AP - 110

Facility-Wide GW Monitoring Report

April 2013

State of New Mexico
Energy, Minerals and Natural Resources Department

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Governor

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Oil Conservation Division

MAY 16, 2014

Mr. Dan Crawford
Environmental Manager
Navajo Refining Company, L.L.C.
501 East Main
Artesia, New Mexico 88210

RE: Facility-Wide Groundwater Monitoring Work Plan- FWGWMWP (July 2013)
Facility-Wide Groundwater Monitoring Report- FWGWMR (April 2014)

Mr. Crawford:

The New Mexico Oil Conservation Division (OCD) has completed its review of the above Facility-Wide Groundwater Monitoring Work Plan- FWGWMWP (plan). The attached cover letter (letter) dated July 31, 2013 with the plan is extensive and contains many requests and statements that could have been incorporated into the plan. In addition, OCD recently reviewed the Facility-Wide Groundwater Monitoring Report- FWGWMR (report) dated April 2014, which appears to provide information needed to help address requests in the letter.

OCD review comments on the plan, letter, and report are provided herein. OCD comments are subject to change based on hydrogeologic conditions caused by hydrodynamic pumping conditions at facility water supply wells that induce a cone(s) of depression beneath the facility. OCD observes ground water contamination documented in ground water that is ultimately captured within the cone(s) of depression induced by WW-North, WW-South, and WW-East (refinery water supply wells). These wells appear to be controlling the contaminant hydrogeology (i.e., contaminant migration, dispersion, dissolution, mixing, and dimensions of cone(s) of depression, capture of ground water contamination) within the refinery property boundary.

OCD cover **letter** comments, recommendations and/or requirements are:

1) OCD notices on Page 5 of the letter "Laboratory Analytical List" Paragraph 1: The operator states, "However, this sample plan was developed before the installation of many of the wells in the current network and without historical perspective of relevant ground water chemicals of concern." This statement questions the appropriateness of any operator request(s) in the letter accompanying the plan for reduction in the monitoring frequency, etc. However, a recent review of the submitted report containing contaminant hydrogeologic information has allowed OCD to proceed with its review and comment on the plan, letter, etc.
2) In the future, the operator shall incorporate details of the cover letter into the plan for OCD review, consideration and possible approval instead of into a separate cover letter.

3) All monitor/recovery wells that are not sampled shall remain in-tact for possible utilization in the future.
4) MWs 10 and 26, which were recommended to not be sampled anymore by the operator, shall be sampled at least annually. The MWs provide useful contaminant hydrogeologic information, i.e., spreading plume(s), etc. that could initiate the contingency plan (CP) over time.
5) WW-North, WW-South and WW-East wells are required to be monitored at least quarterly from now on because they appear to be effectively controlling the facility hydrogeology and ultimately capturing any migrating contaminants in ground water at the facility. Since the facility is within the City of Lovington Well Head Protection Area (WHPA) and ground water appears to be a USDW, and the water produced from the wells is used for sanitary and refinery purposes.
6) Analytical field sample results for pH, Specific Conductivity, field sample results, etc. shall be reported with the analytical data in future reports. OCD understands why field sample analysis makes sense for certain parameters following acceptable field sample collection and test procedures.
7) The CP becomes effective in Section 5.0 when 19.15.30 NMAC becomes applicable. Therefore, the CP must comply with the above environmental contingency measures and/or regulations.
8) On Page 6 "Closing" the operator indicates that wells installed after the date of the submittal (July 31, 2013- MWs 12, 17 and 30?) will be sampled on a semi-annual basis until a concentration history has been developed. OCD requires that "until a concentration history has been developed" be replaced with "and listed in the FWGWMWP approved by the OCD".

OCD **plan** comments, recommendations and/or requirements are:

1) The operator shall comply with United State Environmental Protection Agency (EPA) Quality Assurance/Quality Control with Data Quality Objectives (DQOs) associated with all environmental field sampling and environmental analytical laboratory work completed for the OCD, and/or OCD approved environmental methods, etc.
2) Table 2-1 Groundwater Sampling Plan Summary: F, G and H shall also be included during February and August Sampling Events; however, the operator shall utilize acceptable field analytical methods to document these parameter for reports.
3) Section 5.0 "Groundwater Monitoring Contingency Plan" of the Table of Contents and Page 5-1 do not correlate, i.e., Section 5.0 is "Additional Assessment". OCD does not approve of this section because the facility is under an Abatement Plan Permit (AP-110) and shall comply with Part 30 (19.15.30 NNAC "Remediation") of the Oil and Gas Regulations when applicable.
4) Section 5.0 above could be changed to address OCD leaks, spills, releases guidance associated with any new "C-141 Spill/Release" form submittal that is associated with Part 29 of the Oil and Gas Regulations and would be applicable only in the event of a new leak, spill and/or release.
5) Section 5.0 rationale for ground water sampling based on soil screening limits is also not approved. OCD relies on some criteria from its oil and gas regulations, but also utilizes the WQCC Toxic Pollutants and Standards for ground water contamination in 20.6.2.7(WW) NMAC and 20.6.2.3103 NMAC. Since ground water contamination above WQCC Standards has been confirmed, OCD relies on these standards for ground water cleanup to the greater of the standards and/or background.
6) Section 6.0 References should include OCD Oil and Gas Spill/Release (Part 29) (19.15.29 NMAC) and Remediation (Part 30) (19.15.30 NMAC) references along with the Water Quality Control Commission (WQCC) (20.6.2 NMAC) water quality toxic pollutants (Section 7(WW)) and ground water standards (Section 3103).

OCD **plan** "Appendix B" (Release Response Guidance) comments, recommendations and/or requirements are:

1) Section 1.0 "Initial Release Response and Notification": The reference to 19.15.3.116 NMAC does not exist. Leaks, spills, and releases are handled under Part 29 (10.15.29 NMAC) and require verification soil remediation in the C-141 Form.

2) Section 3.0 "Soil Confirmation Sampling": The operator appears be relying on RALs or SSLs to determine whether leaks, spills, releases to soil media need to be cleaned up. All leaks, spills, and releases to soil media need to be cleaned up by the operator. The issue will become the chemicals of concern and clean-up criteria approved by OCD. It is important to note that OCD must protect all ground water less than 10,000 ppm TDS. While SSLs may be used to assess the risk to human health from acceptable exposure in contaminated soil media, OCD's focus is on the protection of surface and ground water, in addition to public safety at refineries.

3) Section 4.0 Development of RALs and SSLs: OCD relies on the action levels specified in the Table on Page 4-2; however, OCD may stipulate other parameters of concern, i.e., chloride, sulfate, pH, etc. The operator is directed to Part 30 (19.15.30 NMAC "Remediation") for ground water issues at or from the facility.

4) Table 1 does not address contaminants, i.e., VOCs, SVOCs, general chemistry, metals, etc. in ground water.

5) OCD accepts Attachment 1 (C-141 Form) for notification of leaks, spills and releases at the facility. OCD may also accept it for reporting spreading of the ground water plume; however, OCD requires the operator to address Part 30 (see above) for any ground water contamination under its Abatement Plan Permit (AP-110). The C-141 Form may be utilized for ground water contamination discovery purposes.

6) OCD accepts Attachment 2 as a good approach for handling Part 29 leaks, spills and releases.

OCD **report** comments, recommendations and/or requirements are:

1) OCD observes the presence of toxic pollutants detected in some monitor wells at the facility.

2) Nitrites and nitrates have been detected above WQCC Standards at MW-25 near the office and sanitary facilities. The operator shall evaluate septic disposition procedures for preventing discharges into ground water above the WQCC water quality standards, i.e., pumping septic systems and proper disposal, etc.

3) OCD requires that a monitor well be emplaced hydrogeologically upgradient of MW-11 where BTEX is present above WQCC water quality standards to help identify the source of contamination. In addition, the operator shall propose corrective action(s) to remove contamination from ground water within 30 days of receipt of this letter.

4) MWs 18 and 19 appear to be positioned at the center of the ground water cone of depression and should be monitored semi-annually at minimum.

5) The operator shall review oil and gas well records based on well API#s within vicinity and upgradient of contamination (Figures 5 – 10) to identify any possible oil and gas well source(s) of contamination, i.e., any compliance issues. LPU-14 is the only active well (injection well) located upgradient from MW-15 based on the hydrogeology. There are also some production wells that are TA's and a PA'd injection well (LSAU-4). MW-2 appears to be the "background" ground water quality well for the facility.

6) The operator should implement analytical and acceptable statistical measures to establish background ground water quality criteria for the facility if it does not wish to rely solely on WQCC water quality standards at the facility.

Please contact me at (505) 476-3490 if you have questions. Thank you.

Sincerely,

Carl J. Chávez
Environmental Engineer

CJC/cjc

cc: Robert Combs, Navajo Refining Company, L.L.C.
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April 12, 2013

Mr. Carl J. Chavez
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: 2012 Annual Facility-Wide Groundwater Monitoring Report, Navajo Refining Company, Lea Refinery, Lovington, New Mexico, AP-110.

Dear Mr. Chavez:

Please find enclosed the original and one electronic copy of the *2012 Annual Facility-Wide Groundwater Monitoring Report* (Report) for the Navajo Refining Company (NRC) Lea Refinery (refinery) located in Lovington, New Mexico. The Report summarizes the results of groundwater monitoring activities conducted at the refinery during calendar year 2012.

This Report was prepared in accordance with NRC's February 22, 2013, Memorandum to the New Mexico Oil Conservation Division (OCD) and OCD's response on February 28, 2013. Groundwater monitoring activities were conducted in general accordance with the Groundwater Discharge Permit (GW-014) issued by the OCD, even though the Groundwater Discharge Permit was rescinded by the OCD on February 9, 2012.

If you should have any questions or comments regarding this Report, please feel free to contact me at (512) 684-3104 or Julie Speer at (512) 684-3148.

Sincerely,

Bryan Gilbert, P.G.
Project Manager

Sincerely,

Julie Speer, E.I.T.
Associate Project Manager

cc: Robert Combs, The HollyFrontier Companies, Artesia, New Mexico
Michael Holder, Navajo Refining Company, Artesia, New Mexico
Arsin Sahba, TRC, Austin, Texas

2012 Annual Facility-Wide Groundwater Monitoring Report



The HollyFrontier Companies
Navajo Refining Company
Lea Refinery
Lovington, New Mexico

April 2013

Prepared for:

HOLLYFRONTIER
Navajo Refining Company
Artesia, New Mexico

Prepared by:

TRC
TRC Environmental Corporation
Austin, Texas

2012 Annual Facility-Wide Groundwater Monitoring Report

The HollyFrontier Companies/Navajo Refining Company
Lea Refinery
Lovington, New Mexico

Prepared for:

HOLLYFRONTIER

The HollyFrontier Companies/Navajo Refining Company
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TRC Project No. 196364

April 2013

Principal Lead _____ **Technical Lead** _____

EXECUTIVE SUMMARY

This *2012 Annual Facility-Wide Groundwater Monitoring Report* documents groundwater monitoring activities conducted at the Lea Refinery (refinery) in Lovington, New Mexico during calendar year 2012. The monitoring objectives are to determine groundwater elevations, flow direction, and gradient and obtain dissolved-phase toxic pollutant concentration data.

The groundwater monitoring program consists of semi-annual groundwater gauging of wells, semi-annual groundwater sampling of wells, monthly sampling of one water supply well and holding tank, and annual reporting. Monitoring activities were conducted in general accordance with the Groundwater Discharge Permit (GW-014) issued by the New Mexico Oil Conservation Division (OCD), even though the Groundwater Discharge Permit was rescinded by the OCD on February 9, 2012. In accordance with NRC's February 22, 2013, Memorandum to the OCD, this *2012 Annual Facility-Wide Groundwater Monitoring Report* documents groundwater monitoring activities conducted in 2012, including the January/February 2012 groundwater monitoring event that was previously documented in the April 15, 2012, *Ground Water and Treatment System Annual Monitoring Report* prepared by Safety & Environmental Solutions, Inc. (SESI, Inc).

The 2012 groundwater monitoring results indicate that physical and chemical groundwater conditions are generally consistent with historical data.

Navajo Refining Company (NRC) will continue to implement groundwater monitoring activities during 2013. A *Facility-Wide Groundwater Monitoring Work Plan* will be prepared and submitted to the OCD by July 31, 2013. The work plan will include standard response/corrective action procedures for responding to releases at the refinery.

TRC and NRC submitted a *Source Determination and Background Evaluation Work Plan* to OCD on December 6, 2012. The OCD provided comments to the December 2012 work plan in an April 3, 2013, e-mail. NRC will submit a response to OCD's comments under separate cover. Groundwater source determination and background evaluation activities will be conducted in 2013. A Phase 2 Abatement Plan Proposal will be submitted after evaluation of the investigation results.

Wells MW-12 and MW-17 will be replaced in 2013 because they were damaged and cannot be gauged and/or sampled. Well abandonment and installation activities will be documented in the *2013 Annual Facility-Wide Groundwater Monitoring Report* to be submitted to OCD by April 15, 2014.

The following three releases occurred at the refinery during 2012: (1) cooling water spill from the cooling tower on April 30, 2012; (2) gas oil spill from Tank 104B on June 6, 2012; and (3) gas oil spill at Holly Energy Partners (HEP) pump station on December 27, 2012. Final documentation regarding the Tank 104-B spill will be provided to OCD by May 15, 2013. The April 2012 Cooling Tower release will be further investigated with documentation provided to OCD by July 31, 2013. The December 2012 HEP pump station gas oil release will be investigated with documentation provided to OCD by September 15, 2013.

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1.0 INTRODUCTION

On behalf of The HollyFrontier Companies (HFC) and Navajo Refining Company (NRC), TRC Environmental Corporation (TRC) is submitting this *2012 Annual Facility-Wide Groundwater Monitoring Report* to summarize the results of groundwater monitoring activities conducted at the Lea Refinery (refinery) in Lovington, New Mexico during calendar year 2012. Previous annual monitoring reports were submitted in accordance with a Groundwater Discharge Permit (GW-014) issued by the New Mexico Oil Conservation Division (OCD). The Groundwater Discharge Permit was due to expire on October 30, 2011 and a renewal draft permit was issued in August 2011 that was to go into effect by November 1, 2011. However, this draft permit was rescinded by the OCD on February 9, 2012. This report is prepared in accordance with NRC's February 22, 2013, Memorandum to the OCD and OCD's response on February 28, 2013.

1.1 Refinery Description

The NRC Lea Refinery is located approximately five miles south of Lovington in Lea County, New Mexico. The facility is operated by NRC and consists of refining operations and includes Holly Energy Partners (HEP) pipeline and receiving stations. A refinery vicinity map is provided as Figure 1 and a refinery site plan is provided as Figure 2.

2.0 SEMI-ANNUAL GROUNDWATER MONITORING ACTIVITIES

Semi-annual groundwater monitoring activities were conducted at the Lea Refinery in January/February 2012 and July 2012. Safety & Environmental Solutions, Inc. (SESI) conducted the first semi-annual groundwater monitoring event from January 30 to February 2, 2012, and the second semi-annual event from July 23 to July 30, 2012. Groundwater monitoring activities consisted of: (1) gauging 28 refinery monitoring wells (MW-1 through MW-16 and MW-18 through MW-29) and one recovery well (RW-1) and (2) collecting groundwater samples for laboratory analysis from 27 refinery monitoring wells (MW-1 through MW-11, MW-12 through MW-16, and MW-18 through MW-29), one recovery well, and three water supply wells (WW-North, WW-South, and WW-East). The locations of the monitoring wells, recovery well, and water supply wells are presented in Figure 2.

The following deviations to the Groundwater Discharge Permit (GW-014) were documented during both monitoring events:

- Well MW-12 was damaged and could not be sampled.
- Well MW-17 was damaged and could not be gauged or sampled.

2.1 Fluid Level Gauging

During both the January/February 2012 and July 2012 semi-annual monitoring events, 28 monitoring wells (MW-1 through MW-16 and MW-18 through MW-29) and one recovery well (RW-1) were gauged to determine the groundwater elevation, groundwater flow direction and gradient, the presence or absence of phase-separated hydrocarbons (PSH), and apparent PSH thickness. A decontaminated water level meter (Solinst Model 101) was used to measure static depth to water in wells that historically did not contain PSH (MW-2 through MW-6, MW-8 through MW-16, and MW-18 through MW-29). A decontaminated oil-water interface probe (Solinst Model 122) was used to measure depth to water and depth to PSH, if present, in wells that have historically contained PSH (MW-1, MW-7, and RW-1). Depth to water and depth to PSH were measured to the nearest 0.01-foot from the top of the well casing.

2.2 Groundwater Sample Collection

Groundwater samples were collected for laboratory analysis from 27 refinery monitoring wells (MW-1 through MW-11, MW-13 through MW-16, and MW-18 through MW-29), one recovery well (RW-1), and three water supply wells (WW-North, WW-South, and WW-East) during both the January/February 2012 and July 2012 semi-annual monitoring events. Groundwater samples could not be collected from monitoring wells MW-12 and MW-17 because these wells were damaged or destroyed during previous refinery operations. Wells MW-12 and MW-17 will be replaced in 2013.

Each monitoring and recovery well was purged and sampled using low-flow sampling procedures. A stainless steel, submersible pump (Proactive model SS-Monsoon) with a low-flow, electric controller and dedicated vinyl tubing was used for purging and sampling the monitoring wells and recovery well. The pump intake was placed at the middle of the water column because the water elevations were within the screened well intervals. A water quality meter was used to measure pH, temperature, and conductivity at regular intervals during the purging process to obtain geochemical data and to monitor for stabilization of the groundwater. The purging process was considered complete when the water quality parameters achieved stabilization.

