	3.44	25	
Boron	0.3426	0.020	0.25	0.0839	103	75-125	0.3309	3.47	25	
Cadmium	0.0477	0.0020	0.05	0	95.4	75-125	0.04816	0.96	25	
Chromium	0.04662	0.0050	0.05	0	93.2	75-125	0.046	1.34	25	
Cobalt	0.0466	0.0050	0.05	0.0006407	91.9	75-125	0.04607	1.14	25	
Copper	0.04254	0.0050	0.05	0	85.1	75-125	0.04161	2.21	25	
Iron	4.686	0.20	5	0	93.7	75-125	4.736	1.06	25	
Lead	0.0471	0.0050	0.05	0	94.2	75-125	0.04727	0.36	25	
Manganese	0.2957	0.0050	0.05	0.2481	95.2	75-125	0.287	2.99	25	O
Molybdenum	0.04801	0.0050	0.05	0.002836	90.3	75-125	0.04784	0.355	25	
Nickel	0.04649	0.0050	0.05	0.001866	89.2	75-125	0.04767	2.51	25	
Selenium	0.04695	0.0050	0.05	0	93.9	75-125	0.04772	1.63	25	
Silver	0.04351	0.0050	0.05	0	87	75-125	0.04342	0.207	25	
Thallium	0.04492	0.0020	0.05	0	89.8	75-125	0.04416	1.71	25	
Zinc	0.05398	0.0050	0.05	0.003244	101	75-125	0.05021	7.24	25	

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **30635** Instrument ID **ICPMS02** Method: **SW6020** **(Dissolve)**

DUP Sample ID: **0807035-02ADUP** Units: **mg/L** Analysis Date: **7/4/2008 12:35 AM**

Client ID: Run ID: **ICPMS03_080703A** SeqNo: **1434743** Prep Date: **7/3/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.002089	0.010	0	0	0	0-0	0.002426	0	25	J
Antimony	ND	0.0050	0	0	0	0-0	0	0	25	
Arsenic	ND	0.0050	0	0	0	0-0	0	0	25	
Barium	0.05416	0.0050	0	0	0	0-0	0.05585	3.07	25	
Beryllium	ND	0.0020	0	0	0	0-0	0	0	25	
Boron	0.08552	0.020	0	0	0	0-0	0.0839	1.91	25	
Cadmium	ND	0.0020	0	0	0	0-0	0	0	25	
Chromium	ND	0.0050	0	0	0	0-0	0	0	25	
Cobalt	0.0006737	0.0050	0	0	0	0-0	0.0006407	0	25	J
Copper	ND	0.0050	0	0	0	0-0	0	0	25	
Iron	ND	0.20	0	0	0	0-0	0	0	25	
Lead	ND	0.0050	0	0	0	0-0	0	0	25	
Manganese	0.24	0.0050	0	0	0	0-0	0.2481	3.32	25	
Molybdenum	0.002569	0.0050	0	0	0	0-0	0.002836	0	25	J
Nickel	0.001821	0.0050	0	0	0	0-0	0.001866	0	25	J
Selenium	ND	0.0050	0	0	0	0-0	0	0	25	
Silver	ND	0.0050	0	0	0	0-0	0	0	25	
Thallium	ND	0.0020	0	0	0	0-0	0	0	25	
Zinc	0.002076	0.0050	0	0	0	0-0	0.003244	0	25	J

The following samples were analyzed in this batch:

0806640-01B	0806640-03B	0806640-05B
0806640-07B	0806640-08B	0806640-09B
0806640-10B	0806640-11B	0806640-12B
0806640-13B		

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **30655** Instrument ID **Mercury** Method: **SW7470** **(Dissolve)**

MBLK Sample ID: **GBLKW1-070708-30655** Units: **mg/L** Analysis Date: **7/7/2008 03:59 PM**
Client ID: Run ID: **MERCURY_080707A** SeqNo: **1435532** Prep Date: **7/7/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020								

LCS Sample ID: **GLCSW1-070708-30655** Units: **mg/L** Analysis Date: **7/7/2008 04:01 PM**
Client ID: Run ID: **MERCURY_080707A** SeqNo: **1435533** Prep Date: **7/7/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00537	0.00020	0.005	0	107	80-120	0			

LCSD Sample ID: **GLCSDW1-070708-30655** Units: **mg/L** Analysis Date: **7/7/2008 04:03 PM**
Client ID: Run ID: **MERCURY_080707A** SeqNo: **1435534** Prep Date: **7/7/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00548	0.00020	0.005	0	110	80-120	0.00537	2.03	20	

MS Sample ID: **0807035-03AMS** Units: **mg/L** Analysis Date: **7/7/2008 04:25 PM**
Client ID: Run ID: **MERCURY_080707A** SeqNo: **1435537** Prep Date: **7/7/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00565	0.00020	0.005	0.000002	113	80-120	0			

MSD Sample ID: **0807035-03AMSD** Units: **mg/L** Analysis Date: **7/7/2008 04:27 PM**
Client ID: Run ID: **MERCURY_080707A** SeqNo: **1435538** Prep Date: **7/7/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00561	0.00020	0.005	0.000002	112	80-120	0.00565	0.71	20	

DUP Sample ID: **0807035-03ADUP** Units: **mg/L** Analysis Date: **7/7/2008 04:15 PM**
Client ID: Run ID: **MERCURY_080707A** SeqNo: **1435535** Prep Date: **7/7/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020	0	0	0	0-0	0.000002	0	20	

The following samples were analyzed in this batch:

0806640-01B	0806640-03B	0806640-05B
0806640-07B	0806640-08B	0806640-09B
0806640-10B	0806640-11B	0806640-12B
0806640-13B		

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **30657** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW2-070708-30657** Units: **mg/L** Analysis Date: **7/7/2008 05:56 PM**
Client ID: Run ID: **MERCURY_080707B** SeqNo: **1435779** Prep Date: **7/7/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020								

LCS Sample ID: **GLCSW2-070708-30657** Units: **mg/L** Analysis Date: **7/7/2008 05:58 PM**
Client ID: Run ID: **MERCURY_080707B** SeqNo: **1435780** Prep Date: **7/7/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00495	0.00020	0.005	0	99	85-115	0			

LCSD Sample ID: **GLCSDW2-070708-30657** Units: **mg/L** Analysis Date: **7/7/2008 06:00 PM**
Client ID: Run ID: **MERCURY_080707B** SeqNo: **1435781** Prep Date: **7/7/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00485	0.00020	0.005	0	97	85-115	0.00495	2.04	20	

MS Sample ID: **0806639-12BMS** Units: **mg/L** Analysis Date: **7/7/2008 06:10 PM**
Client ID: Run ID: **MERCURY_080707B** SeqNo: **1435784** Prep Date: **7/7/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00507	0.00020	0.005	-0.000059	103	85-115	0			

MSD Sample ID: **0806639-12BMSD** Units: **mg/L** Analysis Date: **7/7/2008 06:13 PM**
Client ID: Run ID: **MERCURY_080707B** SeqNo: **1435785** Prep Date: **7/7/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00533	0.00020	0.005	-0.000059	108	85-115	0.00507	5	20	