The water supply wells were purged and sampled from a sampling point (i.e., tap or spigot) located at or near the well head or pump house and before the water supply is introduced into any storage tank or treatment unit. The wells were purged at the sample point to remove any standing water from the well casing and surface piping. Grab readings of geochemical parameters, including pH, temperature, and conductivity, were also collected during the purging process.

After the purging process was complete, groundwater samples were collected directly from the dedicated tubing (for the monitoring and recovery wells) or from the water supply well sampling point into method-specific containers provided by the laboratory. Samples collected for dissolved metal analyses were filtered in the field using a 0.45 micron filter. All groundwater samples were submitted to ALS Environmental Laboratory in Houston, Texas under appropriate chain-of-custody documentation for the following analyses:

- Volatile organic compounds (VOCs) by Method SW8260;
- Semi-volatile organic compounds (SVOCs) by Method SW8270;
- Dissolved metals (aluminum, arsenic, barium, boron, cadmium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, nickel, selenium, silver, uranium, zinc) by Method SW6020;
- Total mercury by Method SW7470A;
- Anions (chloride, fluoride, nitrate, nitrite, and sulfate) by EPA Method 300.0;
- Alkalinity by Method SM2320B;
- Specific conductivity by Method M2510 B; and
- Total Dissolved Solids (TDS) by Method M2540C.

3.0 SEMI-ANNUAL GROUNDWATER MONITORING RESULTS

Results of the semi-annual groundwater monitoring activities conducted in January/February 2012 and July 2012 are discussed below.

3.1 Fluid Gauging Results

Fluid level gauging was performed from January 30 to February 2, 2012 and on July 23, 2012. Depth to water measurements and groundwater elevations are presented in Table 1. No PSH was detected in any monitoring or recovery well during either gauging event. Potentiometric groundwater surface maps for the January/February 2012 and July 2012 gauging events are presented as Figures 3 and 4, respectively. The groundwater elevations measured during both gauging events indicate groundwater flows radially (southeast, south, and north/northwest) towards a cone of depression near the three water supply wells located within the central portion of the Lea Refinery. This cone of depression is consistent with previous events and is induced by groundwater pumping from the three on-site water supply wells.

Groundwater elevations measured during the January/February 2012 event decreased an average 1.74 feet from those measured in February 2011. The January/February 2012 groundwater elevation data indicates groundwater beneath the northwestern portion of the Lea Refinery flows southeast towards the cone of depression at a hydraulic gradient ranging from 0.003 to 0.006 feet per foot. North of the cone of depression, groundwater flows south at a hydraulic gradient of 0.007 feet per foot. South/southeast of the cone of depression, groundwater flows north/northwest at a hydraulic gradient of 0.005 feet per foot.

Groundwater elevations measured during the July 2012 event decreased an average 1.91 feet from those measured in July 2011. The July 2012 groundwater elevation data indicates groundwater northwest of the cone of depression flows southeast at a hydraulic gradient ranging from of 0.003 to 0.019 feet per foot. North of the cone of depression, groundwater flows south at a hydraulic gradient ranging from of 0.006 to 0.015 feet per foot. South/southeast of the cone of depression, groundwater flows north/northwest at a hydraulic gradient ranging from 0.004 to 0.021 feet per foot. The increased hydraulic gradient observed in July 2012 near the cone of depression is caused by a decrease in the groundwater elevation measured at MW-18. The groundwater elevation measured at MW-18 in July 2012 decreased 9.69 feet from January 2012, which is anomalously low compared to historical groundwater elevation measurements. The groundwater level in this well will be watched closely during the next monitoring event.

A graph of groundwater elevations versus time for wells MW-4 and MW-6 is provided in Appendix A. As shown on the graph, groundwater elevations wells MW-4 and MW-6 have decreased 4.21 feet and 4.36 feet, respectively, from June 2009 to July 2012. These reductions in groundwater are consistent across the refinery and are likely due to (1) limited recharge due to

low rainfall levels and (2) active pumping from three on-site water supply wells and City of Lovington water supply wells located northwest and west (i.e., upgradient) of the refinery.

3.2 Groundwater Sampling Results

Analytical results of organic and inorganic constituents in groundwater samples collected during the 2012 sampling events are presented in Tables 2 and 3, respectively. The analytical data are compared to the New Mexico Water Quality Control Commission (WQCC) Human Health Standards for groundwater and any results that exceeded these standards are shaded gray. Groundwater concentration maps are provided as Figures 5 to 13 for constituents that exceeded WQCC Standards. Laboratory analytical reports are provided in Appendix B. Plots of groundwater concentrations over time for detected constituents are provided in Appendix C.

3.2.1 Organic Constituent Results

Analytical results for VOCs and SVOCs (organic constituents) in groundwater are presented in Table 2. Exceedances of the WQCC Standards are shaded in Table 2. A discussion of the organic constituent results is provided below. Naphthalene results are included in the VOC (SW8260) and SVOC (SW8270) sections as it is reported by both analytical methods.

3.2.1.1 Volatile Organic Compounds

VOCs were not detected above the laboratory reporting limit in 30 of the 31 wells sampled during both the January/February and July 2012 sampling events. VOCs were only detected in monitoring well MW-11 during both sampling events. Concentration maps of VOCs in groundwater for the January/February and July 2012 sampling events are provided as Figures 5 and 6, respectively.

In February 2012, benzene, ethylbenzene, xylenes, and naphthalene were detected above the laboratory reporting limit in well MW-11, with benzene and naphthalene reported at concentrations above the WQCC Standards. Xylenes and naphthalene had not previously been detected in well MW-11. The benzene concentration in well MW-11 increased from 1.2 milligrams per liter (mg/L) in July 2011 to 7.8 mg/L in February 2012.

In July 2012, only benzene was detected above the laboratory reporting limit in well MW-11 at a concentration above the WCQQ Standard. The benzene concentration decreased from the February 2012 result of 7.8 mg/L to 0.049 mg/L in July 2012. The February 2012 benzene concentration of 7.8 mg/L in MW-11 is anomalous compared to historical data.

Well MW-11 will be watched closely during future monitoring events. In addition, source determination investigation activities will be conducted in 2013 to determine the potential source of benzene in well MW-11.

3.2.1.2 Semi-Volatile Organic Compounds

SVOCs were not detected above the laboratory reporting limit in 28 of the 31 wells sampled during the January/February 2012 event and in 30 of the 31 wells sampled during the July 2012 event.

In January/February 2012, naphthalene was detected in monitoring wells MW-18 and MW-29 at concentrations below the WQCC Standards and in well MW-11 at a concentration above the WQCC Standard. Naphthalene had not previously been detected in wells MW-18 and MW-29, nor had it been previously detected above the WQCC Standard in well MW-11. The naphthalene concentration in well MW-11 increased from 0.00036 mg/L in July 2011 to 0.039 in February 2012. In addition, 2-methylnaphthalene and phenol were detected in well MW-11 at concentrations below the WQCC Standards. A concentration map of SVOCs in groundwater for the January/February 2012 sampling event is provided as Figure 7.

In July 2012, SVOCs were only detected in monitoring well MW-11 at concentrations below the WQCC Standards. The SVOCs detected in MW-11 included naphthalene and phenol. A concentration map of SVOCs in groundwater for the July 2012 sampling event is not provided because none of the reported concentrations exceeded the WQCC Standards.

Well MW-11 will be watched closely during future monitoring events. In addition, source determination investigation activities will be conducted in 2013 to determine the potential source of naphthalene in well MW-11.

3.2.2 Inorganic Constituent Results

Analytical results for anions, TDS, and metals (inorganic constituents) in groundwater are presented in Table 3. All exceedances of the WQCC Standards are shaded in Table 3. A discussion of the inorganic constituent results is provided below.

Source determination and background evaluation activities will be conducted in 2013 to determine if inorganic concentrations in groundwater at the refinery are representative of background conditions or other upgradient sources in the vicinity of the refinery or are likely sourced from the NRC operations at the refinery.

3.2.2.1 Anions

The January/February 2012 analytical results indicate that chloride and fluoride are present in groundwater at concentrations above their respective WQCC Standards. Chloride was detected at a concentration above the WQCC Standard of 250 mg/L in 6 of the 31 wells sampled with a maximum detected concentration of 887 mg/L in MW-23. Fluoride was detected at a concentration above the WQCC Standard of 1.6 mg/L in 4 of the 31 wells sampled with a maximum detected concentration of 2.94 mg/L in MW-3.

The July 2012 analytical results indicate that chloride, fluoride, and nitrate-nitrite are present at concentrations above their respective WQCC Standards. Chloride was detected at a concentration above the WQCC Standard of 250 mg/L in 5 of the 31 wells sampled with a maximum detected concentration of 1,130 mg/L in MW-19. Fluoride was detected at a concentration above the WQCC Standard of 1.6 mg/L in 4 of the 31 wells sampled with a maximum detected concentration of 2.70 mg/L in MW-3. Nitrate-nitrite was detected above its WQCC Standard of 10 mg/L in well MW-25 at a concentration of 37.1 mg/L.

Concentration maps of anions that exceeded WQCC Standards in groundwater for the January/February 2012 and July 2012 sampling events are provided as Figures 8 and 9, respectively.

Reported anion concentrations for the 2012 sampling events were generally consistent with previous sampling results, with notable increases in the following wells:

- MW-15: Chloride concentrations increased from 236 mg/L in July 2011 to 304 mg/L in January 2012, which is the historical maximum reported concentration at the well since August 2010. The chloride concentration decreased slightly to 291 mg/L during the July 2012 sampling event, but both the 2012 chloride results are the first exceedances of the WQCC Standard observed in MW-15. The historical trend of chloride concentrations in MW-15 indicates fluctuating concentrations likely related to seasonal recharge effects.

- MW-19: Chloride concentrations increased from 610 mg/L in January 2012 to 1,130 mg/L in July 2012, which is the maximum reported concentration at the well since August 2010. The historical trend of chloride concentrations in MW-19 indicates fluctuating concentrations likely related to seasonal recharge effects.

- MW-24: Fluoride concentrations increased from 1.55 mg/L in July 2011 to 2.42 mg/L in February 2012 and July 2012, which is slightly higher than the previous the historical maximum of 2.31 mg/L reported in August 2010. However, the reported concentration of 1.55 mg/L in July 2011 was a historical minimum and is anomalous compared to historical concentrations.

- MW-25: Nitrate-nitrite concentrations increased from 3.64 mg/L in July 2011 to 4.56 mg/L in February 2012 and to 37.1 mg/L in July 2012. The July 2012 nitrate-nitrite result was higher than historical results observed at MW-25 and the first exceedance of the WQCC Standard. This well will be watched closely during future groundwater monitoring events.

- MW-28: Fluoride concentrations increased from 1.28 mg/L in July 2011 to 1.68 mg/L in January 2012 and to 1.79 mg/L in July 2012. The July 2012 fluoride result is the historical maximum reported at the well since August 2010. This well will be watched closely during future monitoring events to confirm that there is not an increasing trend.

- MW-29: Chloride concentrations increased from 152 mg/L in January 2012 to 250 mg/L in July 2012. These values are lower than the historical maximum concentration of 456 mg/L detected in August 2010.

3.2.2.2 Total Dissolved Solids

During the January/February 2012 sampling event, TDS was detected at concentrations above the WQCC Standard of 1,000 mg/L in 8 of the 31 wells sampled with a maximum detected concentration of 2,720 mg/L in well MW-23. During the July 2012 sampling event, TDS was detected at concentrations above the WQCC Standard of 1,000 mg/L in 8 of the 31 wells sampled with a maximum detected concentration of 3,570 mg/L in well MW-19. Concentration maps of TDS in groundwater for the January/February 2012 and July 2012 samplings event are provided as Figures 10 and 11, respectively. Reported TDS concentrations for both 2012 sampling events were generally consistent with previous sampling results, with notable increases in the following wells:

- MW-15: TDS concentrations increased from 940 mg/L in July 2011 to 1,330 mg/L in January 2012, which is the historical maximum reported at the well since August 2010. The chloride concentration decreased slightly to 1,060 mg/L during the July 2012 sampling event, but both the 2012 TDS results are the first exceedances of the WQCC Standard observed in well MW-15. This well will be watched closely during future groundwater monitoring events.

- MW-19: TDS concentrations increased from 1,770 mg/L in January 2012 to 3,570 mg/L in July 2012, which is the maximum reported at the well since August 2010. The historical trend of TDS concentrations in MW-19 indicates fluctuating concentrations likely related to seasonal recharge effects.

- MW-25: TDS concentrations increased from 634 mg/L in July 2011 to 820 mg/L in February 2012 and to 1,110 mg/L in July 2012. The July 2012 TDS result is higher than historical maximum observed at MW-25 and the first exceedance of the WQCC Standard. This well will be watched closely during future groundwater monitoring events.

- MW-29: TDS concentrations increased from 798 mg/L in July 2011 to 898 mg/L in February 2012 and to 1,120 mg/L in July 2012. The 2012 TDS results are higher than historical maximum observed at MW-25; the July 2012 TDS result was the first exceedance of the WQCC Standard. This well will be watched closely during future groundwater monitoring events.

3.2.2.3 Metals

The January/February 2012 analytical results indicate that barium, chromium, iron, and manganese are present in groundwater at concentrations above their respective WQCC Standards. Barium was detected above its WQCC Standard of 1.0 mg/L in well MW-11 at a concentration of 1.4 mg/L. Chromium was detected above its WQCC Standard of 0.05 mg/L in well MW-29 at a concentration of 0.106 mg/L. Manganese was detected at a concentration above the WQCC Standard of 0.2 mg/L in 5 of the 31 wells sampled with a maximum detected concentration of 1.25 mg/L in well MW-6. Iron was detected above its WQCC Standard of 1.0 mg/L in well MW-11 at a concentration of 1.77 mg/L.

The July 2012 analytical results indicate that chromium, iron, manganese, and uranium are present in groundwater at concentrations above their respective WQCC Standards. Chromium was detected above its WQCC Standard of 0.05 mg/L in well MW-29 at a concentration of 0.261 mg/L. Manganese was detected at a concentration above the WQCC Standard of 0.2 mg/L in 5 of the 31 wells sampled with a maximum detected concentration of 2.54 mg/L in well MW-11. Iron was detected above its WQCC Standard of 1.0 mg/L in wells MW-6 and MW-11 at concentrations of 1.28 mg/L and 2.02 mg/L, respectively. Uranium was detected slightly above its WQCC Standard of 0.03 mg/L in well MW-11 at a concentration of 0.033 mg/L.

Concentration maps of metals that exceeded WQCC Standards in groundwater for the January/February 2012 and July 2012 sampling events are provided as Figures 12 and 13, respectively. As shown in Figures 12 and 13, metal exceedances are present in groundwater beneath the wastewater separator, the former salt water disposal wells, and between Tanks 1214 and 1203, which are all located within the northwestern/central portion of the Lea Refinery.

Reported metal concentrations for the 2012 sampling events were generally consistent with previous sampling results, with notable increases in the following wells:

- MW-11: Barium concentrations increased from 0.15 mg/L in July 2011 to 1.4 mg/L in February 2012, which is the historical maximum and the first exceedance of the WQCC Standard observed at well MW-11 since June 2009. The barium concentration decreased below the WQCC Standard in July 2012 to 0.827 mg/L. The historical

trend of barium concentrations in well MW-11 indicates fluctuating concentrations likely related to seasonal recharge effects.

- MW-11: Iron concentrations increased from not detected above a laboratory reporting limit of 0.200 mg/L in July 2011 to 1.77 mg/L in February 2012 and to 2.02 mg/L in July 2012. The 2012 iron results are greater than the historical maximum and are the first exceedances of the WQCC Standard observed at well MW-11.

- MW-11: Manganese concentrations increased from 0.0301 mg/L in July 2011 to 1.05 mg/L in February 2012 and to 2.54 mg/L in July 2012. The 2012 manganese results are greater than the historical maximum observed at well MW-11.

- MW-11: Uranium concentrations increased from 0.00616 mg/L in July 2011 to 0.0138 mg/L in February 2012 and to 0.033 mg/L in July 2012. The 2012 uranium results are greater than the historical maximum and are the first exceedances of the WQCC Standard observed at well MW-11. This well will be watched closely during future sampling events.

- MW-29: Chromium concentrations increased from 0.106 mg/L in January 2012 to 0.261 mg/L in July 2012, which is the maximum reported at the well since August 2010. This well will be watched closely during future sampling events.

4.0 MONTHLY WATER WELL AND TANK SAMPLING

Groundwater samples were collected from water supply well WW-East and water supply holding tank Tank 1210 on a monthly basis from August 2012 to December 2012 in accordance with July 2012 e-mail correspondence between NRC and OCD. The objective of the monthly sampling was to evaluate the potential risk associated with use of the water in refinery restrooms and safety showers (the water is not used for drinking or cooking). Water supply holding tank Tank 1210 stores water pumped from water supply wells WW-North, WW-South, and WW-East. Water supply well WW-East is sampled monthly as it is the primary source of refinery water supply (i.e., the well operates approximately 70 to 80 percent of the time). Water supply wells WW-North and WW-South are used to supplement well WW-East (i.e., WW-North and WW-West each operate only 10 to 15 percent of the time) and are thus not sampled on a monthly basis. A sample was not collected from WW-East in November 2012 because the well was not operational at that time.

Groundwater samples collected from WW-East and Tank 1210 were submitted to ALS Environmental Laboratory in Houston, Texas under appropriate chain-of-custody documentation for analysis of United States Environmental Protection Agency (U.S. EPA) Region 5 Skinner List of Constituents. Analytical results of the water supply well and holding tank samples are summarized in Table 4 and are compared to WQCC Standards. None of the Skinner List constituents were detected at concentrations above their respective WQCC Standard in any of the monthly samples. Based on these results, the water poses no risk associated with continued use in refinery restrooms and safety showers.