DUP Sample ID: **0806639-12BDUP** Units: **mg/L** Analysis Date: **7/7/2008 06:08 PM**
Client ID: Run ID: **MERCURY_080707B** SeqNo: **1435783** Prep Date: **7/7/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020	0	0	0	0-0	-0.000059	0	20	

The following samples were analyzed in this batch:

0806640-02A	0806640-04B	0806640-06B
0806640-15B	0806640-16B	0806640-17B
0806640-18B		

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **30539** Instrument ID **SV-2** Method: **SW8270**

MBLK Sample ID: **SBLKW1-080630-30539** Units: **µg/L** Analysis Date: **7/7/2008 10:53 AM**

Client ID: Run ID: **SV-2_080707A** SeqNo: **1437811** Prep Date: **6/30/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	0.20								
Acenaphthylene	ND	0.20								
Anthracene	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzo(a)pyrene	ND	0.20								
Benzo(b)fluoranthene	ND	0.20								
Benzo(g,h,i)perylene	ND	0.20								
Benzo(k)fluoranthene	ND	0.20								
Chrysene	ND	0.20								
Dibenz(a,h)anthracene	ND	0.20								
Fluoranthene	ND	0.20								
Fluorene	ND	0.20								
Indeno(1,2,3-cd)pyrene	ND	0.20								
Naphthalene	ND	0.20								
Phenanthrene	ND	0.20								
Pyrene	ND	0.20								
Surr: 2-Fluorobiphenyl	*3.474*	0.20	*5*	0	*69.5*	*48-115*	0			
Surr: 4-Terphenyl-d14	*3.627*	0.20	*5*	0	*72.5*	*47-117*	0			
Surr: Nitrobenzene-d5	*3.427*	0.20	*5*	0	*68.5*	*44-115*	0			

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J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **30539** Instrument ID **SV-2** Method: **SW8270**

LCS Sample ID: **SLCSW1-80630-30539** Units: **µg/L** Analysis Date: **7/7/2008 11:14 AM**

Client ID: Run ID: **SV-2_080707A** SeqNo: **1437824** Prep Date: **6/30/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	3.847	0.20	5	0	76.9	50-120	0			
Acenaphthylene	3.777	0.20	5	0	75.5	50-120	0			
Anthracene	3.753	0.20	5	0	75.1	55-120	0			
Benz(a)anthracene	3.724	0.20	5	0	74.5	55-120	0			
Benzo(a)pyrene	4.141	0.20	5	0	82.8	55-120	0			
Benzo(b)fluoranthene	4.287	0.20	5	0	85.7	50-120	0			
Benzo(g,h,i)perylene	4.008	0.20	5	0	80.2	50-120	0			
Benzo(k)fluoranthene	3.92	0.20	5	0	78.4	55-125	0			
Chrysene	3.995	0.20	5	0	79.9	56-120	0			
Dibenz(a,h)anthracene	3.775	0.20	5	0	75.5	55-120	0			
Fluoranthene	3.082	0.20	5	0	61.6	50-125	0			
Fluorene	3.871	0.20	5	0	77.4	50-120	0			
Indeno(1,2,3-cd)pyrene	3.95	0.20	5	0	79	50-120	0			
Naphthalene	4.04	0.20	5	0	80.8	45-120	0			
Phenanthrene	3.801	0.20	5	0	76	50-121	0			
Pyrene	4.068	0.20	5	0	81.4	50-130	0			
Surr: 2-Fluorobiphenyl	*3.389*	0.20	*5*	0	*67.8*	*48-120*	0			
Surr: 4-Terphenyl-d14	*3.557*	0.20	*5*	0	*71.1*	*51-135*	0			
Surr: Nitrobenzene-d5	*3.343*	0.20	*5*	0	*66.9*	*41-120*	0			

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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0806640
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **30539** Instrument ID **SV-2** Method: **SW8270**

LCSD Sample ID: **SLCSDW1-080630-30539** Units: **µg/L** Analysis Date: **7/7/2008 11:34 AM**

Client ID: Run ID: **SV-2_080707A** SeqNo: **1437817** Prep Date: **6/30/2008** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	4.245	0.20	5	0	84.9	50-120	3.847	9.83	20	
Acenaphthylene	4.265	0.20	5	0	85.3	50-120	3.777	12.1	20	
Anthracene	4.34	0.20	5	0	86.8	55-120	3.753	14.5	20	
Benz(a)anthracene	4.609	0.20	5	0	92.2	55-120	3.724	21.3	20	R
Benzo(a)pyrene	4.973	0.20	5	0	99.5	55-120	4.141	18.3	20	
Benzo(b)fluoranthene	5.451	0.20	5	0	109	50-120	4.287	23.9	20	R
Benzo(g,h,i)perylene	4.823	0.20	5	0	96.5	50-120	4.008	18.5	20	
Benzo(k)fluoranthene	4.711	0.20	5	0	94.2	55-125	3.92	18.3	20	
Chrysene	4.703	0.20	5	0	94.1	56-120	3.995	16.3	20	
Dibenz(a,h)anthracene	4.762	0.20	5	0	95.2	55-120	3.775	23.1	20	R
Fluoranthene	3.658	0.20	5	0	73.2	50-125	3.082	17.1	20	
Fluorene	4.332	0.20	5	0	86.6	50-120	3.871	11.2	20	
Indeno(1,2,3-cd)pyrene	5.015	0.20	5	0	100	50-120	3.95	23.8	20	R
Naphthalene	4.318	0.20	5	0	86.4	45-120	4.04	6.65	20	
Phenanthrene	4.387	0.20	5	0	87.7	50-121	3.801	14.3	20	
Pyrene	4.674	0.20	5	0	93.5	50-130	4.068	13.9	20	
Surr: 2-Fluorobiphenyl	*3.637*	0.20	*5*	0	*72.7*	*48-120*	3.389	*7.04*	*20*	
Surr: 4-Terphenyl-d14	*3.951*	0.20	*5*	0	*79*	*51-135*	3.557	*10.5*	*20*	
Surr: Nitrobenzene-d5	*3.627*	0.20	*5*	0	*72.5*	*41-120*	3.343	*8.15*	*20*	

The following samples were analyzed in this batch:

0806640-01C	0806640-03C	0806640-05C
0806640-07C	0806640-08C	0806640-09C
0806640-10C	0806640-11C	0806640-12C
0806640-13C	0806640-15C	0806640-16C
0806640-17C	0806640-18C	

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

ALS

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Chain of Custody Form

Page 1 of 6

3352 128th Ave.
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Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 0806640

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Huntsman Brickland Refinery	A	BTEX (8021)
Work Order		Project Number	85439	B	Total Metals (6020/7000) Al,Sb,As,Ba,Be,B,Cd,Cr,Co,Cu,Fe
Company Name	ERM Southwest, Inc.	Bill To Company	ERM Southwest, Inc.	C	Pb,Mn,Hg,Mo,Ni,Se,Ag,Tl,Zn
Send Report To	Brad Stokes	Invoice Attn	Brad Stokes	D	PAHs (8270) Low-Level
Address	442 Bermuda	Address	442 Bermuda	E	
				F	
City/State/Zip	Corpus Christi, TX 78411	City/State/Zip	Corpus Christi, TX 78411	G	
Phone	(361) 737-9203	Phone	(361) 737-9203	H	
Fax		Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-7	6/24/08	1335	WATER	HCl	3	X										
2	↓	↓	↓	↓	HNO3	1		X					(FIELD FILTERED)				
3	↓	↓	↓	↓	8	2				X							
4	FB-1	6/24/08	1246	WATER	HNO3	1		X									
5	MW-3S	6/24/08	1555	WATER	HCl	3	X										
6	↓	↓	↓	↓	HNO3	1		X					(FIELD FILTERED)				
7	↓	↓	↓	↓	8	2				X							
8	FB-1	6/24/08	1625	WATER	HCl	3	X										
9	↓	↓	↓	↓	HNO3	1		X									
10																	

Sampler(s) Please Print & Sign: Randolph Orthun / Randolph Orthun

Shipment Method: FEDX

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour ☐ Other

Results Due Date:

Relinquished by: Randolph Orthun | Date: 6/26/08 | Time: 1806 | Received by:

Relinquished by: | Date: | Time: | Received by (Laboratory): 062708 0930

Notes: 10 Work Days TAT.

Logged by (Laboratory): | Date: | Time: | Checked by (Laboratory):

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
☑ Level II Std QC
☐ Level III Std QC/Raw Data
☐ Level IV SW846/CLP
☐ Other
☐ TRRP CheckList
☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO$_3$ 3-H$_2$SO$_4$ 4-NaOH 5-Na$_2$S$_2$O$_3$ 6-NaHSO$_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.

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Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 0806640

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Huntsman Brickland Refinery	A	BTEX (8021)
Work Order		Project Number	85439	B	Total Metals (6020/7000) Al,Sb,As,Ba,Be,B,Cd,Cr,Co,Cu,Fe
Company Name	ERM Southwest, Inc.	Bill To Company	ERM Southwest, Inc.	C	Pb,Mn,Hg,Mo,Ni,Se,Ag,Tl,Zn
Send Report To	Brad Stokes	Invoice Attn	Brad Stokes	D	PAHs (8270) Low-Level
Address	442 Bermuda	Address	442 Bermuda	E	
				F	
City/State/Zip	Corpus Christi, TX 78411	City/State/Zip	Corpus Christi, TX 78411	G	
Phone	(361) 737-9203	Phone	(361) 737-9203	H	
Fax		Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-4	6/25/08	0830	WATER	HCl	3	X										
2	↓	↓	↓	↓	HNO3	1		X					(FIELD FILTERED)				
3					8	2				X							
4	FB-2	6/25/08	0845	WATER	HNO3	1		X									
5	FB-2	6/25/08	1545	WATER	HCl	3	X										
6	MW-6D	6/25/08	1020	WATER	HCl	3	X										
7	↓				HNO3	1		X					(FIELD FILTERED)				
8					8	2				X							
9																	
10																	

Sampler(s) Please Print & Sign: RANDOLPH OSTLUND [signature]

Shipment Method: FedX

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

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

Notes: 10 Work Days TAT.

Relinquished by: | Date: | Time: | Received by (Laboratory): [signature] 6/27/08 0930

Cooler ID | Cooler Temp.

QC Package: (Check One Box Below)
☑ Level II Std QC
☐ Level III Std QC/Raw Data
☐ Level IV SW846/CLP
☐ Other ______
☐ TRRP CheckList
☐ TRRP Level IV

Logged by (Laboratory): | Date: | Time: | Checked by (Laboratory):

Preservative Key: 1-HCl 2-HNO$_3$ 3-H$_2$SO$_4$ 4-NaOH 5-Na$_2$S$_2$O$_3$ 6-NaHSO$_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
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Chain of Custody Form

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Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 0806040

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Huntsman Brickland Refinery	A	BTEX (8021)
Work Order		Project Number	85439	B	Total Metals (6020/7000) Al,Sb,As,Ba,Be,B,Cd,Cr,Co,Cu,Fe
Company Name	ERM Southwest, Inc.	Bill To Company	ERM Southwest, Inc.	C	Pb,Mn,Hg,Mo,Ni,Se,Ag,Tl,Zn
Send Report To	Brad Stokes	Invoice Attn	Brad Stokes	D	PAHs (8270) Low-Level
Address	442 Bermuda	Address	442 Bermuda	E	
				F	
City/State/Zip	Corpus Christi, TX 78411	City/State/Zip	Corpus Christi, TX 78411	G	
Phone	(361) 737-9203	Phone	(361) 737-9203	H	
Fax		Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-3D	6/25/08	1145	WATER	HCl	3	X										
2	↓	↓	↓	↓	HNO3	1		X				(FIELD FILTERED)					
3	↓	↓	↓	↓	8	2				X							
4	MW-6S	6/25/08	1450	WATER	HCl	3	X										
5	↓	↓	↓	↓	HNO3	1		X				(FIELD FILTERED)					
6	↓	↓	↓	↓	8	2				X							
7	DUP-1	6/25/08	1500	WATER	HCl	3	X										
8					HNO3	1		X				(FIELD FILTERED)					
9					8	2				X							
10																	

Sampler(s) Please Print & Sign: Randall Ottellund [signature]
Shipment Method: FedX
Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour ☐ Other
Results Due Date:

Relinquished by: Randall Ottellund | Date: 6/26/08 | Time: 1800 | Received by: [signature]
Relinquished by: | Date: | Time: | Received by (Laboratory): [signature] 0626 08 0830
Logged by (Laboratory): | Date: | Time: | Checked by (Laboratory):

Notes: 10 Work Days TAT.

Cooler ID | Cooler Temp.

QC Package: (Check One Box Below)
☑ Level II Std QC
☐ Level III Std QC/Raw Data
☐ Level IV SW846/CLP
☐ Other ________
☐ TRRP CheckList
☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.

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ALS Project Manager: | ALS Work Order #: 0806000

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Huntsman Brickland Refinery	A	BTEX (8021)
Work Order		Project Number	85439	B	Total Metals (6020/7000) Al,Sb,As,Ba,Be,B,Cd,Cr,Co,Cu,Fe
Company Name	ERM Southwest, Inc.	Bill To Company	ERM Southwest, Inc.	C	Pb,Mn,Hg,Mo,Ni,Se,Ag,Tl,Zn
Send Report To	Brad Stokes	Invoice Attn	Brad Stokes	D	PAHs (8270) Low-Level
Address	442 Bermuda	Address	442 Bermuda	E	
				F	
City/State/Zip	Corpus Christi, TX 78411	City/State/Zip	Corpus Christi, TX 78411	G	
Phone	(361) 737-9203	Phone	(361) 737-9203	H	
Fax		Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-15	6/26/08	0820	WATER	HCl	3	X										
2	↓	↓	↓	↓	HNO_3	1		X					(FIELD FILTERED)				
3					8	2				X							
4	MW-95	6/26/08	1020	WATER	HCl	3	X										
5	↓	↓	↓	↓	HNO_3	1		X					(FIELD FILTERED)				
6					8	2				X							
7	MW-14	6/26/08	1145	WATER	HCl	3	X										
8					HNO_3	1		X					(FIELD FILTERED)				
9					8	2				X							
10																	

Sampler(s) Please Print & Sign: Randall Ortland

Shipment Method: FDX

Required Turnaround Time: (Check Box) ☐ Other ☑ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: Randall Ortland | Date: 6/26/08 | Time: 1800 | Received by:

Relinquished by: | Date: | Time: | Received by (Laboratory): 6/26-08/0830

Logged by (Laboratory): | Date: | Time: | Checked by (Laboratory):

Notes: 10 Work Days TAT.