5.0 QUALITY ASSURANCE/QUALITY CONTROL

5.1 Semi-Annual Groundwater Samples

Thirty-one water samples, one field duplicate, and three trip blanks were collected from January 30 to February 2, 2012. Thirty-one water samples, one field duplicate, and three trip blanks were collected on from July 24 to 30, 2012. These samples were submitted to ALS Environmental Laboratory in Houston, Texas for analyses. Data for the following methods are reported:

- Chloride, Fluoride, Sulfate, and Nitrate/Nitrite by U.S. EPA Method 300.0
- Alkalinity by Standard Method (SM) 2320B
- Specific Conductivity by SM 2510B
- pH BY SM4500H+B
- TDS by SM 2540C
- Metals by SW846 Method 6020
- Mercury by SW846 Method 7470
- VOCs by SW846 Method 8260
- Low-Level SVOCs by SW846 Method 8270

TRC Quality Assurance (QA) staff reviewed resultant data on March 12, 2013. Six separate data packages identified as work orders 1201933, 1202121, 1202144, 12071240, 12071372, and 12071434 were reviewed. Data were reviewed for compliance with the analytical protocols used for sample analysis and laboratory-defined control limits. Items reviewed during the data validation process included the following:

- Sample integrity
- Blank analyses
- Spike recoveries
- Duplicate recoveries
- Sample documentation

The following data interpretation issues were identified:

- Laboratory notes associated with work orders 1201933, 1202121, and 1202144 indicate that samples for nitrate analyses had been preserved. Therefore, instead of nitrate, the laboratory reported results for nitrate/nitrite.
- Laboratory notes indicate that all pH analyses were performed outside of holding time. The method states that samples must be analyzed immediately. ALS interprets this to mean within 15 minutes of collection. Samples collected in January and February were analyzed within 4 days of collection. Samples collected in July were analyzed within 9 days of collection.
- Sample MW-24-0212 was analyzed for TDS more than 33 days after collection. The holding time for TDS is 7 days after collection. Results for TDS in MW-24-0212 should not be used for decision making purposes.
- Laboratory notes indicate that internal standard recoveries were below control limits in SVOC analyses of samples MW-11-0212 and MW-13-0212 and these low recoveries were confirmed through re-analysis. Reported concentrations of SVOC compounds in these samples should be considered estimated due to matrix interferences.
- Fluoride was detected in the method blank identified as WBLKS1-0201120R122900. Reported concentrations of fluoride in associated samples MW-29-0112, MW-2-0112, and MW-15-0112 are less than ten times the blank concentration and may include significant measurement contributions from laboratory sources of contamination.
- Aluminum was detected in the method blank identified as MBLKW3-020612-58710. Reported concentrations of aluminum in samples MW-18-0112 (Dissolved) and MW-23-0212 (Dissolved) are less than ten times the blank concentration and may include significant measurement contributions from laboratory sources of contamination.
- Aluminum was detected in the method blank identified as MBLKW4-021612-58711. Reported concentrations of aluminum in samples North Well-0212 (Dissolved) and East Well-0212 (Dissolved) are less than ten times the blank concentration and may include significant measurement contributions from laboratory sources of contamination.
- Aluminum and boron were detected in the method blank identified as MBLKW6-080312-63164. Reported concentrations of aluminum in samples MW-16-0712, MW-9-0712, MW-18-0712, MW-19-0712, MW-14-0712, and MW-5-0712 as well as boron in samples MW-2-0712, MW-28-0712, MW-15-0712, MW-16-0712, MW-4-

0712, MW-9-0712, MW-10-0712, MW-3-0712, MW-18-0712, MW-20-0712, MW-14-0712, and MW-5-0712 are less than ten times the blank concentrations and may include significant measurement contributions from laboratory sources of contamination.

- Recoveries of fluoride and sulfate are greater than laboratory-defined limits in matrix spike (MS/MSD) analyses of sample MW-27-0212. These results are indicative of a high bias for fluoride and sulfate in this sample due to matrix interferences. These high biases may extend to other samples collected for this project.
- Recoveries of sulfate are greater than laboratory-defined limits in matrix spike (MS/MSD) analyses of sample East Well-0212. These results are indicative of a high bias for sulfate in this sample due to matrix interferences. This high bias may extend to other samples collected for this project.
- Recoveries of aluminum are less than laboratory-specified limits in MS/MSD analyses of sample RW-1-0712. These results are indicative of a low bias for aluminum in this sample due to matrix interferences. This low bias may extend to other samples collected for this project.
- Relative percent difference (RPD) values for 2,4,6-trichlorophenol, 2-chlorophenol, 4,6-dinitro-2-methylphenol, benzo(b)fluoranthene, hexachlorobenzene, and hexachloroethane are greater than laboratory-defined limits in laboratory control samples (LCS/LCSD) associated with batch 58576. Reported results for the listed compounds in samples MW-29-0112, MW-28-0112, MW-2-0112, MW-15-0112, MW-16-0112, MW-4-0112, and MW-3-0112 include excessive variability due to inadequate laboratory measurement control.
- RPD values for 2,4-dinitrophenol, 2-methylnaphthalene, acetophenoine, isophorone, nitrobenzene, and N-nitrosodiphenylamine are greater than laboratory-defined limits in laboratory control samples (LCS/LCSD) associated with batch 62997. Reported results for the listed compounds in samples MW-29-0712, MW-2-0712, MW-28-0712, MW-15-0712, MW-16-0712, MW-4-0712, MW-6-0712, MW-9-0712, MW-10-0712, MW-3-0712, MW-18-0712, MW-19-0712, MW-20-0712, MW-14-0712, and MW-5-0712 include excessive variability due to inadequate laboratory measurement control.
- The RPD value for butyl benzyl phthalate is greater than laboratory-defined limits in LCS/LCSD analyses associated with batch 58695. Reported results for butyl benzyl phthalate in samples MW-6-0212, RW-1-0212, MW-7-0212, MW-1-0212, South

Well-0212, North Well-0212, and East Well-0212 include excessive variability due to inadequate laboratory measurement control.

- RPD values for 1-methylnaphthalene, 2,4,5-trichlorophenol, 2,4,6-trichlorophenol, 2,4-dinitrotoluene, 2,6-dinitrotoluene, 4-nitrophenol, dibenzofuran, diethyl phthalate, dimethyl phthalate, and isophorone are greater than laboratory-defined limits in laboratory control samples (LCS/LCSD) associated with batch 63036. Reported results for the listed compounds in samples MW-21-0712, MW-22-0712, MW-23-0712, MW-25-0712, MW-26-0712, MW-13-0712, MW-27-0712, MW-11-0712, MW-8-0712, MW-1-0712, MW-7-0712, and RW-1-0712 include excessive variability due to inadequate laboratory measurement control.
- The RPD value for aluminum is greater than laboratory-specified limits in laboratory duplicate analyses of sample MW-23-0212 (Dissolved). Therefore, the reported concentration of aluminum in MW-23-0212 (Dissolved) should be considered estimated. It is also noted that aluminum was detected in the associated method blank for this sample.
- The RPD value for aluminum is greater than laboratory-defined limits in laboratory duplicate analyses of sample RW-1-0712. Therefore, the reported concentration of aluminum in RW-1-0712 should be considered estimated due to excessive variability.
- RPD values for bis(2-ethylhexyl)phthalate, dissolved boron, dissolved zinc are greater than expected (RPD > 20%) in field duplicate analyses of sample MW-5-0112. Reported concentrations of these analytes in MW-5-0112 include excessive variability due to matrix interferences. This excessive variability may extend to other samples collected at the refinery.

5.2 Monthly Water Well and Tank Samples

Nine (9) water samples were collected on August 27, 2012; September 26, 2012; October 22, 2012; November 20, 2012; and December 27, 2012. These samples were submitted to ALS Laboratory Group in Houston, Texas for analyses. Data for the following methods are reported:

- Cyanide by U.S. EPA Method 335.2
- Metals by SW846 Method 6020
- Mercury by SW846 Method 7470
- VOCs by SW846 Method 8260
- Low-Level SVOCs by SW846 Method 8270

TRC QA staff reviewed resultant data on April 9, 2013. Nine separate data packages identified as work orders 12081148, 12081185, 1209956, 1209957, 1210906, 1210908, 1211770, 1212899, and 1212900 were reviewed. Data were reviewed for compliance with the analytical protocols used for sample analysis and laboratory-defined control limits. Items reviewed during the data validation process included the following:

- Sample integrity
- Blank analyses
- Spike recoveries
- Duplicate recoveries
- Sample documentation

The following data interpretation issues were identified:

- Temperature upon receipt at the laboratory is not reported for Work Order 1211770. No statement can be made regarding the adequacy of temperature preservation for the sample reported in this work order.
- Reported concentrations of selenium and zinc in the method blank identified as MBLKW1-083113-63836 are less than ten times the detected concentrations in associated sample EAST WATER WELL (12081148-01). These results indicate that reported concentrations of selenium and zinc in this sample may include significant measurement contributions from laboratory sources of contamination.
- Cyanide was detected in the method blank identified as WBLKW1-090512-R134328. The reported concentration of cyanide in sample EAST WATER WELL (12081148-01) is less than ten times the blank concentration and may include significant measurement contributions from laboratory sources of contamination.
- The reported concentration of zinc in the method blank identified as MBLKW2-090412-63883 is less than ten times the detected concentrations in associated sample 1210 TANK (12081185-01). These results indicate that reported concentration of zinc in this sample may include significant measurement contributions from laboratory sources of contamination.
- Selenium was detected in the method blank identified as MBLKW2-112812-66095. The reported concentration of selenium in sample 1210 Tank (1211770-01) is less than ten times the blank concentration and may include significant measurement contributions from laboratory sources of contamination.

- RPD values for pyridine and indene are greater than laboratory-defined limits in laboratory control samples (LCS/LCSD) associated with batch 64608. Reported results for the pyridine and indene (all non-detected) in samples 1210 Tank (1209956-01) and East Water Well (1209957-01) may include excessive variability due to inadequate laboratory measurement control.

6.0 2012 RELEASES AND REMEDIATION ACTIVITIES

A brief summary of each release and NRC's release response action that occurred at the refinery in 2012 is provided below.

6.1 April 30, 2012 Spill at Cooling Tower

At approximately 04:30 on April 30, 2012, operators were adding makeup water (reverse osmosis [RO] permeate supplemented with freshwater) to the basin of the refinery cooling tower. The cooling tower level increased more quickly than anticipated, and spilled approximately 10 barrels of cooling water to the ground. The operators closed the feed water valve and began to drain the cooling water return at the sources in order to reduce the level to normal operating conditions. This operation was being performed manually due to a failed feed control valve. The area affected by the release was the ground surface along the northeast and northwest sides of the cooling tower, which will be investigated by NRC in 2013. A final Release Notification and Corrective Acton Form C-141 and investigation summary report will be submitted to OCD by July 31, 2013.

6.2 June 6, 2012 Spill at Tank 104B

At approximately 23:00 on June 6, 2012, satellite communications were interrupted with HEP's controls and monitoring systems, which was unknown to the refinery. The interruption caused the pump that was transferring gas oil from Tank 104B to the Artesia Refinery to shut down. This caused the Tank 104-B level to increase rapidly since the tank outflow was stopped but the gas oil rundown to the tank continued for several hours. At approximately 06:00 on June 7, 2012, operators at the refinery discovered that Tank 104B had overflowed and released approximately 3,000 barrels of viscous gas oil. The gas oil rundown to Tank 104B was stopped and flow was diverted to Tank 1206 while the Crude Unit process rate was reduced. Tank 104B is contained inside a bermed area shared by four other tanks (Tanks 106A, 104A, 103A, 103B, as shown on Figure 2).

Of the estimated 3,000 barrels released, 2,956 barrels of gas oil were recovered. Impacted soil was excavated and transported to the R360 disposal facility in Hobbs, New Mexico. Soil samples were collected from the bottom of the excavation to verify that all impacted soil had been removed. The area was subsequently backfilled with clean fill. The final Release Notification and Corrective Acton Form C-141 will be submitted by May 15, 2013, and will include the excavation and sampling summary report, soil sample analytical results, photographs, and disposal records.

6.3 December 27, 2012 Gas Oil Spill at HEP Pump Station

At approximately 03:00 on December 27, 2012, a HEP pipeline 10-inch variable speed pump inner seal failed, releasing viscous gas oil to the gravel-covered ground surface. The pump

and pump station are located west of Tank 105B (see Figure 2). An operator discovered the spill, traced it to the source, and notified the pipeline operator, who immediately shut down the pump. The gas oil was retained within the diked containment at the HEP pump station. A vacuum truck was used to remove free liquid until the gas oil cooled and solidified. The remainder of the solidified gas oil and affected gravel were excavated and transferred to roll-off bins for disposal at R360 in Hobbs, New Mexico. The area will be investigated in 2013. A final Release Notification and Corrective Acton Form C-141 and investigation summary report, including soil sample analytical results, photographs, and disposal records, will be submitted to OCD by September 15, 2013.

7.0 CONCLUSIONS

The following conclusions are based on data collected during groundwater monitoring activities conducted during calendar year 2012:

- Groundwater flow directions were consistent with previous groundwater monitoring events. Groundwater elevations decreased an average 1.74 feet from February 2011 to January/February 2012 and 1.91 feet July 2011 to July 2012. The groundwater elevation measured at MW-18 in July 2012 was anomalously low compared to historical groundwater elevation measurements.
- PSH was not detected in any monitoring wells.
- VOCs were only detected at concentrations above the laboratory reporting limit in well MW-11 during both semi-annual monitoring events. Benzene was reported at concentrations above its WQCC Standard in well MW-11 during both semi-annual monitoring events and naphthalene was reported above its WQCC Standard in February 2012.
- Naphthalene, as an SVOC, was reported at a concentration above its WQCC Standard in well MW-11 in February 2012. This was the only SVOC exceedance of WQCC Standards reported during 2012.
- Anion exceedances of WQCC Standards reported during 2012 included chloride (in six wells) and fluoride (in four wells) in January/February 2012; and chloride (in five wells), fluoride (in four wells), and nitrate-nitrite (in well MW-25) in July 2012.
- TDS was reported at concentrations above its WQCC Standard in eight wells during both semi-annual monitoring events.
- Metal exceedances of WQCC Standards reported during 2012 included barium (in well MW-11), chromium (in well MW-29), iron (in well MW-11), and manganese (in five wells) in January/February 2012; and chromium, iron, manganese, and uranium in July 2012.
- No constituents exceeded WQCC Standards in wells located along the southeastern refinery boundary (MW-5, MW-14, and MW-22), which is the natural downgradient portion of the facility (i.e., if active pumping from the on-site water supply wells ceased).
- WQCC Standards were not exceeded in any of the monthly samples collected from water supply well WW-East and Tank 1210. Based on these results, the water poses no risk associated with continued use in refinery restrooms and safety showers.

The following summarizes the scope of work planned for 2013:

- Continue to implement semi-annual groundwater monitoring and annual reporting activities.
- Prepare and submit a *Facility-Wide Groundwater Monitoring Work Plan* to the OCD by July 31, 2013.
- Continue monthly sampling of WW-East and Tank 1210 until August 2013. In August 2013, the 12 months of monthly water supply well WW-East and Tank 1210 analytical data will be evaluated. If no WQCC Standards are exceeded and detected concentrations are stable, then monthly sampling of the water supply well WW-East and Tank 1210 will cease. Water supply well WW-East and Tank 1210 will continue to be sampled during semi-annual groundwater monitoring activities.
- Replace damaged monitor wells MW-12 and MW-17.
- Submit a response to OCD's April 3, 2013, comments to the December 6, 2012, *Source Determination and Background Evaluation Work Plan.*
- Conduct refinery-wide source determination and background evaluation activities.
- Conduct further investigation of the April 2012 Cooling Tower release. A response will be submitted to the OCD by July 31, 2013.
- Conduct investigation of the December 2012 HEP pump station gas oil release. A response will be submitted to the OCD by September 15, 2013.

Figure 1. Refinery Vicinity Map



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LEGEND

- LW - CITY OF LOVINGTON WATER WELL
- RAIL
- FENCE

N

1 inch = 700 feet

0 350 700 1,400

FEET

REFINERY VICINITY MAP

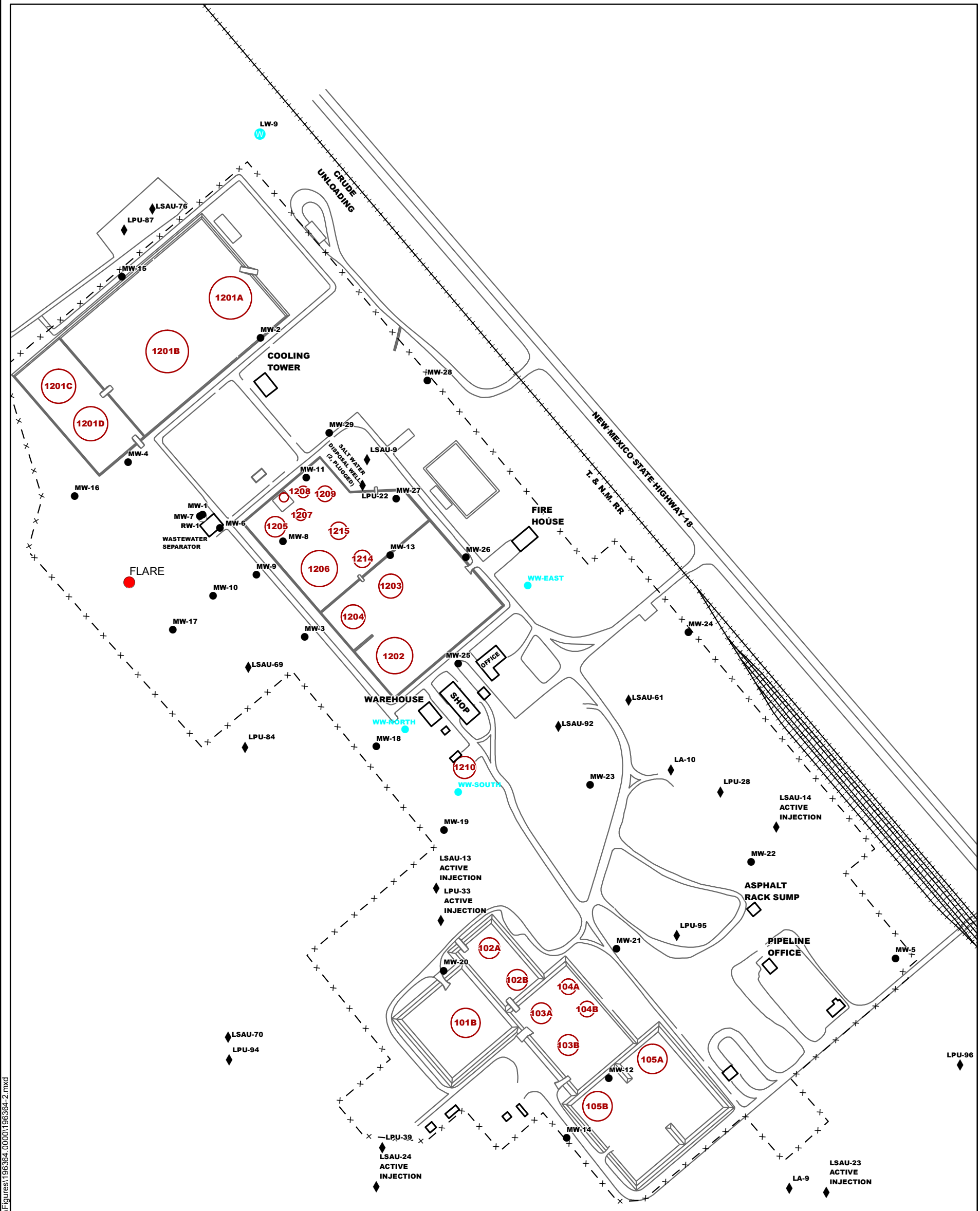
NAVAJO REFINING COMPANY
LEA REFINERY LOVINGTON, NM

PROJECT NO: 196364.0001	MXD: 196364-1
AUTHOR: RLB	DATE: 4/10/2013

TRC
505 EAST HUNTLAND DRIVE
SUITE 250
AUSTIN, TEXAS 78752
(512) 329-6080

FIGURE 1

Figure 2. Refinery Site Plan



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LEGEND

- MONITORING WELL
- LW - CITY OF LOVINGTON WATER WELL
- LA - LOVINGTON ABO UNIT
- LPU - LOVINGTON PADDOCK UNIT
- LSAU - LOVINGTON SAN ANDRES UNIT
- RECOVERY WELL
- WATER WELL
- FLARE
- RAIL
- FENCE
- BUILDINGS
- TANKS

N

0 180 360 720

FEET

REFINERY SITE PLAN

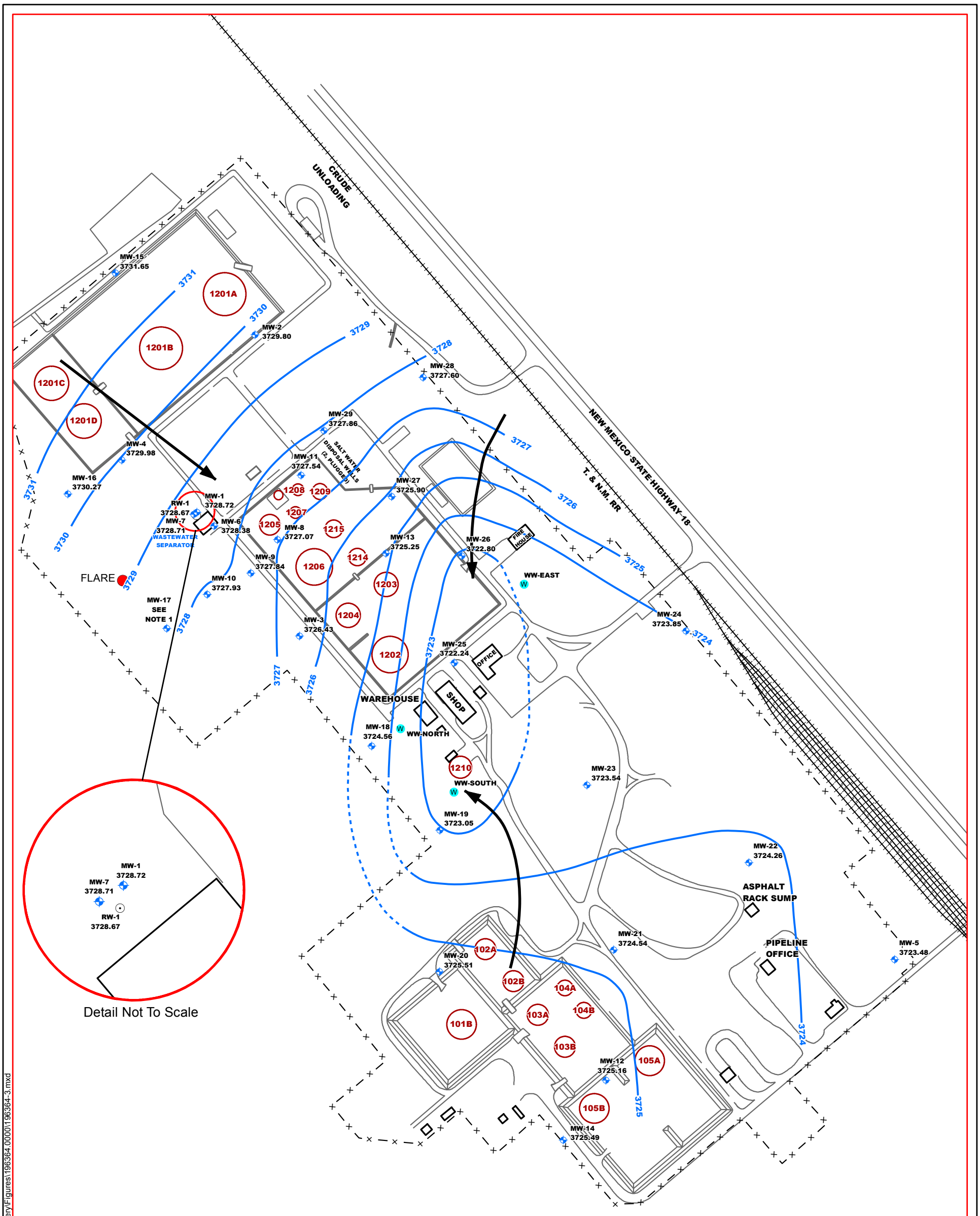
NAVAJO REFINING COMPANY
LEA REFINERY LOVINGTON, NM

PROJECT NO: 196364.0001	MXD: 196364-2
AUTHOR: RLB	DATE: 4/10/2013

TRC
505 EAST HUNTLAND DRIVE
SUITE 250
AUSTIN, TEXAS 78752
(512) 329-6080

FIGURE 2

Figure 3. Groundwater Potentiometric Surface Map – January/February 2012



NOTE:
1. MW-17 IS DAMAGED AND COULD NOT BE GAUGED.

LEGEND

- GROUNDWATER CONTOURS (DASHED WHERE INFERRED)
- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- FLARE
- GROUNDWATER FLOW DIRECTION
- RAIL
- FENCE
- BUILDINGS
- TANKS
- 3731.65 GROUNDWATER ELEVATION CONTOUR (FEET)

N

0 175 350 700
FEET

GROUNDWATER POTENTIOMETRIC SURFACE MAP - JANUARY/FEBRUARY 2012

NAVAJO REFINING COMPANY
LEA REFINERY LOVINGTON, NM

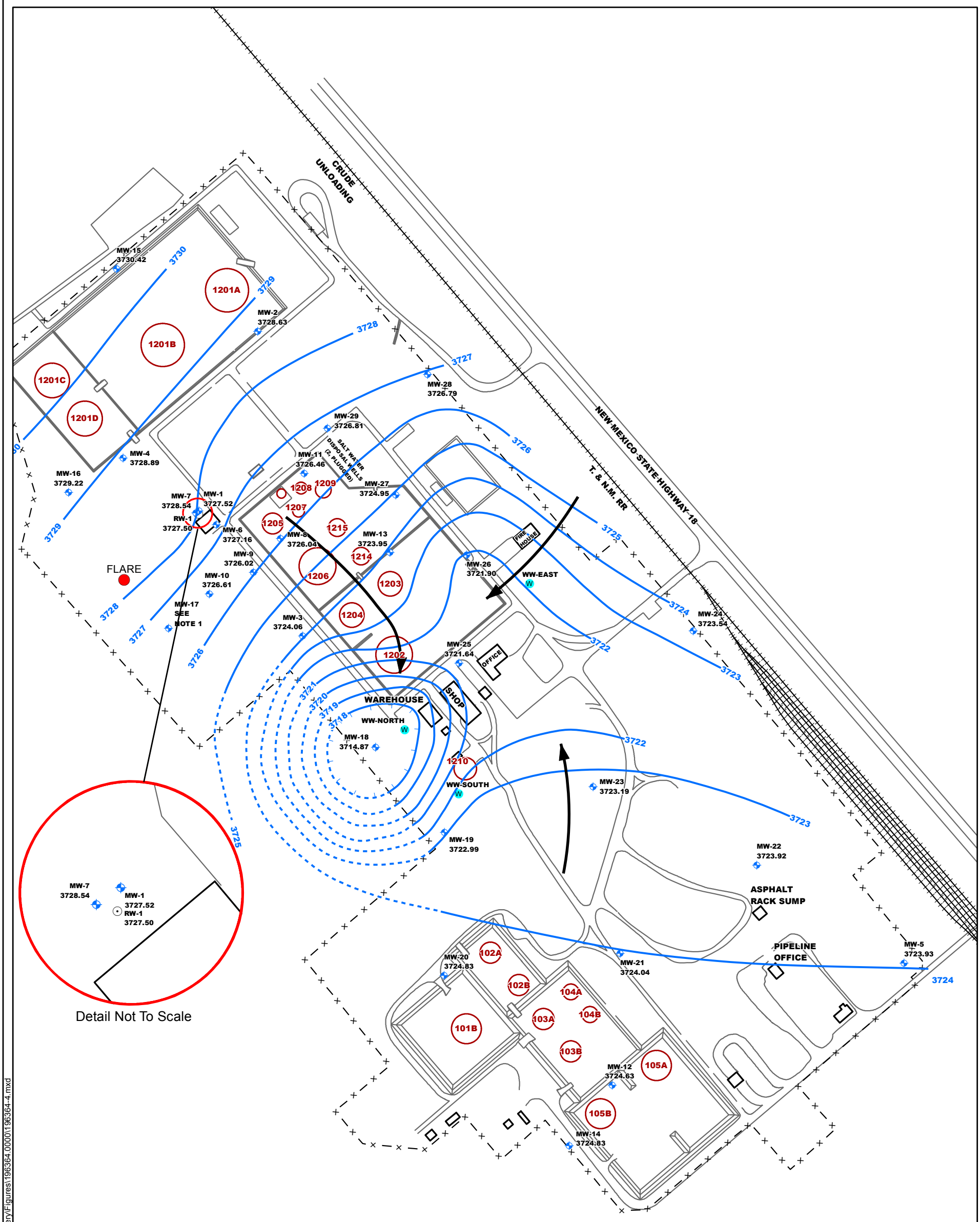
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AUTHOR: RLB	DATE: 4/4/2013

TRC
505 EAST HUNTLAND DRIVE
SUITE 250
AUSTIN, TEXAS 78752
(512) 329-6080

FIGURE 3

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Figure 4. Groundwater Potentiometric Surface Map – July 2012



NOTE:
1. MW-17 IS DAMAGED AND COULD NOT BE GAUGED.

LEGEND

- GROUNDWATER CONTOURS (DASHED WHERE INFERRED)
- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- FLARE
- GROUNDWATER FLOW DIRECTION
- RAIL
- FENCE
- BUILDINGS
- TANKS
- 3731.65 GROUNDWATER ELEVATION CONTOUR (FEET)

N

0 175 350 700
FEET

GROUNDWATER POTENTIOMETRIC SURFACE MAP - JULY 2012

NAVAJO REFINING COMPANY
LEA REFINERY LOVINGTON, NM

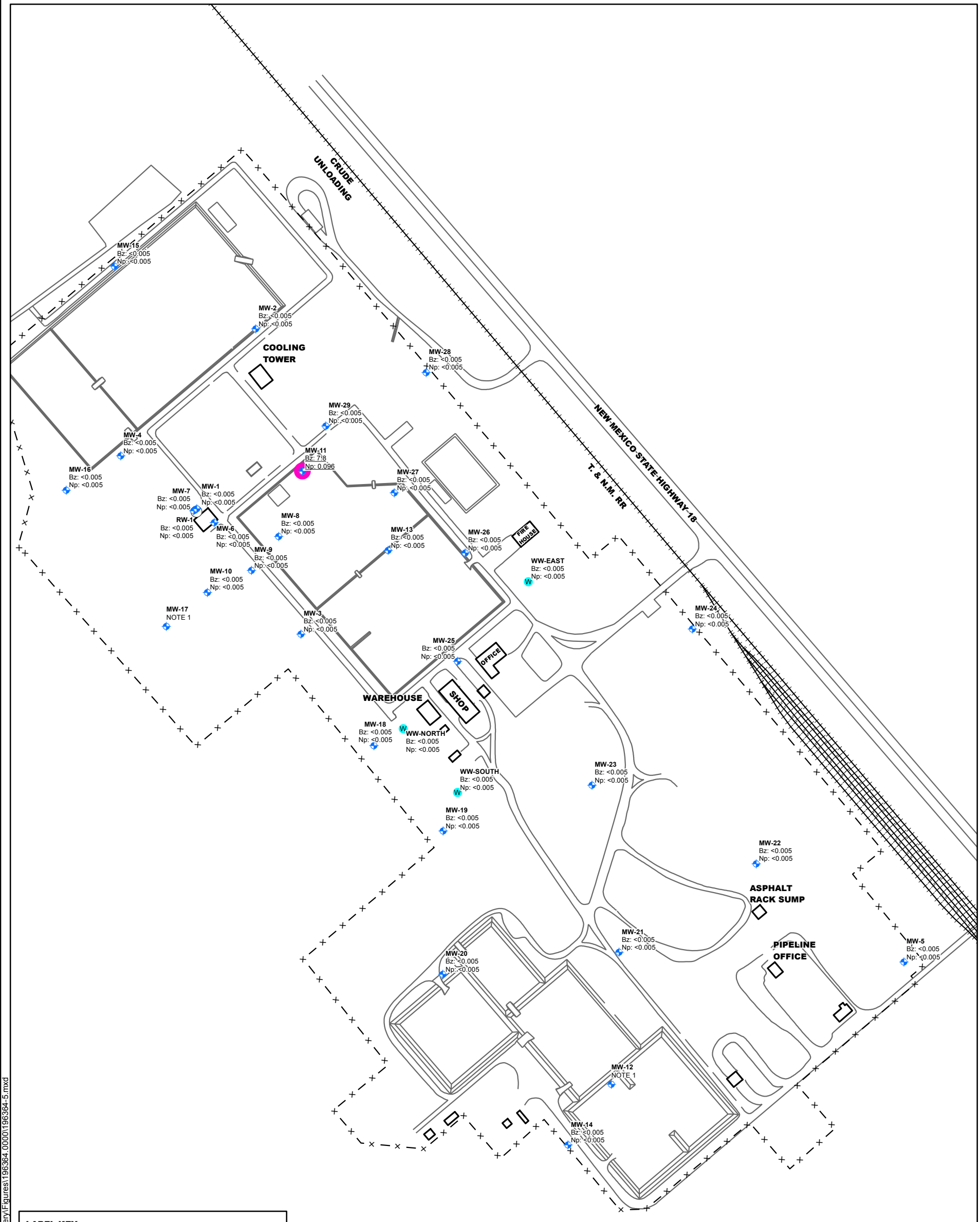
PROJECT NO: 196364.0001	MXD: 196364-4
AUTHOR: RLB	DATE: 4/4/2013

TRC
505 EAST HUNTLAND DRIVE
SUITE 250
AUSTIN, TEXAS 78752
(512) 329-6080

FIGURE 4

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Figure 5. Volatile Organic Compounds Concentration Map – January/February 2012



LABEL KEY:
Bz: <0.0050 - BENZENE CONCENTRATION
Np: <0.0050 - NAPHTHALENE CONCENTRATION

UNDERLINE NOTES EXCEEDANCE OF WGCC STANDARD.

NOTE:
1. MW-12 AND MW-17 ARE DAMAGED AND COULD NOT BE SAMPLED.
2. ALL CONCENTRATIONS IN mg/L.
3. BENZENE AND NAPHTHALENE RESULTS SHOWN FOR ALL WELLS BECAUSE THESE ARE THE ONLY VOCS THAT EXCEEDED THEIR RESPECTIVE WQCC STANDARDS.