Cooler ID | Cooler Temp

QC Package: (Check One Box Below)
- ☑ Level II Std QC
- ☐ Level III Std QC/Raw Data
- ☐ Level IV SW846/CLP
- ☐ Other
- ☐ TRRP CheckList
- ☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.

Chain of Custody Form

ALS

10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager:

ALS Work Order #: 0806640

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Huntsman Brickland Refinery	A	BTEX (8021)
Work Order		Project Number	85439	B	Total Metals (6020/7000) Al,Sb,As,Ba,Be,B,Cd,Cr,Co,Cu,Fe
Company Name	ERM Southwest, Inc.	Bill To Company	ERM Southwest, Inc.	C	Pb,Mn,Hg,Mo,Ni,Se,Ag,Tl,Zn
Send Report To	Brad Stokes	Invoice Attn	Brad Stokes	D	PAHs (8270) Low-Level
Address	442 Bermuda	Address	442 Bermuda	E	
				F	
City/State/Zip	Corpus Christi, TX 78411	City/State/Zip	Corpus Christi, TX 78411	G	
Phone	(361) 737-9203	Phone	(361) 737-9203	H	
Fax		Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	TRIP BLANK-1	6/26/08	1800	WATER	HCl	3	X										
2	EB-2	6/26/08	1730	WATER	HCl	3	X										
3					HNO3	1		X									
4					8	2				X							
5	EB-3	6/26/08	1745	WATER	HCl	3	X										
6					HNO3	1		X									
7					8	2				X							
8																	
9																	
10																	

Sampler(s) Please Print & Sign: [signature]

Shipment Method: FedEx

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
[signature]	6/26/08	1800	
Relinquished by:	Date:	Time:	Received by (Laboratory): [signature] 6/27/08/0730
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: 10 Work Days TAT.

Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)
		☑ Level II Std QC ☐ Level III Std QC/Raw Data ☐ Level IV SW846/CLP ☐ Other ___ ☐ TRRP CheckList ☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
[redacted]

10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 0826640

Customer Information

Purchase Order	
Work Order	
Company Name	ERM Southwest, Inc.
Send Report To	Brad Stokes
Address	442 Bermuda
City/State/Zip	Corpus Christi, TX 78411
Phone	(361) 737-9203
Fax	
e-Mail Address	

Project Information

Project Name	Huntsman Brickland Refinery
Project Number	85439
Bill To Company	ERM Southwest, Inc.
Invoice Attn	Brad Stokes
Address	442 Bermuda
City/State/Zip	Corpus Christi, TX 78411
Phone	(361) 737-9203
Fax	
e-Mail Address	

Parameter/Method Request for Analysis

A	BTEX (8021)
B	Total Metals (6020/7000) Al,Sb,As,Ba,Be,B,Cd,Cr,Co,Cu,Fe
C	Pb,Mn,Hg,Mo,Ni,Se,Ag,Tl,Zn
D	PAHs (8270) Low-Level
E	
F	
G	
H	
I	
J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	RIVER-UPSTREAM	6/25/08	0821	WATER	HCl	3	X										
2					HNO_3	1		X									
3					8	2				X							
4	RIVER-DOWNSTREAM	6/25/08	0750	WATER	HCl	3	X										
5					HNO_3	1		X									
6					8	2				X							
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Ronald Ottens / RONALD OTTENS

Shipment Method: FOX

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour ☐ Other

Results Due Date:

Relinquished by: Ronald Ottens — Date: 6/26/08 — Time: 1800 — Received by:

Relinquished by: — Date: — Time: — Received by (Laboratory): 6-27-08 0830

Notes: 10 Work Days TAT.

Logged by (Laboratory): — Date: — Time: — Checked by (Laboratory):

Cooler ID | Cooler Temp.

QC Package: (Check One Box Below)
- ☑ Level II Std QC
- ☐ Level III Std QC/Raw Data
- ☐ Level IV SW846/CLP
- ☐ Other
- ☐ TRRP CheckList
- ☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.

ALS Group USA, Corp.

Sample Receipt Checklist

Client Name: ERMSW-CC

Date/Time Received: 6/27/2008 07:30

Work Order Number 0806640

Received by: RSZ

Checklist completed by [signature] 6/27/08 (Signature / Date)

Reviewed by Initials LT 6/30/08 (Date)

Matrix: W

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	- one COC not relinquished.
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☐	No ☑	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.5c,1.7c,2.1c,2.3c 002		
Cooler(s)/Kit(s):	2399,1707,1679,2446		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐

Adjusted? Checked by

Login Notes: Both PAH bottles arrived broken for MW-6S--split 1 liter from Dup-01 to compensate since MW-6S is the parent sample. One PAH bottle arrived broken for MW-6D.

Client contacted: Date contacted: 6/27/08 Person contacted Randy O

Contacted by: LT Regarding: Breakage

Comments: Dup 01 is the dup of MW 6S. when both ambers arrived broken. Ambers are split to both the Dup & MW 6S.

Corrective Action

0806040

...This portion can be removed for Recipient's records.

Date 6/26/08 FedEx Tracking Number 867911581524 2

Sender's Name RANDY ORTLUND Phone 915 497-9457

Company ERM

Address 100 TEXACO ROAD 2446 Dept/Room/Suite/Room

City EL PASO, TX State TX ZIP 79905

Your Internal Billing Reference

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUSTODY SEAL
Date: 6/26/08 Time: 1800
Name: RANDALL H ORTLUND
Company: ERM

Seal Broken By: K
Date: 6.27.08

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUSTODY SEAL
Date: 6/26/08 Time: 1800
Name: RANDALL H ORTLUND
Company: ERM

Seal Broken By: K
Date: 6.27.08

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUSTODY SEAL
6/26/08 Time: 1800
RANDALL H ORTLUND
ERM

Seal Broken By: K
Date: 6.27.08

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUSTODY SEAL
6/26/08 Time: 1800
RANDALL H ORTLUND
ERM

Seal Broken By: K
Date: 6/27/08

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

22-Jan-09

Brad Stokes
ERM Southwest, Inc.
442 Bermuda
Corpus Christi, TX 78411

Tel: (361) 737-9203
Fax:

Re: Huntsman Brickland Refinery

Work Order : **0901136**

Dear Brad,

ALS Laboratory Group received 14 samples on 1/10/2009 08:35 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 25.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Lora Terrill