LEGEND

- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- WQCC STANDARD WAS EXCEEDED AT THIS LOCATION
- RAIL
- FENCE
- BUILDINGS

N

0 175 350 700
FEET

VOLATILE ORGANIC COMPOUNDS CONCENTRATION MAP - JANUARY/FEBRUARY 2012

NAVAJO REFINING COMPANY
LEA REFINERY LOVINGTON, NM

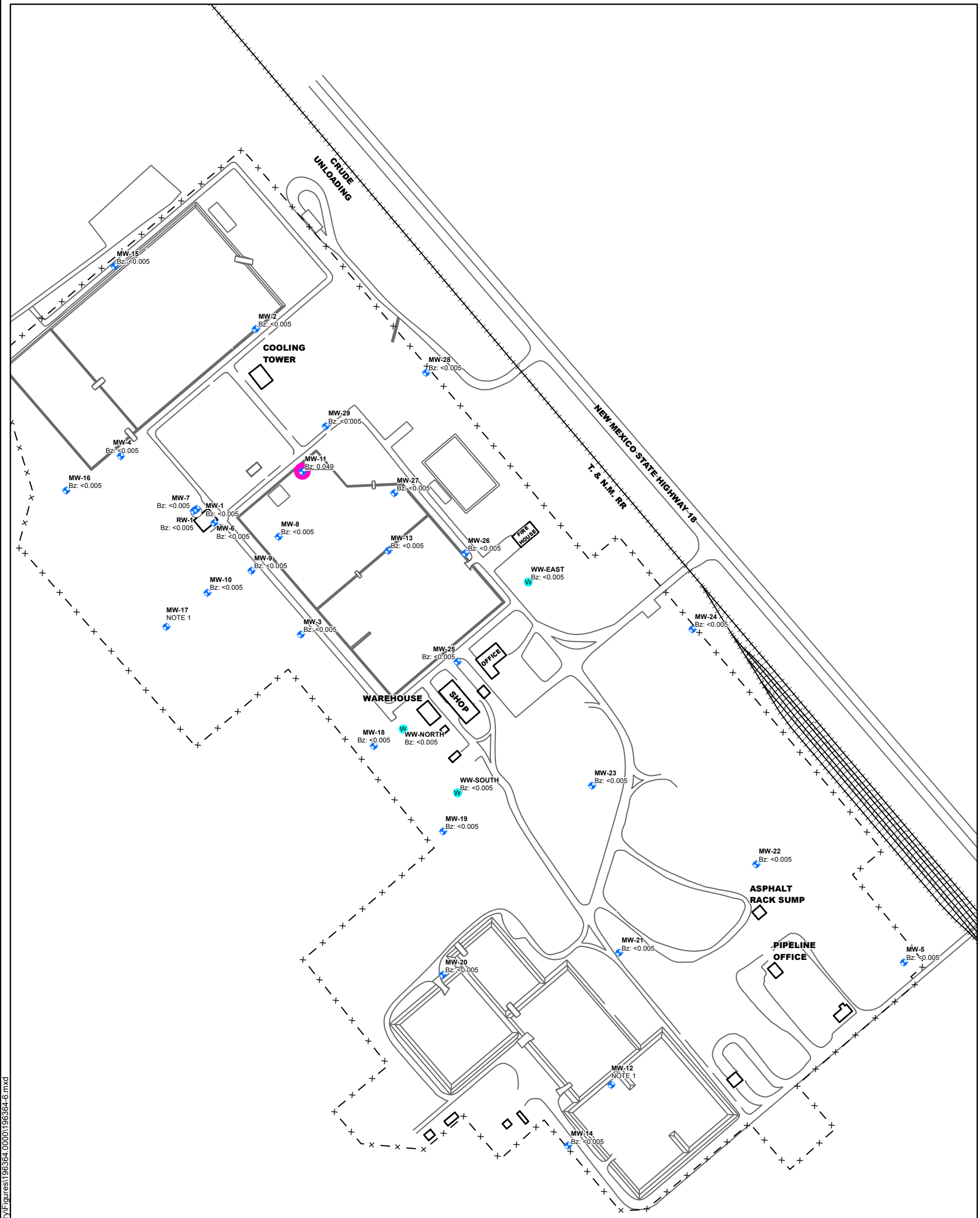
PROJECT NO: 196364.0001	MXD: 196364-5
AUTHOR: RLB	DATE: 4/10/2013

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SUITE 250
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(512) 329-6080

FIGURE 5

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Figure 6. Volatile Organic Compounds Concentration Map – July 2012



LABEL KEY:
Bz: <0.0050 BENZENE CONCENTRATION

UNDERLINE NOTES EXCEEDANCE OF WQCC STANDARD.

NOTE:
1. MW-12 AND MW-17 ARE DAMAGED AND COULD NOT BE SAMPLED.
2. ALL CONCENTRATIONS IN mg/L.
3. BENZENE RESULTS SHOWN FOR ALL WELLS BECAUSE IT IS THE ONLY VOC THAT EXCEEDED ITS WQCC STANDARD.

LEGEND

- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- WQCC STANDARD WAS EXCEEDED AT THIS LOCATION
- RAIL
- FENCE
- BUILDINGS

N

0 175 350 700
FEET

VOLATILE ORGANIC COMPOUNDS CONCENTRATION MAP - JULY 2012

NAVAJO REFINING COMPANY
LEA REFINERY LOVINGTON, NM

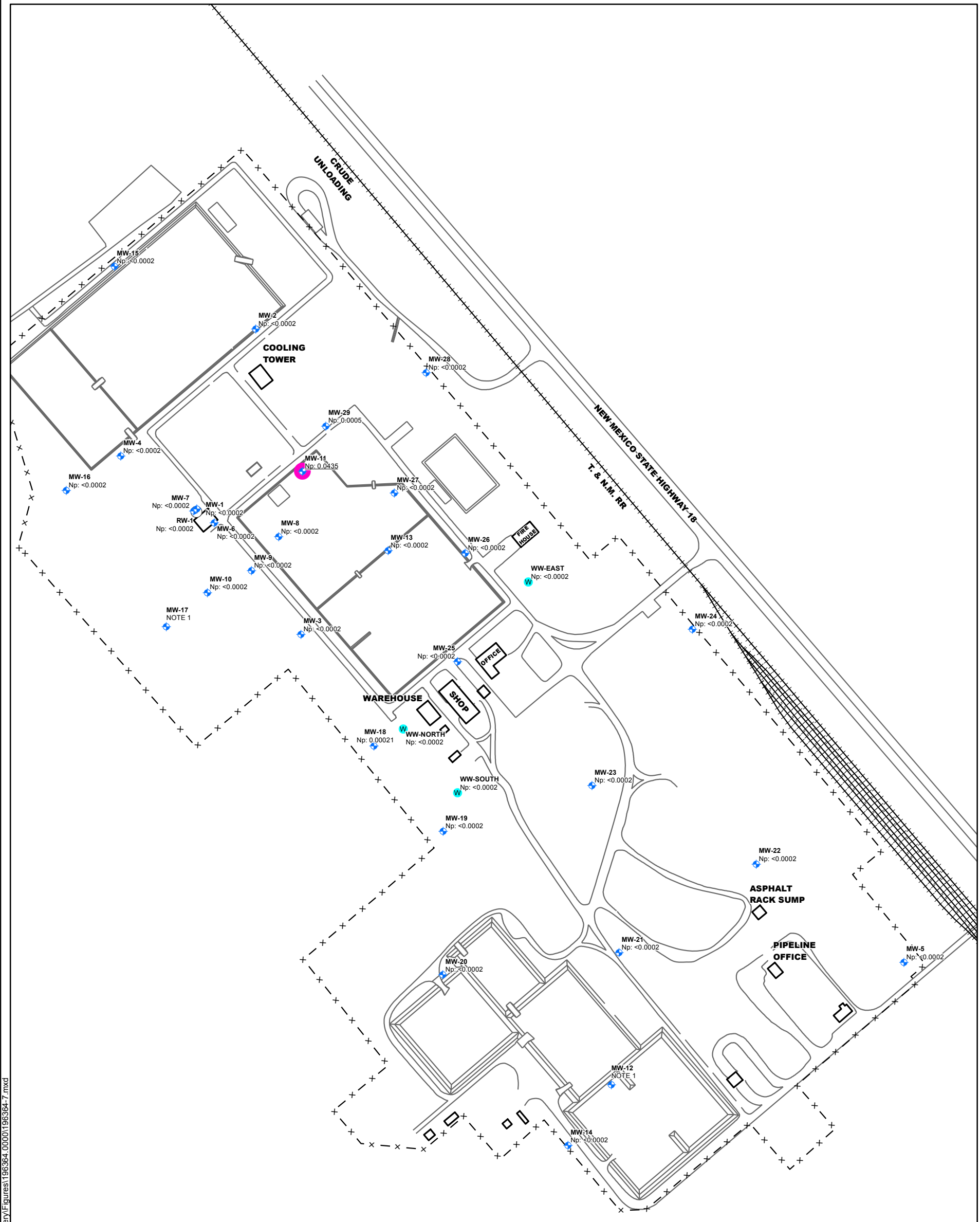
PROJECT NO: 196364.0001	MXD: 196364-6
AUTHOR: RLB	DATE: 4/10/2013

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(512) 329-6080

FIGURE 6

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Figure 7. Semi-Volatile Organic Compounds Concentration Map – January/February 2012



Document Path: S:\#Holly\Navajo Lovington Refinery\Figures\196364.0000\196364-7.mxd

LABEL KEY:
Np: <0.00020 - NAPHTHALENE CONCENTRATION

UNDERLINE NOTES EXCEEDANCE OF WQCC STANDARD.

NOTE:
1. MW-12 AND MW-17 ARE DAMAGED AND COULD NOT BE SAMPLED.
2. ALL CONCENTRATIONS IN mg/L.
3. NAPHTHALENE RESULTS SHOWN FOR ALL WELLS BECAUSE IT IS THE ONLY SVOC THAT EXCEEDED ITS WQCC STANDARD.

LEGEND

- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- WQCC STANDARD WAS EXCEEDED AT THIS LOCATION
- RAIL
- FENCE
- BUILDINGS

N

0 175 350 700
FEET

SEMI-VOLATILE ORGANIC COMPOUNDS CONCENTRATION MAP - JANUARY/FEBRUARY 2012

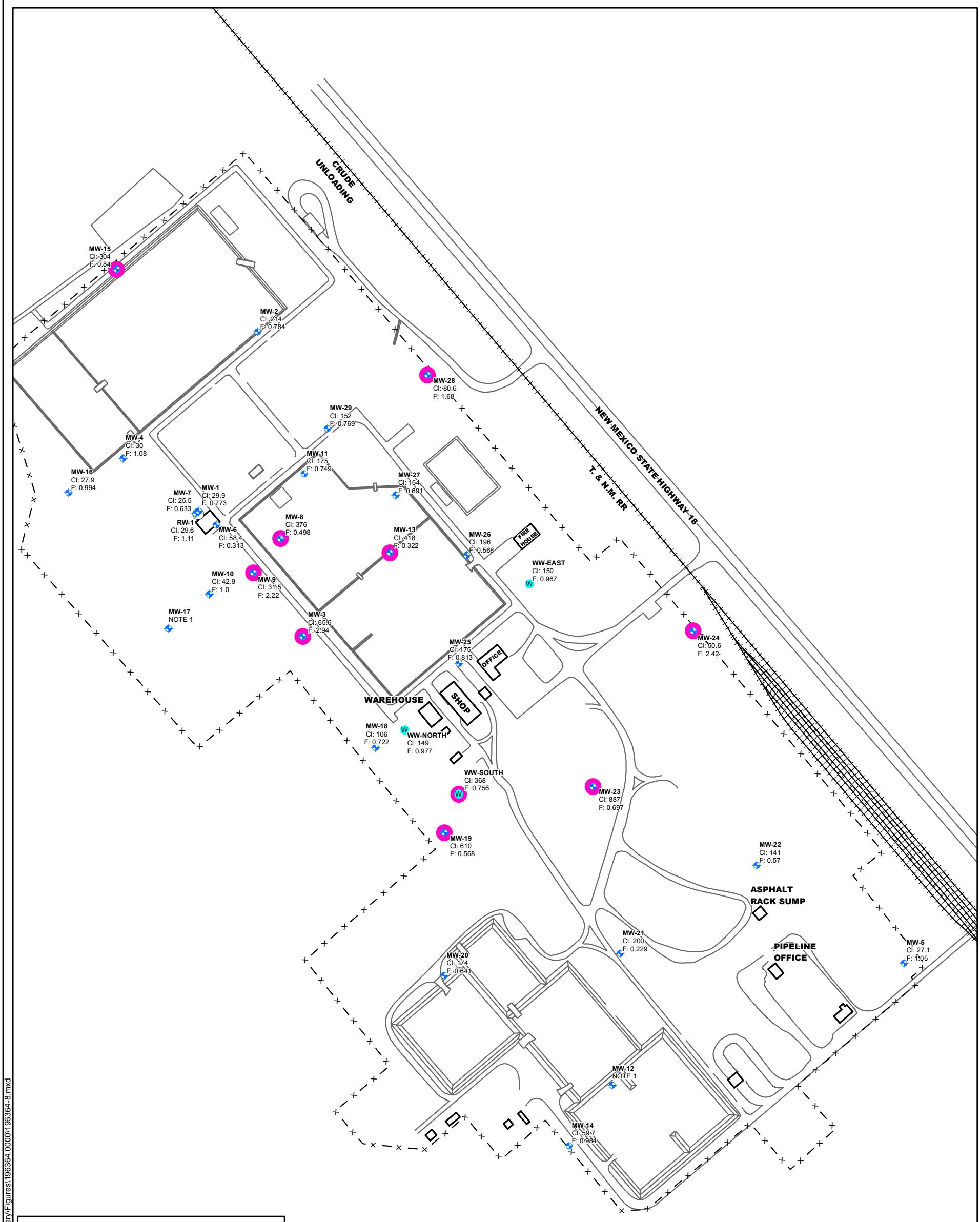
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PROJECT NO: 196364.0001	MXD: 196364-7
AUTHOR: RLB	DATE: 4/10/2013

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FIGURE 7

Figure 8. Anions Concentration Map – January/February 2012



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LABEL KEY:
Cl: 80.6 - CHLORIDE CONCENTRATION
F: 1.68 - FLUORIDE CONCENTRATION

UNDERLINE NOTES EXCEEDANCE OF WQCC STANDARD.

NOTE:
1. MW-12 AND MW-17 ARE DAMAGED AND COULD NOT BE SAMPLED.
2. ALL CONCENTRATIONS IN mg/L.
3. CHLORIDE AND FLUORIDE CONCENTRATIONS SHOWN FOR ALL WELLS BECAUSE THEY ARE THE ONLY ANIONS THAT EXCEEDED THEIR RESPECTIVE WQCC STANDARDS.

LEGEND

- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- WQCC STANDARD WAS EXCEEDED AT THIS LOCATION
- RAIL
- FENCE
- BUILDINGS

N

0 175 350 700
FEET

ANIONS
CONCENTRATION MAP - JANUARY/FEBRUARY 2012

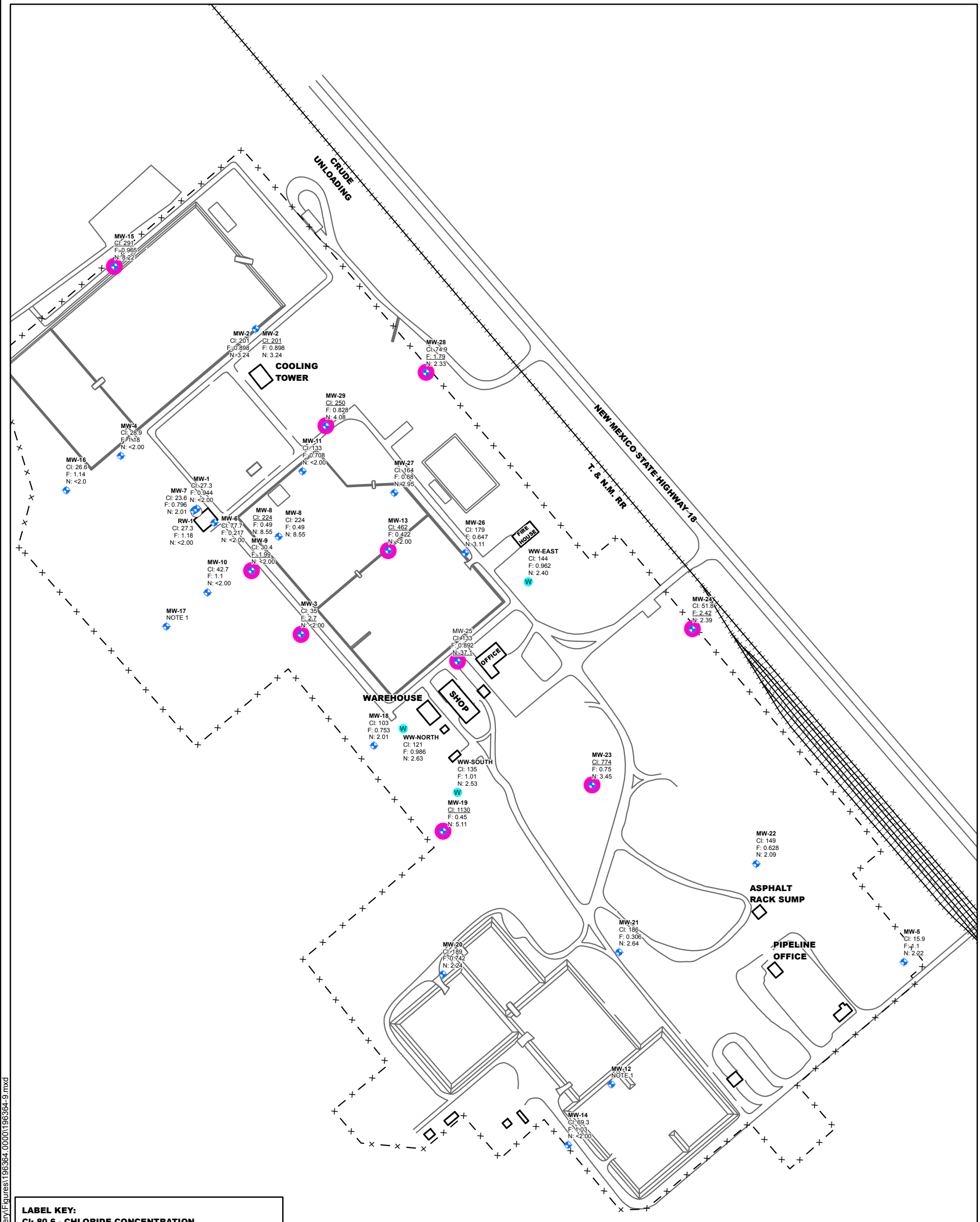
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PROJECT NO: 196364.0001	MXD: 196364-8
AUTHOR: RLB	DATE: 4/4/2013

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FIGURE
8

Figure 9. Anions Concentration Map – July 2012



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LABEL KEY:
Cl: 80.6 - CHLORIDE CONCENTRATION
F: 1.68 - FLOURIDE CONCENTRATION
N: 3.24 - NITRITE-NITRATE CONCENTRATION

UNDERLINE NOTES EXCEEDANCE OF WQCC STANDARD.