Electronically approved by: Glenda H. Ramos

Lora Terrill
VP Lab Operations

ACCREDITED IN ACCORDANCE WITH nelac

Certificate No: T104704231-08-TX

ALS Laboratory Group

Date: 22-Jan-09

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: **0901136**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
0901136-01	MW-12	Water		1/7/2009 16:45	1/10/2009 08:35	☐
0901136-02	MW-3S	Water		1/8/2009 11:45	1/10/2009 08:35	☐
0901136-03	EB-1	Water		1/7/2009 16:00	1/10/2009 08:35	☐
0901136-04	FB-1	Water		1/7/2009 17:00	1/10/2009 08:35	☐
0901136-05	MW-3D	Water		1/8/2009 12:40	1/10/2009 08:35	☐
0901136-06	MW-9S	Water		1/8/2009 13:50	1/10/2009 08:35	☐
0901136-07	EB-2	Water		1/8/2009 14:20	1/10/2009 08:35	☐
0901136-08	River-Upstream	Water		1/8/2009 15:00	1/10/2009 08:35	☐
0901136-09	MW-6D	Water		1/8/2009 15:55	1/10/2009 08:35	☐
0901136-10	FB-2	Water		1/8/2009 15:35	1/10/2009 08:35	☐
0901136-11	MW-6S	Water		1/8/2009 16:55	1/10/2009 08:35	☐
0901136-12	Dup-1	Water		1/8/2009 15:00	1/10/2009 08:35	☐
0901136-13	River-Downstream	Water		1/8/2009 17:15	1/10/2009 08:35	☐
0901136-14	TB-1	Water		1/8/2009 17:15	1/10/2009 08:35	☐

ALS Laboratory Group

Date: *22-Jan-09*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0901136
Sample ID: MW-12
Lab ID: 0901136-01
Collection Date: 1/7/2009 04:45 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS			**SW6020**		Prep Date: **1/14/2009**	Analyst: **ALR**
Boron	**1.20**		**0.500**	**mg/L**	10	1/15/2009 06:01 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *22-Jan-09*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0901136
Sample ID: MW-3S
Lab ID: 0901136-02
Collection Date: 1/8/2009 11:45 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	1/12/2009 07:10 PM
Toluene	ND		0.0010	mg/L	1	1/12/2009 07:10 PM
Ethylbenzene	ND		0.0010	mg/L	1	1/12/2009 07:10 PM
Xylenes, Total	ND		0.0030	mg/L	1	1/12/2009 07:10 PM
Surr: 4-Bromofluorobenzene	*101*		*77-129*	*%REC*	1	1/12/2009 07:10 PM
Surr: Trifluorotoluene	*114*		*75-130*	*%REC*	1	1/12/2009 07:10 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *22-Jan-09*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Sample ID: EB-1
Collection Date: 1/7/2009 04:00 PM

Work Order: 0901136
Lab ID: 0901136-03
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	1/12/2009 10:10 AM
Toluene	ND		0.0010	mg/L	1	1/12/2009 10:10 AM
Ethylbenzene	ND		0.0010	mg/L	1	1/12/2009 10:10 AM
Xylenes, Total	ND		0.0030	mg/L	1	1/12/2009 10:10 AM
Surr: 4-Bromofluorobenzene	*104*		*77-129*	*%REC*	1	1/12/2009 10:10 AM
Surr: Trifluorotoluene	*112*		*75-130*	*%REC*	1	1/12/2009 10:10 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *22-Jan-09*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0901136
Sample ID: FB-1
Lab ID: 0901136-04
Collection Date: 1/7/2009 05:00 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	1/12/2009 10:37 AM
Toluene	ND		0.0010	mg/L	1	1/12/2009 10:37 AM
Ethylbenzene	ND		0.0010	mg/L	1	1/12/2009 10:37 AM
Xylenes, Total	ND		0.0030	mg/L	1	1/12/2009 10:37 AM
Surr: 4-Bromofluorobenzene	*100*		*77-129*	*%REC*	1	1/12/2009 10:37 AM
Surr: Trifluorotoluene	*113*		*75-130*	*%REC*	1	1/12/2009 10:37 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *22-Jan-09*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Sample ID: MW-3D
Collection Date: 1/8/2009 12:40 PM

Work Order: 0901136
Lab ID: 0901136-05
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	1/13/2009 09:37 AM
Toluene	ND		0.0010	mg/L	1	1/13/2009 09:37 AM
Ethylbenzene	ND		0.0010	mg/L	1	1/13/2009 09:37 AM
Xylenes, Total	ND		0.0030	mg/L	1	1/13/2009 09:37 AM
Surr: 4-Bromofluorobenzene	*91.0*		*77-129*	*%REC*	1	1/13/2009 09:37 AM
Surr: Trifluorotoluene	*105*		*75-130*	*%REC*	1	1/13/2009 09:37 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *22-Jan-09*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0901136
Sample ID: MW-9S
Lab ID: 0901136-06
Collection Date: 1/8/2009 01:50 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	1/12/2009 04:56 PM
Toluene	ND		0.0010	mg/L	1	1/12/2009 04:56 PM
Ethylbenzene	ND		0.0010	mg/L	1	1/12/2009 04:56 PM
Xylenes, Total	ND		0.0030	mg/L	1	1/12/2009 04:56 PM
Surr: 4-Bromofluorobenzene	*101*		*77-129*	*%REC*	1	1/12/2009 04:56 PM
Surr: Trifluorotoluene	*119*		*75-130*	*%REC*	1	1/12/2009 04:56 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *22-Jan-09*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Sample ID: EB-2
Collection Date: 1/8/2009 02:20 PM

Work Order: 0901136
Lab ID: 0901136-07
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	1/12/2009 03:35 PM
Toluene	ND		0.0010	mg/L	1	1/12/2009 03:35 PM
Ethylbenzene	ND		0.0010	mg/L	1	1/12/2009 03:35 PM
Xylenes, Total	ND		0.0030	mg/L	1	1/12/2009 03:35 PM
Surr: 4-Bromofluorobenzene	*86.7*		*77-129*	*%REC*	1	1/12/2009 03:35 PM
Surr: Trifluorotoluene	*104*		*75-130*	*%REC*	1	1/12/2009 03:35 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *22-Jan-09*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Sample ID: River-Upstream
Collection Date: 1/8/2009 03:00 PM

Work Order: 0901136
Lab ID: 0901136-08
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	1/12/2009 05:22 PM
Toluene	ND		0.0010	mg/L	1	1/12/2009 05:22 PM
Ethylbenzene	ND		0.0010	mg/L	1	1/12/2009 05:22 PM
Xylenes, Total	ND		0.0030	mg/L	1	1/12/2009 05:22 PM
Surr: 4-Bromofluorobenzene	*96.4*		*77-129*	*%REC*	1	1/12/2009 05:22 PM
Surr: Trifluorotoluene	*120*		*75-130*	*%REC*	1	1/12/2009 05:22 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *22-Jan-09*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Sample ID: MW-6D
Collection Date: 1/8/2009 03:55 PM