NOTE:
1. MW-12 AND MW-17 ARE DAMAGED AND COULD NOT BE SAMPLED.
2. ALL CONCENTRATIONS IN mg/L.
3. CHLORIDE, FLUORIDE AND NITRATES SHOWN FOR ALL WELLS BECAUSE THEY ARE THE ONLY ANIONS THAT EXCEEDED THEIR RESPECTIVE WQCC STANDARD.

LEGEND

- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- WQCC STANDARD WAS EXCEEDED AT THIS LOCATION
- RAIL
- FENCE
- BUILDINGS

N

0 175 350 700
FEET

ANIONS CONCENTRATION MAP - JULY 2012

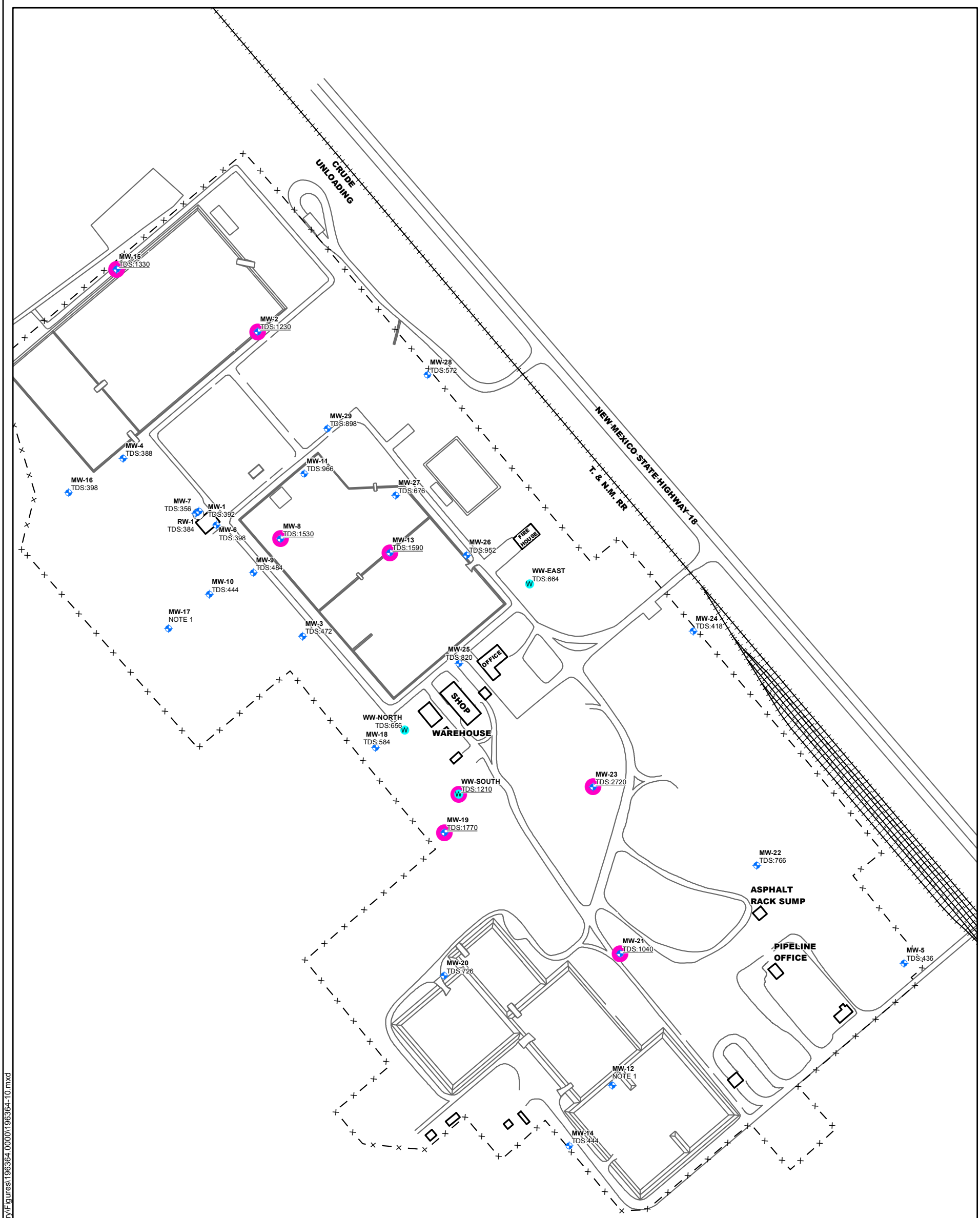
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PROJECT NO: 196364.0001	MXD: 196364-9
AUTHOR: RLB	DATE: 4/10/2013

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(512) 329-6080

FIGURE 9

Figure 10. Total Dissolved Solids Concentration Map – January/February 2012



LABEL KEY:
TDS: 1210 - TOTAL DISSOLVED SOLIDS CONCENTRATION

UNDERLINE NOTES EXCEEDANCE OF WQCC STANDARD.

NOTE:
1. MW-12 AND MW-17 ARE DAMAGED AND COULD NOT BE SAMPLED.
2. ALL CONCENTRATIONS IN mg/L.

LEGEND

- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- WQCC STANDARD WAS EXCEEDED AT THIS LOCATION
- RAIL
- FENCE
- BUILDINGS

N

0 175 350 700
FEET

TOTAL DISSOLVED SOLIDS CONCENTRATION MAP - JANUARY/FEBRUARY 2012

NAVAJO REFINING COMPANY
LEA REFINERY LOVINGTON, NM

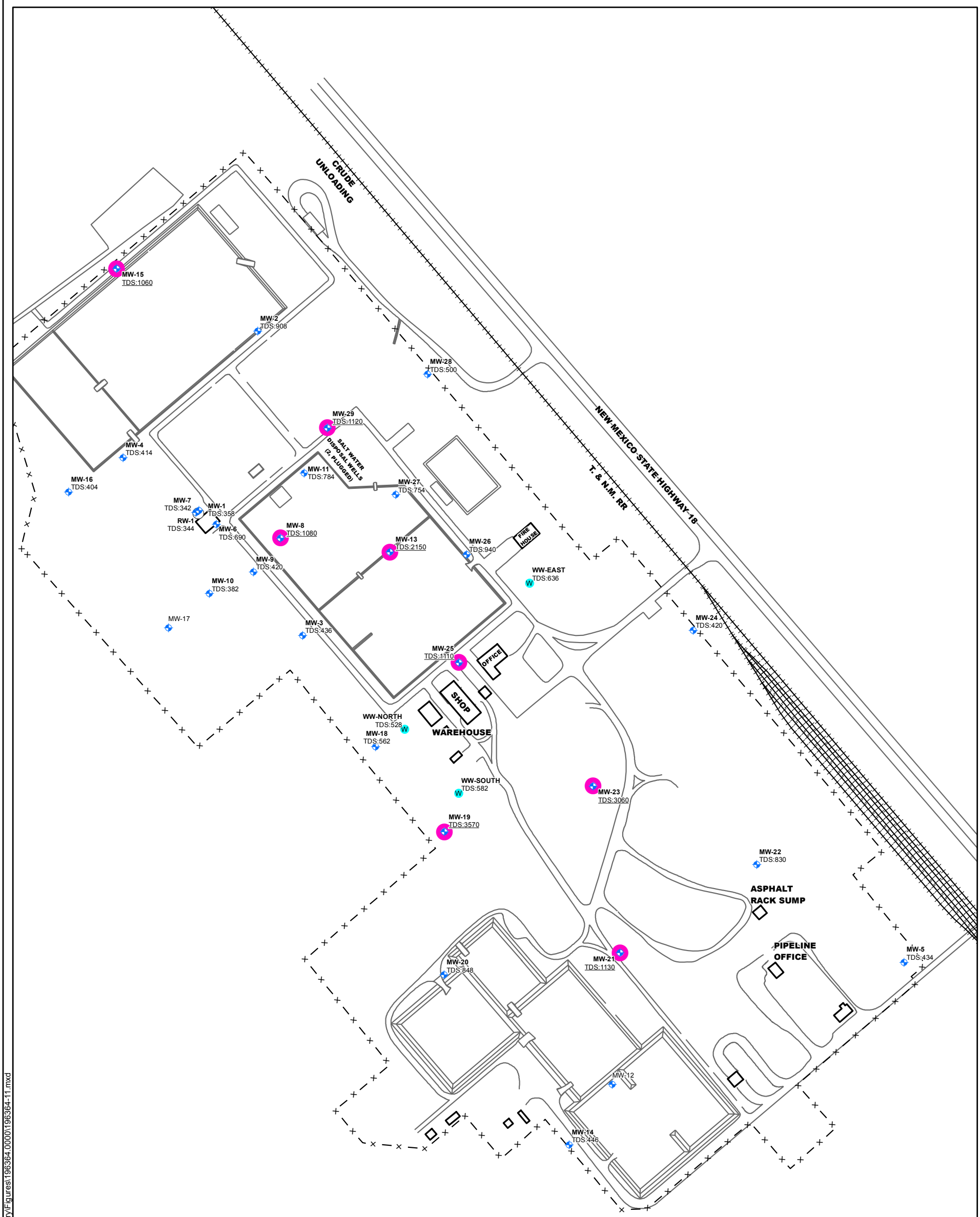
PROJECT NO: 196364.0001	MXD: 196364-10
AUTHOR: RLB	DATE: 4/4/2013

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(512) 329-6080

FIGURE 10

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Figure 11. Total Dissolved Solids Concentration Map – July 2012



LABEL KEY:
TDS: 1210 - TOTAL DISSOLVED SOLIDS CONCENTRATION

UNDERLINE NOTES EXCEEDANCE OF WQCC STANDARD.

NOTE:
1. MW-12 AND MW-17 ARE DAMAGED AND COULD NOT BE SAMPLED.
2. ALL CONCENTRATIONS IN mg/L.

LEGEND

- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- WQCC STANDARD WAS EXCEEDED AT THIS LOCATION
- RAIL
- FENCE
- BUILDINGS

N

0 175 350 700
FEET

TOTAL DISSOLVED SOLIDS CONCENTRATION MAP - JULY 2012

NAVAJO REFINING COMPANY
LEA REFINERY LOVINGTON, NM

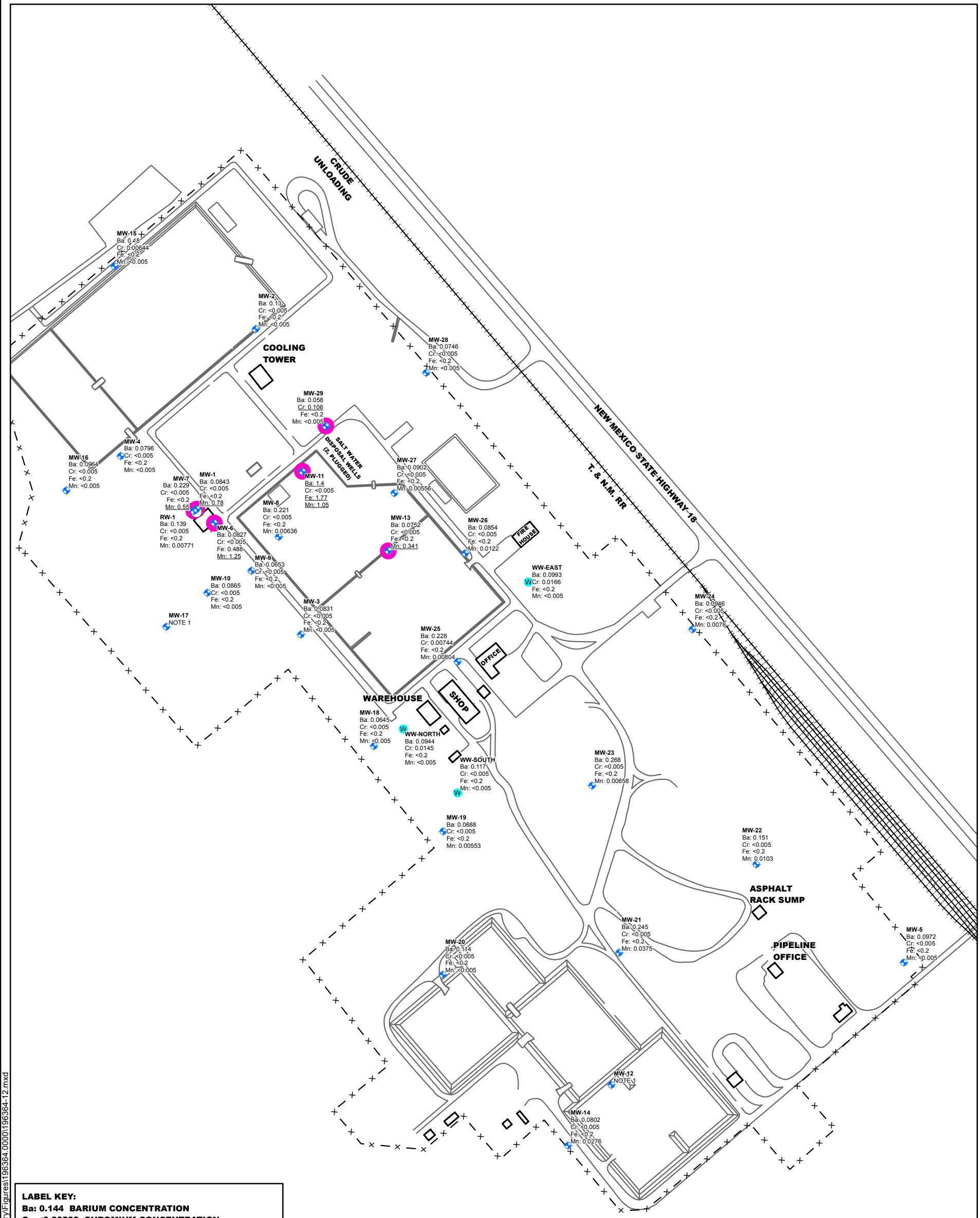
PROJECT NO: 196364.0001	MXD: 196364-11
AUTHOR: RLB	DATE: 4/4/2013

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FIGURE 11

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Figure 12. Metals Concentration Map – January/February 2012



LABEL KEY:
Ba: 0.144 BARIUM CONCENTRATION
Cr: <0.00500 CHROMIUM CONCENTRATION
Fe: <0.200 IRON CONCENTRATION
Mn: <0.00500 MANGANESE CONCENTRATION

UNDERLINE NOTES EXCEEDANCE OF WQCC STANDARD.

NOTE:
1. MW-12 AND MW-17 ARE DAMAGED AND COULD NOT BE SAMPLED.
2. ALL CONCENTRATIONS IN mg/L.
3. BARIUM, CHROMIUM, IRON AND MANGANESE SHOWN FOR ALL WELLS BECAUSE THEY ARE THE ONLY METALS THAT EXCEEDED THEIR RESPECTIVE WQCC STANDARDS.

LEGEND

- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- WQCC STANDARD WAS EXCEEDED AT THIS LOCATION
- RAIL
- FENCE
- BUILDINGS

N

0 175 350 700
FEET

METALS CONCENTRATION MAP - JANUARY/FEBRUARY 2012

NAVAJO REFINING COMPANY
LEA REFINERY LOVINGTON, NM

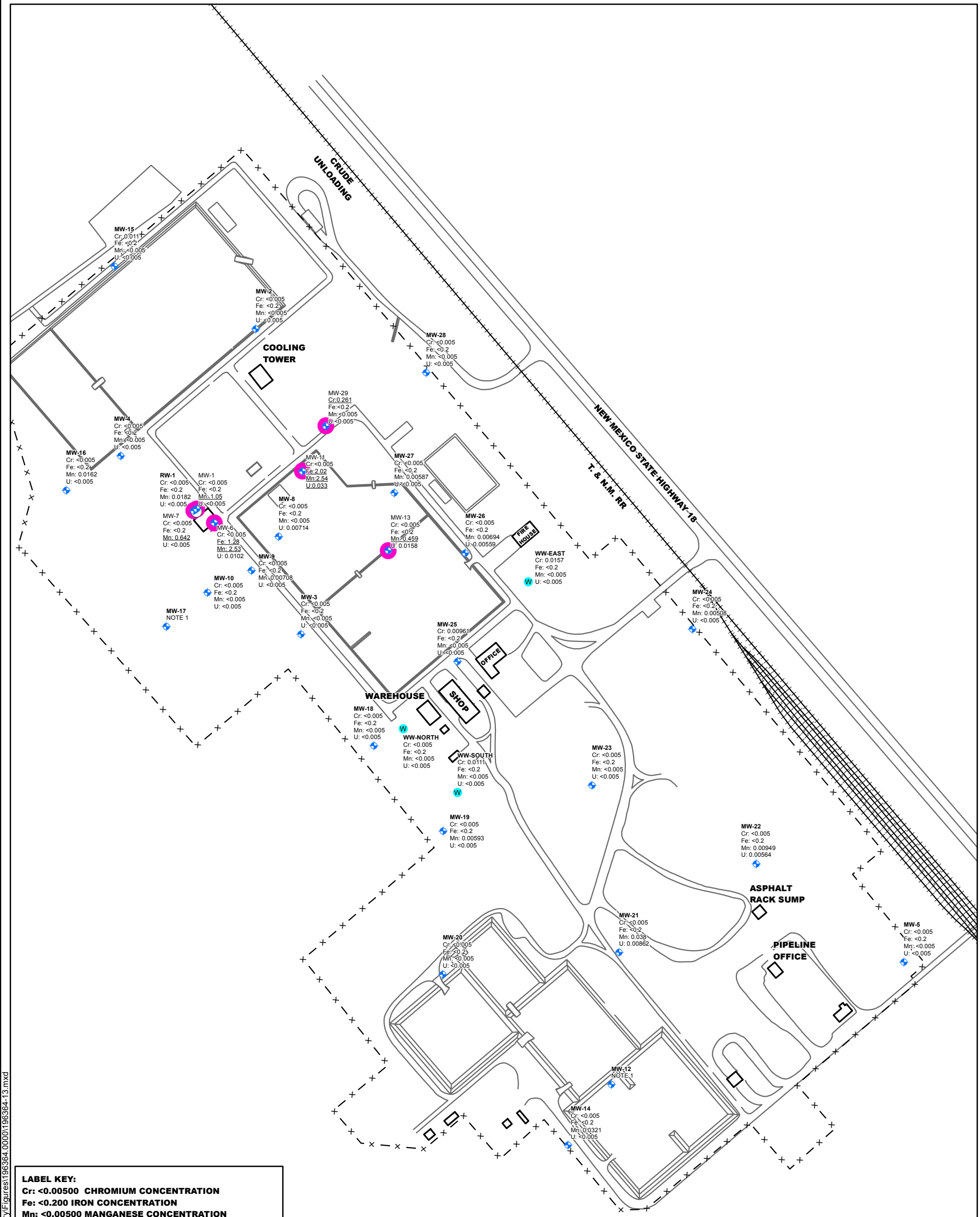
PROJECT NO: 196364.0001	MXD: 196364-12
AUTHOR: RLB	DATE: 4/10/2013

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FIGURE 12

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Figure 13. Metals Concentration Map – July 2012



LABEL KEY:
Cr: <0.00500 CHROMIUM CONCENTRATION
Fe: <0.200 IRON CONCENTRATION
Mn: <0.00500 MANGANESE CONCENTRATION
U: 0.033 URANIUM CONCENTRATION

UNDERLINE NOTES EXCEEDANCE OF WQCC STANDARD.

NOTE:
1. MW-12 AND MW-17 ARE DAMAGED AND COULD NOT BE SAMPLED.
2. ALL CONCENTRATIONS IN mg/L.
3. CHROMIUM, IRON, MANGANESE AND URANIUM ARE SHOWN FOR ALL WELLS BECAUSE THEY ARE THE ONLY METALS THAT EXCEEDED THEIR RESPECTIVE WQCC STANDARD.

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LEGEND

- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- WQCC STANDARD WAS EXCEEDED AT THIS LOCATION
- RAIL
- FENCE
- BUILDINGS

N

0 175 350 700
FEET

METALS CONCENTRATION MAP - JULY 2012

NAVAJO REFINING COMPANY
LEA REFINERY LOVINGTON, NM

PROJECT NO: 196364.0001	MXD: 196364-13
AUTHOR: RLB	DATE: 4/10/2013

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FIGURE 13

Table 1. Water Elevation Measurements

Table 1. Water Elevation Measurements, Navajo Refining Company, Lea Refinery, Lovington, NM

Monitor Well	Top of Casing Elevation (feet)	Well Screen Interval (feet)	Date	Depth to Product (feet, btoc)	Depth to Water (feet, btoc)	Total Depth (feet)	Product Thickness (feet)	Corrected Depth to Water (feet)	Corrected Water Level Elev. (feet)	Change from previous measurement (ft)
MW-1 [1,5]	3,838.40	3,739.19 to 3,709.19	04/30/09	- -	106.35	136.10	0.00	106.35	3,732.05	NA
			06/10/09	- -	106.49	NM	0.00	106.49	3,731.91	-0.14
			06/19/09	- -	106.57	129.12	0.00	106.57	3,731.83	-0.08
			07/02/09	- -	106.74	129.13	0.00	106.74	3,731.66	-0.17
			07/24/09	- -	106.83	129.11	0.00	106.83	3,731.57	-0.09
			09/24/09	- -	107.31	129.12	0.00	107.31	3,731.09	-0.48
			10/27/09	- -	107.44	129.10	0.00	107.44	3,730.96	-0.13
			01/13/10	- -	107.57	129.11	0.00	107.57	3,730.83	-0.13
			04/01/10	- -	107.51	NM	0.00	107.51	3,730.89	0.06
			08/11/10	- -	108.09	129.16	0.00	108.09	3,730.31	-0.58
			02/23/11	- -	108.12	129.14	0.00	108.12	3,730.28	-0.03
			07/12/11	- -	109.00	129.11	0.00	109.00	3,729.40	-0.88
			02/02/12	- -	109.68	129.12	0.00	109.68	3,728.72	-0.68
			07/23/12	- -	110.88	128.87	0.00	110.88	3,727.52	-1.20
MW-2 [1,5]	3,837.35	3,739.77 to 3,709.77	06/22/09	- -	104.32	126.41	0.00	104.32	3,733.03	NA
			01/13/10	- -	105.44	126.68	0.00	105.44	3,731.91	-1.12
			08/11/10	- -	105.97	126.42	0.00	105.97	3,731.38	-0.53
			02/23/11	- -	105.92	126.46	0.00	105.92	3,731.43	0.05
			07/12/11	- -	107.22	126.47	0.00	107.22	3,730.13	-1.30
			01/30/12	- -	107.55	126.47	0.00	107.55	3,729.80	-0.33
			07/23/12	- -	108.72	126.48	0.00	108.72	3,728.63	-1.17
MW-3 [1,5]	3,831.65	3,733.73 to 3,703.73	06/16/09	- -	102.65	130.45	0.00	102.65	3,729.00	NA
			01/13/10	- -	103.29	130.69	0.00	103.29	3,728.36	-0.64
			08/11/10	- -	104.82	130.42	0.00	104.82	3,726.83	-1.53
			09/28/10	- -	104.70	NM	0.00	104.70	3,726.95	0.12
			02/23/11	- -	104.11	130.47	0.00	104.11	3,727.54	0.59
			07/12/11	- -	104.89	130.50	0.00	104.89	3,726.76	-0.78
			01/30/12	- -	105.22	130.45	0.00	105.22	3,726.43	-0.33
			07/23/12	- -	107.59	130.46	0.00	107.59	3,724.06	-2.37
MW-4 [1,5]	3,839.89	3,741.76 to 3,711.76	06/16/09	- -	106.79	128.02	0.00	106.79	3,733.10	NA
			01/13/10	- -	107.72	127.94	0.00	107.72	3,732.17	-0.93
			08/11/10	- -	108.19	128.03	0.00	108.19	3,731.70	-0.47
			09/28/10	- -	108.47	NM	0.00	108.47	3,731.42	-0.28
			02/23/11	- -	108.31	127.82	0.00	108.31	3,731.58	0.16
			07/12/11	- -	109.27	128.02	0.00	109.27	3,730.62	-0.96
			01/30/12	- -	109.91	128.02	0.00	109.91	3,729.98	-0.64
			07/23/12	- -	111.00	127.82	0.00	111.00	3,728.89	-1.09
MW-5 [1,5]	3,819.15	3,731.13 to 3,701.13	06/16/09	- -	90.84	NM	0.00	90.84	3,728.31	NA
			01/13/10	- -	92.02	118.30	0.00	92.02	3,727.13	-1.18
			08/11/10	- -	92.67	117.93	0.00	92.67	3,726.48	-0.65
			02/23/11	- -	92.68	118.00	0.00	92.68	3,726.47	-0.01
			07/12/11	- -	93.38	117.97	0.00	93.38	3,725.77	-0.70
			01/31/12	- -	94.75	117.75	0.00	94.75	3,724.40	-1.37
			07/23/12	- -	95.22	117.92	0.00	95.22	3,723.93	-0.47

Table 1. Water Elevation Measurements, Navajo Refining Company, Lea Refinery, Lovington, NM

Monitor Well	Top of Casing Elevation (feet)	Well Screen Interval (feet)	Date	Depth to Product (feet, btoc)	Depth to Water (feet, btoc)	Total Depth (feet)	Product Thickness (feet)	Corrected Depth to Water (feet)	Corrected Water Level Elev. (feet)	Change from previous measurement (ft)
MW-6 [1,5]	3,838.16	3,738.17 to 3,708.17	06/18/09	- -	106.64	129.48	0.00	106.64	3,731.52	NA
			07/24/09	- -	106.92	129.71	0.00	106.92	3,731.24	-0.28
			09/24/09	- -	107.44	129.74	0.00	107.44	3,730.72	-0.52
			10/27/09	- -	107.55	129.73	0.00	107.55	3,730.61	-0.11
			01/13/10	- -	107.64	129.71	0.00	107.64	3,730.52	-0.09
			02/02/10	- -	107.69	NM	0.00	107.69	3,730.47	-0.05
			04/01/10	- -	107.65	NM	0.00	107.65	3,730.51	0.04
			08/11/10	- -	108.00	129.71	0.00	108.00	3,730.16	-0.35
			02/23/11	- -	108.22	129.72	0.00	108.22	3,729.94	-0.22
			07/12/11	- -	109.09	129.74	0.00	109.09	3,729.07	-0.87
			02/02/12	- -	109.78	129.74	0.00	109.78	3,728.38	-0.69
			07/23/12	- -	111.00	129.47	0.00	111.00	3,727.16	-1.22
MW-7 [1,5]	3,838.42	3,738.19 to 3,708.19	04/30/09	- -	106.37	135.54	0.00	106.37	3,732.05	NA
			06/10/09	- -	106.48	NM	0.00	106.48	3,731.94	-0.11
			06/19/09	- -	106.68	129.34	0.00	106.68	3,731.74	-0.20
			07/02/09	- -	106.75	129.51	0.00	106.75	3,731.67	-0.07
			07/24/09	- -	106.84	129.52	0.00	106.84	3,731.58	-0.09
			09/24/09	- -	107.33	129.29	0.00	107.33	3,731.09	-0.49
			10/27/09	- -	107.46	129.53	0.00	107.46	3,730.96	-0.13
			01/13/10	- -	107.60	129.55	0.00	107.60	3,730.82	-0.14
			02/02/10	- -	107.61	NM	0.00	107.61	3,730.81	-0.01
			04/01/10	- -	107.52	NM	0.00	107.52	3,730.90	0.09
			08/11/10	- -	108.10	129.57	0.00	108.10	3,730.32	-0.58
			02/23/11	- -	108.13	129.52	0.00	108.13	3,730.29	-0.03
			07/12/11	- -	109.01	129.50	0.00	109.01	3,729.41	-0.88
			02/02/12	- -	109.71	129.26	0.00	109.71	3,728.71	-0.70
			07/23/12	- -	109.88	129.30	0.00	109.88	3,728.54	-0.17
MW-8 [2,5]	3,839.98	3,737.44 to 3,707.44	06/18/09	- -	109.37	132.30	0.00	109.37	3,730.61	NA
			01/13/10	- -	110.47	132.56	0.00	110.47	3,729.51	-1.10
			08/11/10	- -	111.05	132.34	0.00	111.05	3,728.93	-0.58
			02/23/11	- -	111.07	132.34	0.00	111.07	3,728.91	-0.02
			07/12/11	- -	111.98	132.36	0.00	111.98	3,728.00	-0.91
			02/01/12	- -	112.91	132.32	0.00	112.91	3,727.07	-0.93
			07/23/12	- -	113.94	132.33	0.00	113.94	3,726.04	-1.03
MW-9 [2,5]	3,835.22	3,736.13 to 3,706.13	06/16/09	- -	104.58	129.18	0.00	104.58	3,730.64	NA
			01/13/10	- -	105.61	129.48	0.00	105.61	3,729.61	-1.03
			08/11/10	- -	106.37	129.21	0.00	106.37	3,728.85	-0.76
			02/23/11	- -	106.28	129.24	0.00	106.28	3,728.94	0.09
			07/12/11	- -	107.17	129.26	0.00	107.17	3,728.05	-0.89
			01/31/12	- -	107.38	129.30	0.00	107.38	3,727.84	-0.21
			07/23/12	- -	109.20	128.90	0.00	109.20	3,726.02	-1.82
MW-10 [2,5]	3,833.66	3,735.49 to 3,705.49	06/16/09	- -	102.57	129.14	0.00	102.57	3,731.09	NA
			01/13/10	- -	103.51	127.42	0.00	103.51	3,730.15	-0.94
			08/11/10	- -	104.31	128.47	0.00	104.31	3,729.35	-0.80
			02/23/11	- -	104.26	128.54	0.00	104.26	3,729.40	0.05
			07/12/11	- -	105.08	128.46	0.00	105.08	3,728.58	-0.82
			01/31/12	- -	105.73	128.40	0.00	105.73	3,727.93	-0.65
			07/23/12	- -	107.05	128.50	0.00	107.05	3,726.61	-1.32

Table 1. Water Elevation Measurements, Navajo Refining Company, Lea Refinery, Lovington, NM

Monitor Well	Top of Casing Elevation (feet)	Well Screen Interval (feet)	Date	Depth to Product (feet, btoc)	Depth to Water (feet, btoc)	Total Depth (feet)	Product Thickness (feet)	Corrected Depth to Water (feet)	Corrected Water Level Elev. (feet)	Change from previous measurement (ft)
MW-11 [3,5]	3,839.56	3,741.13 to 3,721.13	06/20/02	- -	99.93	NM	0.00	99.93	3,739.63	NA
			09/17/02	- -	100.63	NM	0.00	100.63	3,738.93	-0.70
			12/19/02	- -	100.50	NM	0.00	100.50	3,739.06	0.13
			03/28/03	- -	99.74	NM	0.00	99.74	3,739.82	0.76
			06/20/03	- -	100.76	NM	0.00	100.76	3,738.80	-1.02
			09/15/03	- -	101.51	NM	0.00	101.51	3,738.05	-0.75
			04/30/04	- -	102.31	116.21	0.00	102.31	3,737.25	-0.80
			02/21/05	- -	103.80	NM	0.00	103.80	3,735.76	-1.49
			06/28/05	- -	104.33	NM	0.00	104.33	3,735.23	-0.53
			09/30/05	- -	104.60	NM	0.00	104.60	3,734.96	-0.27
			12/29/05	- -	104.81	NM	0.00	104.81	3,734.75	-0.21
			04/10/06	- -	105.12	NM	0.00	105.12	3,734.44	-0.31
			07/06/06	- -	105.61	NM	0.00	105.61	3,733.95	-0.49
			01/26/07	- -	106.63	NM	0.00	106.63	3,732.93	-1.02
			03/27/07	- -	106.80	NM	0.00	106.80	3,732.76	-0.17
			07/13/07	- -	106.94	NM	0.00	106.94	3,732.62	-0.14
			09/12/07	- -	107.22	NM	0.00	107.22	3,732.34	-0.28
			12/31/07	- -	106.74	NM	0.00	106.74	3,732.82	0.48
			03/26/08	- -	106.81	117.51	0.00	106.81	3,732.75	-0.07
			06/13/08	- -	107.40	NM	0.00	107.40	3,732.16	-0.59
			09/24/08	- -	108.76	NM	0.00	108.76	3,730.80	-1.36
			12/29/08	- -	108.57	NM	0.00	108.57	3,730.99	0.19
			03/17/09	- -	107.91	NM	0.00	107.91	3,731.65	0.66
			06/18/09	- -	108.65	117.49	0.00	108.65	3,730.91	-0.74
			01/13/10	- -	109.81	117.77	0.00	109.81	3,729.75	-1.16
			08/11/10	- -	110.16	117.50	0.00	110.16	3,729.40	-0.35
			02/23/11	- -	110.32	117.70	0.00	110.32	3,729.24	-0.16
			07/12/11	- -	110.31	117.41	0.00	110.31	3,729.25	0.01
			02/01/12	- -	112.02	117.37	0.00	112.02	3,727.54	-1.71
			07/23/12	- -	113.10	117.38	0.00	113.10	3,726.46	-1.08

Table 1. Water Elevation Measurements, Navajo Refining Company, Lea Refinery, Lovington, NM