Work Order: 0901136
Lab ID: 0901136-09
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	1/12/2009 05:49 PM
Toluene	ND		0.0010	mg/L	1	1/12/2009 05:49 PM
Ethylbenzene	ND		0.0010	mg/L	1	1/12/2009 05:49 PM
Xylenes, Total	ND		0.0030	mg/L	1	1/12/2009 05:49 PM
Surr: 4-Bromofluorobenzene	*99.4*		*77-129*	*%REC*	1	1/12/2009 05:49 PM
Surr: Trifluorotoluene	*114*		*75-130*	*%REC*	1	1/12/2009 05:49 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *22-Jan-09*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0901136
Sample ID: FB-2
Lab ID: 0901136-10
Collection Date: 1/8/2009 03:35 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	1/12/2009 11:04 AM
Toluene	ND		0.0010	mg/L	1	1/12/2009 11:04 AM
Ethylbenzene	ND		0.0010	mg/L	1	1/12/2009 11:04 AM
Xylenes, Total	ND		0.0030	mg/L	1	1/12/2009 11:04 AM
Surr: 4-Bromofluorobenzene	*99.8*		*77-129*	*%REC*	1	1/12/2009 11:04 AM
Surr: Trifluorotoluene	*114*		*75-130*	*%REC*	1	1/12/2009 11:04 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *22-Jan-09*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0901136
Sample ID: MW-6S
Lab ID: 0901136-11
Collection Date: 1/8/2009 04:55 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	1/12/2009 02:13 PM
Toluene	ND		0.0010	mg/L	1	1/12/2009 02:13 PM
Ethylbenzene	ND		0.0010	mg/L	1	1/12/2009 02:13 PM
Xylenes, Total	ND		0.0030	mg/L	1	1/12/2009 02:13 PM
Surr: 4-Bromofluorobenzene	*106*		*77-129*	*%REC*	1	1/12/2009 02:13 PM
Surr: Trifluorotoluene	*113*		*75-130*	*%REC*	1	1/12/2009 02:13 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *22-Jan-09*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0901136
Sample ID: Dup-1
Lab ID: 0901136-12
Collection Date: 1/8/2009 03:00 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	1/12/2009 08:04 PM
Toluene	ND		0.0010	mg/L	1	1/12/2009 08:04 PM
Ethylbenzene	ND		0.0010	mg/L	1	1/12/2009 08:04 PM
Xylenes, Total	ND		0.0030	mg/L	1	1/12/2009 08:04 PM
Surr: 4-Bromofluorobenzene	*98.3*		*77-129*	*%REC*	1	1/12/2009 08:04 PM
Surr: Trifluorotoluene	*113*		*75-130*	*%REC*	1	1/12/2009 08:04 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *22-Jan-09*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Sample ID: River-Downstream
Collection Date: 1/8/2009 05:15 PM

Work Order: 0901136
Lab ID: 0901136-13
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	1/12/2009 07:37 PM
Toluene	ND		0.0010	mg/L	1	1/12/2009 07:37 PM
Ethylbenzene	ND		0.0010	mg/L	1	1/12/2009 07:37 PM
Xylenes, Total	ND		0.0030	mg/L	1	1/12/2009 07:37 PM
Surr: 4-Bromofluorobenzene	*102*		*77-129*	*%REC*	1	1/12/2009 07:37 PM
Surr: Trifluorotoluene	*119*		*75-130*	*%REC*	1	1/12/2009 07:37 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Date: *22-Jan-09*

Client: ERM Southwest, Inc.
Project: Huntsman Brickland Refinery
Work Order: 0901136
Sample ID: TB-1
Lab ID: 0901136-14
Collection Date: 1/8/2009 05:15 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **WLR**
Benzene	ND		0.0010	mg/L	1	1/12/2009 09:44 AM
Toluene	ND		0.0010	mg/L	1	1/12/2009 09:44 AM
Ethylbenzene	ND		0.0010	mg/L	1	1/12/2009 09:44 AM
Xylenes, Total	ND		0.0030	mg/L	1	1/12/2009 09:44 AM
Surr: 4-Bromofluorobenzene	*101*		*77-129*	*%REC*	1	1/12/2009 09:44 AM
Surr: Trifluorotoluene	*111*		*75-130*	*%REC*	1	1/12/2009 09:44 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
a - Not accredited
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time
n - Not offered for accreditation

ALS Laboratory Group

Client: ERM Southwest, Inc.
Work Order: 0901136
Project: Huntsman Brickland Refinery

Date: *22-Jan-09*

QC BATCH REPORT

Batch ID: **R72137** Instrument ID **BTEX1** Method: **SW8021B**

MBLK Sample ID: **MEOHW1-011209-R72137** Units: **µg/L** Analysis Date: **1/12/2009 08:50 AM**
Client ID: Run ID: **BTEX1_090112A** SeqNo: **1577076** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	*31.43*	1.0	*30*	0	*105*	*77-129*	0			
Surr: Trifluorotoluene	*34.97*	1.0	*30*	0	*117*	*75-130*	0			

MBLK Sample ID: **BBLKW1-011209-R72137** Units: **µg/L** Analysis Date: **1/12/2009 09:17 AM**
Client ID: Run ID: **BTEX1_090112A** SeqNo: **1577077** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	*30.11*	1.0	*30*	0	*100*	*77-129*	0			
Surr: Trifluorotoluene	*35.29*	1.0	*30*	0	*118*	*75-130*	0			

LCS Sample ID: **BLCSW1-011209-R72137** Units: **µg/L** Analysis Date: **1/12/2009 08:24 AM**
Client ID: Run ID: **BTEX1_090112A** SeqNo: **1577075** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.97	1.0	20	0	110	77-126	0			
Toluene	21.42	1.0	20	0	107	80-124	0			
Ethylbenzene	21.97	1.0	20	0	110	76-125	0			
Xylenes, Total	67.34	3.0	60	0	112	79-124	0			
Surr: 4-Bromofluorobenzene	*29.8*	1.0	*30*	0	*99.3*	*77-129*	0			
Surr: Trifluorotoluene	*33.72*	1.0	*30*	0	*112*	*75-130*	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0901136
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **R72137** Instrument ID **BTEX1** Method: **SW8021B**

MS Sample ID: **0901136-11AMS** Units: **µg/L** Analysis Date: **1/12/2009 02:40 PM**
Client ID: **MW-6S** Run ID: **BTEX1_090112A** SeqNo: **1577658** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.31	1.0	20	0	102	77-126	0			
Toluene	20.35	1.0	20	0	102	80-124	0			
Ethylbenzene	20.55	1.0	20	0	103	76-125	0			
Xylenes, Total	62.37	3.0	60	1.082	102	79-124	0			
Surr: 4-Bromofluorobenzene	*32.48*	1.0	*30*	0	*108*	*77-129*	0			
Surr: Trifluorotoluene	*34.73*	1.0	*30*	0	*116*	*75-130*	0			

MSD Sample ID: **0901136-11AMSD** Units: **µg/L** Analysis Date: **1/12/2009 04:02 PM**
Client ID: **MW-6S** Run ID: **BTEX1_090112A** SeqNo: **1577660** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	18.94	1.0	20	0	94.7	77-126	20.31	6.95	20	
Toluene	18.96	1.0	20	0	94.8	80-124	20.35	7.07	20	
Ethylbenzene	19.95	1.0	20	0	99.8	76-125	20.55	2.96	20	
Xylenes, Total	60.26	3.0	60	1.082	98.6	79-124	62.37	3.43	20	
Surr: 4-Bromofluorobenzene	*29.78*	1.0	*30*	0	*99.3*	*77-129*	32.48	*8.69*	*20*	
Surr: Trifluorotoluene	*32.14*	1.0	*30*	0	*107*	*75-130*	34.73	*7.74*	*20*	

The following samples were analyzed in this batch:

0901136-02A	0901136-03A	0901136-04A
0901136-06A	0901136-07A	0901136-08A
0901136-09A	0901136-10A	0901136-11A
0901136-12A	0901136-13A	0901136-14A

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0901136
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **R72168** Instrument ID **BTEX1** Method: **SW8021B**

MBLK Sample ID: **MEOHW1-011309-R72168** Units: **µg/L** Analysis Date: **1/13/2009 08:43 AM**
Client ID: Run ID: **BTEX1_090113A** SeqNo: **1577846** Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	*28.65*	1.0	*30*	0	*95.5*	*77-129*	0			
Surr: Trifluorotoluene	*32.28*	1.0	*30*	0	*108*	*75-130*	0			

MBLK Sample ID: **BBLKW1-011309-R72168** Units: **µg/L** Analysis Date: **1/13/2009 09:10 AM**
Client ID: Run ID: **BTEX1_090113A** SeqNo: **1577847** Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	*28.6*	1.0	*30*	0	*95.3*	*77-129*	0			
Surr: Trifluorotoluene	*32.06*	1.0	*30*	0	*107*	*75-130*	0			

LCS Sample ID: **BLCSW1-011309-R72168** Units: **µg/L** Analysis Date: **1/13/2009 07:50 AM**
Client ID: Run ID: **BTEX1_090113A** SeqNo: **1577845** Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.64	1.0	20	0	103	77-126	0			
Toluene	20.65	1.0	20	0	103	80-124	0			
Ethylbenzene	20.82	1.0	20	0	104	76-125	0			
Xylenes, Total	60.88	3.0	60	0	101	79-124	0			
Surr: 4-Bromofluorobenzene	*27.73*	1.0	*30*	0	*92.4*	*77-129*	0			
Surr: Trifluorotoluene	*33.07*	1.0	*30*	0	*110*	*75-130*	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0901136
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **R72168** Instrument ID **BTEX1** Method: **SW8021B**

MS Sample ID: **0901136-05AMS** Units: **µg/L** Analysis Date: **1/13/2009 10:03 AM**
Client ID: **MW-3D** Run ID: **BTEX1_090113A** SeqNo: **1577902** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.08	1.0	20	0	100	77-126	0			
Toluene	20.65	1.0	20	0	103	80-124	0			
Ethylbenzene	20.41	1.0	20	0	102	76-125	0			
Xylenes, Total	59.96	3.0	60	0	99.9	79-124	0			
Surr: 4-Bromofluorobenzene	*27.06*	1.0	*30*	0	*90.2*	*77-129*	0			
Surr: Trifluorotoluene	*33.36*	1.0	*30*	0	*111*	*75-130*	0			

MSD Sample ID: **0901136-05AMSD** Units: **µg/L** Analysis Date: **1/13/2009 10:30 AM**
Client ID: **MW-3D** Run ID: **BTEX1_090113A** SeqNo: **1577903** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.96	1.0	20	0	99.8	77-126	20.08	0.569	20	
Toluene	20.48	1.0	20	0	102	80-124	20.65	0.83	20	
Ethylbenzene	20.41	1.0	20	0	102	76-125	20.41	0.0304	20	
Xylenes, Total	59.82	3.0	60	0	99.7	79-124	59.96	0.232	20	
Surr: 4-Bromofluorobenzene	*28*	1.0	*30*	0	*93.3*	*77-129*	*27.06*	*3.41*	*20*	
Surr: Trifluorotoluene	*32.54*	1.0	*30*	0	*108*	*75-130*	33.36	*2.5*	*20*	

The following samples were analyzed in this batch: 0901136-05A

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

Client: ERM Southwest, Inc.
Work Order: 0901136
Project: Huntsman Brickland Refinery

QC BATCH REPORT

Batch ID: **33947** Instrument ID **ICPMS03** Method: **SW6020**

MBLK Sample ID: **MBLKW1-011409-33947** Units: **mg/L** Analysis Date: **1/15/2009 03:08 PM**
Client ID: Run ID: **ICPMS03_090115A** SeqNo: **1580265** Prep Date: **1/14/2009** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	ND	0.050								

LCS Sample ID: **MLCSW1-011409-33947** Units: **mg/L** Analysis Date: **1/15/2009 03:14 PM**
Client ID: Run ID: **ICPMS03_090115A** SeqNo: **1580266** Prep Date: **1/14/2009** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.4899	0.050	0.5	0	98	80-120	0			

MS Sample ID: **0901120-12EMS** Units: **mg/L** Analysis Date: **1/15/2009 03:57 PM**
Client ID: Run ID: **ICPMS03_090115A** SeqNo: **1580328** Prep Date: **1/14/2009** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.982	0.050	0.5	0.4745	102	80-120	0			

MSD Sample ID: **0901120-12EMSD** Units: **mg/L** Analysis Date: **1/15/2009 04:03 PM**
Client ID: Run ID: **ICPMS03_090115A** SeqNo: **1580329** Prep Date: **1/14/2009** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.986	0.050	0.5	0.4745	102	80-120	0.982	0.407	15	

DUP Sample ID: **0901120-12EDUP** Units: **mg/L** Analysis Date: **1/15/2009 03:38 PM**
Client ID: Run ID: **ICPMS03_090115A** SeqNo: **1580326** Prep Date: **1/14/2009** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.5019	0.050	0	0	0	0-0	0.4745	5.61	25	

The following samples were analyzed in this batch: 0901136-01A

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

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Chain of Custody Form

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Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 0901?

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Huntsman Brickland Refinery	A	BTEX (8021)
Work Order		Project Number	85439	B	Total Metals (6020/7000) Boron
Company Name	ERM Southwest, Inc.	Bill To Company	ERM Southwest, Inc.	C	
Send Report To	Brad Stokes	Invoice Attn	Brad Stokes	D	
Address	442 Bermuda	Address	442 Bermuda	E	
				F	
City/State/Zip	Corpus Christi, TX 78411	City/State/Zip	Corpus Christi, TX 78411	G	
Phone	(361) 737-9203	Phone	(361) 737-9203	H	
Fax		Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-12	1/7/09	1645	WATER	2,8	1		X									
2	MW-3S	1/8/09	1145	WATER	1,8	3	X										
3	EB-1	1/7/09	1600	WATER	1,8	2	X										
4	FB-1	1/7/09	1700	WATER	1,8	2	X										
5	MW-3D	1/8/09	1240	WATER	1,8	3	X										
6	MW-9S	1/8/09	1350	WATER	1,8	3	X										
7	BB-2	1/8/09	1420	WATER	1,8	2	X										
8	RIVER-UPSTREAM	1/8/09	1500	WATER	1,8	3	X										
9	MW-6D	1/8/09	1555	WATER	1,8	3	X										
10	FB-2	1/8/09	1535	WATER	1,8	2	X										

Sampler(s) Please Print & Sign: RANDOLPH ORTLIN [signature]
Shipment Method: FedX
Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour
Results Due Date:

Relinquished by: [signature] Date: 1/9/09 Time: 1500 Received by:
Relinquished by: Date: Time: Received by (Laboratory): [signature] 1-10-09 0985
Logged by (Laboratory): Date: Time: Checked by (Laboratory):

Notes: 10 Work Days TAT.

Cooler ID | Cooler Temp. | QC Package: (Check One Box Below)
☑ Level II Std QC
☐ Level III Std QC/Raw Data
☐ Level IV SW846/CLP
☐ Other ________
☐ TRRP CheckList
☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.

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Chain of Custody Form

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Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 0901136

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Huntsman Brickland Refinery	A	BTEX (8021)
Work Order		Project Number	85439	B	Total Metals (6020/7000) Boron
Company Name	ERM Southwest, Inc.	Bill To Company	ERM Southwest, Inc.	C	
Send Report To	Brad Stokes	Invoice Attn	Brad Stokes	D	
Address	442 Bermuda	Address	442 Bermuda	E	
				F	
City/State/Zip	Corpus Christi, TX 78411	City/State/Zip	Corpus Christi, TX 78411	G	
Phone	(361) 737-9203	Phone	(361) 737-9203	H	
Fax		Fax		I	
e-Mail Address		e-Mail Address		J	

No	Sample Description	Date	Time	Matrix	Pres	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-65	1/8/09	1655	WATER	1,8	2	X										
2	DUP-1	1/8/09	1500	WATER	1,8	2	X										
3	MW-65-MS	1/8/09	1655	WATER	1,8	2	X										
4	MW-65-MSD	1/8/09	1655	WATER	1,8	2	X										
5	RIVER-DOWNSTREAM	1/8/09	1715	WATER	1,8	2	X										
6	TB-1	1/8/09	—	WATER	1,8	2	X										
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: RANDOLPH ORTEGA
Randolph Ortega

Shipment Method

Required Turnaround Time: (Check Box) ☐ Other ☐ 2 WK Days ☐ 24 Hour ☑ Std 10 WK Days ☐ 5 WK Days

Results Due Date:

Relinquished by: Randolph Ortega — Date: 11/9/09 — Time: 1500 — Received by:

Relinquished by: — Date: — Time: — Received by (Laboratory): 11/09/0835

Logged by (Laboratory): — Date: — Time: — Checked by (Laboratory):

Notes: 10 Work Days TAT.

Cooler ID: | Cooler Temp.:

QC Package: (Check One Box Below)
- ☑ Level II Std QC
- ☐ Level III Std QC/Raw Data
- ☐ Level IV SW846/CLP
- ☐ Other _____
- ☐ TRRP CheckList
- ☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-NaHSO 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group

Sample Receipt Checklist

Client Name: ERMSW-CC

Date/Time Received: 1/10/2009 08:35

Work Order Number 0901139

Received by: RSZ

Checklist completed by Signature 1-10-09 Date

Reviewed by Initials LT 1/12/09 Date

Matrix: water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ✓	No	Not Present
Custody seals intact on shipping container/cooler?	Yes ✓	No	Not Present
Custody seals intact on sample bottles?	Yes	No	Not Present ✓
Chain of custody present?	Yes ✓	No	
Chain of custody signed when relinquished and received?	Yes ✓	No	
Chain of custody agrees with sample labels?	Yes ✓	No	
Samples in proper container/bottle?	Yes ✓	No	
Sample containers intact?	Yes ✓	No	
Sufficient sample volume for indicated test?	Yes ✓	No	
All samples received within holding time?	Yes ✓	No	
Container/Temp Blank temperature in compliance?	Yes ✓	No	
Temperature(s)/Thermometer(s):	3.2c	002	
Cooler(s)/Kit(s):	3258		
Water - VOA vials have zero headspace?	Yes ✓	No	No VOA vials submitted
Water - pH acceptable upon receipt?	Yes ✓	No	N/A

Adjusted? Checked by

Login Notes:

Client contacted: Date contacted: Person contacted

Contacted by: Regarding:

Comments:

Corrective Action

090136

From: Origin ID: ELPA (915) 497-9452
ERM
ERM
100 Texaco RD

El Paso, TX 79905

FedEx Express

JCLS111208/2023

Ship Date: 09JAN09
ActWgt: 20.0 LB
CAD: 5919001/INET8091
Account#: S *********

Delivery Address Bar Code

Ref # 0085439
Invoice #
PO #
Dept #

SHIP TO: (281) 530-5656 BILL SENDER

Lora Terrill
ALS Laboratory Group
10450 Stancliff Rd
STE 210
Houston, TX 77099

TRK# 0201 7962 4337 3258

SATURDAY ### A2
PRIORITY OVERNIGHT

77099
TX-US
IAH

X0 JGQA

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic valueof the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $500, e.g. Jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

aboratory Group
ancliff Rd., Suite 210
., Texas 77099
281 530 5656
+1 281 530 5887

CUSTODY SEAL

Date: 1/9/09 Time:
Name: Representative of ERM
Company:

Seal Broken By:
Date: 1/9/09

Waste Disposal

Appendix C

March 19, 2009
Project No. 0085439

Environmental Resources Management Southwest, Inc.
206 E. 9th St., Suite 1700
Austin, Texas 78701
(512) 459-4700

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CESQG
2. Page 1 of 1
3. Emergency Response Phone: 1-800-468-1760
4. Manifest Tracking Number: **001358855 SKS**

5. Generator's Name and Mailing Address:
ENVIRONMENTAL RESOURCES
100 TEXACO ROAD — C/O RANDOLPH ORTEGON
EL PASO TX 79905
Generator's Phone: 915-497-9453

Generator's Site Address (if different than mailing address):
BRICK LAND REFINERY SITE
INTERSTATE 10 & FAISONA DR
SUNLAND PARK NM 88063

6. Transporter 1 Company Name: SAFETY-KLEEN SYSTEMS, INC — U.S. EPA ID Number: TXR000077689

7. Transporter 2 Company Name: — U.S. EPA ID Number:

8. Designated Facility Name and Site Address:
SAFETY-KLEEN SYSTEMS, INC. 000618
1722 COOPER CREEK ROAD
DENTON, TX 76208
Facility's Phone: 940-483-5200
U.S. EPA ID Number: TXD077603371

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON REGULATED SOLID	1	DM	55	P	OUTS 1141
	2. NON-REGULATED LIQUID	1	DM	55	P	OUTS 1141
	3.					
	4.					

14. Special Handling Instructions and Additional Information: SK TRCK#110323538 000330361 4

SK AUTH'D TO USE SUBSEQUENT CARRIERS ...

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: BRAD STOKES — Signature: [signature] — Month 2 Day 6 Year 09

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Sergio Fierro — Signature: [signature] — Month 2 Day 6 Year 09
Transporter 2 Printed/Typed Name: — Signature: — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name — Signature — Month Day Year

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

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