Monitor Well	Top of Casing Elevation (feet)	Well Screen Interval (feet)	Date	Depth to Product (feet, btoc)	Depth to Water (feet, btoc)	Total Depth (feet)	Product Thickness (feet)	Corrected Depth to Water (feet)	Corrected Water Level Elev. (feet)	Change from previous measurement (ft)
MW-12 [3,5]	3,822.73	3,742.29 to 3,722.29	06/20/02	- -	84.20	NM	0.00	84.20	3,738.53	NA
			12/21/02	- -	85.21	NM	0.00	85.21	3,737.52	-1.01
			03/28/03	- -	85.35	NM	0.00	85.35	3,737.38	-0.14
			06/20/03	- -	85.51	NM	0.00	85.51	3,737.22	-0.16
			09/15/03	- -	86.13	NM	0.00	86.13	3,736.60	-0.62
			11/02/03	- -	86.57	NM	0.00	86.57	3,736.16	-0.44
			04/30/04	- -	87.40	100.55	0.00	87.40	3,735.33	-0.83
			02/21/05	- -	88.42	NM	0.00	88.42	3,734.31	-1.02
			06/28/05	- -	88.76	NM	0.00	88.76	3,733.97	-0.34
			09/30/05	- -	89.12	NM	0.00	89.12	3,733.61	-0.36
			12/29/05	- -	89.31	NM	0.00	89.31	3,733.42	-0.19
			04/10/06	- -	89.55	NM	0.00	89.55	3,733.18	-0.24
			07/06/06	- -	90.03	NM	0.00	90.03	3,732.70	-0.48
			01/26/07	- -	90.06	NM	0.00	90.06	3,732.67	-0.03
			03/27/07	- -	90.10	NM	0.00	90.10	3,732.63	-0.04
			07/13/07	- -	91.66	NM	0.00	91.66	3,731.07	-1.56
			09/12/07	- -	92.01	NM	0.00	92.01	3,730.72	-0.35
			12/31/07	- -	92.17	NM	0.00	92.17	3,730.56	-0.16
			03/26/08	- -	92.39	100.57	0.00	92.39	3,730.34	-0.22
			06/13/08	- -	92.59	NM	0.00	92.59	3,730.14	-0.20
			09/24/08	- -	93.21	NM	0.00	93.21	3,729.52	-0.62
			12/29/08	- -	93.59	NM	0.00	93.59	3,729.14	-0.38
			03/17/09	- -	93.75	NM	0.00	93.75	3,728.98	-0.16
			06/16/09	- -	93.83	100.51	0.00	93.83	3,728.90	-0.08
			01/13/10	- -	94.78	100.71	0.00	94.78	3,727.95	-0.95
			08/11/10	- -	95.67	100.56	0.00	95.67	3,727.06	-0.89
			02/23/11	- -	95.85	100.56	0.00	95.85	3,726.88	-0.18
			07/12/11	- -	96.58	100.55	0.00	96.58	3,726.15	-0.73
			02/01/12	- -	97.57	100.57	0.00	97.57	3,725.16	-0.99
			07/23/12	- -	98.10	100.50	0.00	98.10	3,724.63	-0.53
MW-13 [4,5]	3,837.06	3,738.75 to 3,718.75	04/30/04	- -	101.41	119.82	0.00	101.41	3,735.65	NA
			02/21/05	- -	103.09	NM	0.00	103.09	3,733.97	-1.68
			06/28/05	- -	103.48	NM	0.00	103.48	3,733.58	-0.39
			09/30/05	- -	103.80	NM	0.00	103.80	3,733.26	-0.32
			12/29/05	- -	104.41	NM	0.00	104.41	3,732.65	-0.61
			04/10/06	- -	104.59	NM	0.00	104.59	3,732.47	-0.18
			07/06/06	- -	104.94	NM	0.00	104.94	3,732.12	-0.35
			01/26/07	- -	106.41	NM	0.00	106.41	3,730.65	-1.47
			03/27/07	- -	106.47	NM	0.00	106.47	3,730.59	-0.06
			07/13/07	- -	106.93	NM	0.00	106.93	3,730.13	-0.46
			09/12/07	- -	107.19	NM	0.00	107.19	3,729.87	-0.26
			12/31/07	- -	106.71	NM	0.00	106.71	3,730.35	0.48
			03/26/08	- -	107.02	119.75	0.00	107.02	3,730.04	-0.31
			06/13/08	- -	107.19	NM	0.00	107.19	3,729.87	-0.17
			09/24/08	- -	108.56	NM	0.00	108.56	3,728.50	-1.37
			12/29/08	- -	108.71	NM	0.00	108.71	3,728.35	-0.15
			03/17/09	- -	108.36	NM	0.00	108.36	3,728.70	0.35
			06/16/09	- -	108.58	108.58	0.00	108.58	3,728.48	-0.22
			01/13/10	- -	109.68	119.95	0.00	109.68	3,727.38	-1.10
			08/11/10	- -	109.72	119.68	0.00	109.72	3,727.34	-0.04
			02/23/11	- -	110.14	119.69	0.00	110.14	3,726.92	-0.42
			07/12/11	- -	111.17	119.71	0.00	111.17	3,725.89	-1.03
			02/01/12	- -	111.81	119.66	0.00	111.81	3,725.25	-0.64
			07/23/12	- -	113.11	119.66	0.00	113.11	3,723.95	-1.30

Table 1. Water Elevation Measurements, Navajo Refining Company, Lea Refinery, Lovington, NM

Monitor Well	Top of Casing Elevation (feet)	Well Screen Interval (feet)	Date	Depth to Product (feet, btoc)	Depth to Water (feet, btoc)	Total Depth (feet)	Product Thickness (feet)	Corrected Depth to Water (feet)	Corrected Water Level Elev. (feet)	Change from previous measurement (ft)
MW-14 [4,5]	3,823.03	3,737.88 to 3,717.88	04/30/04	- -	87.46	NM	0.00	87.46	3,735.57	NA
			02/21/05	- -	88.48	NM	0.00	88.48	3,734.55	-1.02
			06/28/05	- -	88.80	NM	0.00	88.80	3,734.23	-0.32
			09/30/05	- -	89.14	NM	0.00	89.14	3,733.89	-0.34
			12/29/05	- -	89.34	NM	0.00	89.34	3,733.69	-0.20
			04/10/06	- -	89.63	NM	0.00	89.63	3,733.40	-0.29
			07/06/06	- -	90.08	NM	0.00	90.08	3,732.95	-0.45
			01/26/07	- -	91.02	NM	0.00	91.02	3,732.01	-0.94
			03/27/07	- -	91.18	NM	0.00	91.18	3,731.85	-0.16
			07/13/07	- -	91.68	NM	0.00	91.68	3,731.35	-0.50
			09/12/07	- -	92.02	NM	0.00	92.02	3,731.01	-0.34
			12/31/07	- -	92.25	NM	0.00	92.25	3,730.78	-0.23
			03/26/08	- -	92.43	105.08	0.00	92.43	3,730.60	-0.18
			06/13/08	- -	92.64	NM	0.00	92.64	3,730.39	-0.21
			12/29/08	- -	93.60	NM	0.00	93.60	3,729.43	-0.96
			03/17/09	- -	93.84	NM	0.00	93.84	3,729.19	-0.24
			06/16/09	- -	93.92	105.04	0.00	93.92	3,729.11	-0.08
			01/13/10	- -	94.80	105.30	0.00	94.80	3,728.23	-0.88
			08/11/10	- -	95.67	105.04	0.00	95.67	3,727.36	-0.87
			02/23/11	- -	95.99	105.05	0.00	95.99	3,727.04	-0.32
			07/12/11	- -	96.59	105.06	0.00	96.59	3,726.44	-0.60
			01/31/12	- -	97.54	105.05	0.00	97.54	3,725.49	-0.95
			07/23/12	- -	98.20	105.05	0.00	98.20	3,724.83	-0.66
MW-15 [6,7]	3,840.19	3,738.54 to 3,718.54	08/11/10	- -	106.94	121.68	0.00	106.94	3,733.25	NA
			02/23/11	- -	107.01	121.67	0.00	107.01	3,733.18	-0.07
			07/12/11	- -	108.32	121.62	0.00	108.32	3,731.87	-1.31
			01/30/12	- -	108.54	121.62	0.00	108.54	3,731.65	-0.22
			07/23/12	- -	109.77	121.58	0.00	109.77	3,730.42	-1.23
MW-16 [6,7]	3,838.20	3,737.50 to 3,717.50	08/11/10	- -	106.18	119.61	0.00	106.18	3,732.02	NA
			02/23/11	- -	106.34	119.67	0.00	106.34	3,731.86	-0.16
			07/12/11	- -	107.21	119.61	0.00	107.21	3,730.99	-0.87
			01/30/12	- -	107.93	119.47	0.00	107.93	3,730.27	-0.72
			07/23/12	- -	108.98	119.14	0.00	108.98	3,729.22	-1.05
MW-17 [6,7]	3,831.43	3,735.79 to 3,715.79	08/11/10	- -	101.65	115.92	0.00	101.65	3,729.78	NA
			02/23/11	- -	101.71	115.69	0.00	101.71	3,729.72	-0.06
			07/12/11	- -	102.41	115.55	0.00	102.41	3,729.02	-0.70
			01/31/12	WELL DAMAGED - NOT GAUGED						
			07/23/12	WELL DAMAGED - NOT GAUGED						
MW-18 [6,7]	3,825.05	3,725.52 to 3,705.52	08/11/10	- -	108.54	119.36	0.00	108.54	3,716.51	NA
			09/30/10	- -	104.47	NM	0.00	104.47	3,720.58	4.07
			02/23/11	- -	100.02	119.38	0.00	100.02	3,725.03	4.45
			07/12/11	- -	100.73	119.38	0.00	100.73	3,724.32	-0.71
			01/31/12	- -	100.49	119.38	0.00	100.49	3,724.56	0.24
			07/23/12	- -	110.18	119.37	0.00	110.18	3,714.87	-9.69

Table 1. Water Elevation Measurements, Navajo Refining Company, Lea Refinery, Lovington, NM

Monitor Well	Top of Casing Elevation (feet)	Well Screen Interval (feet)	Date	Depth to Product (feet, btoc)	Depth to Water (feet, btoc)	Total Depth (feet)	Product Thickness (feet)	Corrected Depth to Water (feet)	Corrected Water Level Elev. (feet)	Change from previous measurement (ft)
MW-19 [6,7]	3,823.97	3,731.48 to 3,711.48	08/11/10	- -	102.35	113.60	0.00	102.35	3,721.62	NA
			09/30/10	- -	98.70	NM	0.00	98.70	3,725.27	3.65
			02/23/11	- -	98.32	113.57	0.00	98.32	3,725.65	0.38
			07/12/11	- -	101.87	113.56	0.00	101.87	3,722.10	-3.55
			01/31/12	- -	100.92	113.54	0.00	100.92	3,723.05	0.95
			07/23/12	- -	100.98	113.56	0.00	100.98	3,722.99	-0.06
MW-20 [6,7]	3,824.58	3,733.03 to 3,713.03	08/11/10	- -	97.75	111.82	0.00	97.75	3,726.83	NA
			02/23/11	- -	97.42	111.82	0.00	97.42	3,727.16	0.33
			07/12/11	- -	98.50	111.74	0.00	98.50	3,726.08	-1.08
			01/31/12	- -	99.07	111.74	0.00	99.07	3,725.51	-0.57
			07/23/12	- -	99.75	111.75	0.00	99.75	3,724.83	-0.68
MW-21 [6,7]	3,820.26	3,731.59 to 3,711.59	08/11/10	- -	94.06	108.31	0.00	94.06	3,726.20	NA
			02/23/11	- -	93.84	108.27	0.00	93.84	3,726.42	0.22
			07/12/11	- -	94.85	108.23	0.00	94.85	3,725.41	-1.01
			01/31/12	- -	95.72	108.18	0.00	95.72	3,724.54	-0.87
			07/23/12	- -	96.22	108.24	0.00	96.22	3,724.04	-0.50
MW-22 [6,7]	3,821.82	3,731.2 to 3,711.27	08/11/10	- -	95.62	110.80	0.00	95.62	3,726.20	NA
			02/23/11	- -	95.36	110.78	0.00	95.36	3,726.46	0.26
			07/12/11	- -	96.26	110.74	0.00	96.26	3,725.56	-0.90
			01/31/12	- -	97.56	110.72	0.00	97.56	3,724.26	-1.30
			07/23/12	- -	97.90	110.70	0.00	97.90	3,723.92	-0.34
MW-23 [6,7]	3,825.58	3,730.91 to 3,710.91	08/11/10	- -	100.49	115.10	0.00	100.49	3,725.09	NA
			02/23/11	- -	99.80	115.12	0.00	99.80	3,725.78	0.69
			07/12/11	- -	101.29	115.10	0.00	101.29	3,724.29	-1.49
			02/01/12	- -	102.04	115.07	0.00	102.04	3,723.54	-0.75
			07/23/12	- -	102.39	114.98	0.00	102.39	3,723.19	-0.35
MW-24 [6,7]	3,830.50	3,731.31 to 3,711.31	08/11/10	- -	104.04	118.14	0.00	104.04	3,726.46	NA
			02/23/11	- -	104.26	118.09	0.00	104.26	3,726.24	-0.22
			07/12/11	- -	105.29	118.04	0.00	105.29	3,725.21	-1.03
			02/01/12	- -	106.65	119.10	0.00	106.65	3,723.85	-1.36
			07/23/12	- -	106.96	118.04	0.00	106.96	3,723.54	-0.31
MW-25 [6,7]	3,830.77	3,729.00 to 3,709.00	08/11/10	- -	106.46	121.66	0.00	106.46	3,724.31	NA
			02/23/11	- -	105.72	121.60	0.00	105.72	3,725.05	0.74
			07/12/11	- -	107.24	121.49	0.00	107.24	3,723.53	-1.52
			02/01/12	- -	108.53	121.42	0.00	108.53	3,722.24	-1.29
			07/23/12	- -	109.13	121.47	0.00	109.13	3,721.64	-0.60
MW-26 [6,7]	3,833.18	3,729.89 to 3,709.89	08/11/10	- -	106.22	121.33	0.00	106.22	3,726.96	NA
			02/23/11	- -	108.44	121.31	0.00	108.44	3,724.74	-2.22
			07/12/11	- -	109.58	121.26	0.00	109.58	3,723.60	-1.14
			02/01/12	- -	110.38	121.21	0.00	110.38	3,722.80	-0.80
			07/23/12	- -	111.28	121.24	0.00	111.28	3,721.90	-0.90

Table 1. Water Elevation Measurements, Navajo Refining Company, Lea Refinery, Lovington, NM

Monitor Well	Top of Casing Elevation (feet)	Well Screen Interval (feet)	Date	Depth to Product (feet, btoc)	Depth to Water (feet, btoc)	Total Depth (feet)	Product Thickness (feet)	Corrected Depth to Water (feet)	Corrected Water Level Elev. (feet)	Change from previous measurement (ft)
MW-27 [6,7]	3,837.27	3,733.03 to 3,713.03	08/11/10	- -	109.00	124.07	0.00	109.00	3,728.27	NA
			02/23/11	- -	109.58	123.96	0.00	109.58	3,727.69	-0.58
			07/12/11	- -	110.59	124.00	0.00	110.59	3,726.68	-1.01
			02/01/12	- -	111.37	123.97	0.00	111.37	3,725.90	-0.78
			07/23/12	- -	112.32	123.78	0.00	112.32	3,724.95	-0.95
MW-28 [6,7]	3,833.44	3,733.73 to 3,713.73	08/11/10	- -	103.72	118.42	0.00	103.72	3,729.72	NA
			02/23/11	- -	104.03	118.42	0.00	104.03	3,729.41	-0.31
			07/12/11	- -	105.07	118.35	0.00	105.07	3,728.37	-1.04
			01/30/12	- -	105.84	118.38	0.00	105.84	3,727.60	-0.77
			07/23/12	- -	106.65	118.31	0.00	106.65	3,726.79	-0.81
MW-29 [6,7]	3,835.55	3,734.52 to 3,714.52	08/11/10	- -	105.80	120.42	0.00	105.80	3,729.75	NA
			02/23/11	- -	105.97	120.35	0.00	105.97	3,729.58	-0.17
			07/12/11	- -	107.08	120.33	0.00	107.08	3,728.47	-1.11
			01/30/12	- -	107.69	120.33	0.00	107.69	3,727.86	-0.61
			07/23/12	- -	108.74	120.27	0.00	108.74	3,726.81	-1.05
RW-1	3,838.48	3,738.19 to 3,708.19	04/30/09	- -	106.45	136.09	0.00	106.45	3,732.03	NA
			06/10/09	- -	106.59	NM	0.00	106.59	3,731.89	-0.14
			06/19/09	- -	106.61	129.62	0.00	106.61	3,731.87	-0.02
			07/02/09	- -	106.82	129.25	0.00	106.82	3,731.66	-0.21
			07/24/09	- -	106.92	129.31	0.00	106.92	3,731.56	-0.10
			09/24/09	- -	107.42	129.73	0.00	107.42	3,731.06	-0.50
			10/27/09	- -	107.53	129.25	0.00	107.53	3,730.95	-0.11
			01/13/10	- -	107.67	129.29	0.00	107.67	3,730.81	-0.14
			02/02/10	- -	107.69	NM	0.00	107.69	3,730.79	-0.02
			04/01/10	- -	107.60	NM	0.00	107.60	3,730.88	0.09
			08/11/10	- -	108.18	129.29	0.00	108.18	3,730.30	-0.58
			02/23/11	- -	108.22	129.31	0.00	108.22	3,730.26	-0.04
			07/12/11	- -	109.09	129.27	0.00	109.09	3,729.39	-0.87
			02/02/12	- -	109.81	129.34	0.00	109.81	3,728.67	-0.72
			07/23/12	- -	110.98	129.07	0.00	110.98	3,727.50	-1.17

Notes:

1. Monitoring wells MW-1 through MW-7 installed September 1995; plugged and redrilled April 2009.
2. Monitoring wells MW-8 through MW-10 installed March and April 1996; plugged and redrilled April 2009.
3. Monitoring wells MW-6R, MW-11, MW-12 installed April and May 2002; MW-6R plugged April 2009.
4. Monitoring wells MW-13 and MW-14 installed January 2004.
5. Elevation survey of new and existing wells August 7, 2009. Earlier water level information corrected to current survey.
6. Monitoring wells MW-15 through MW-29 installed May-June 2010.
7. Elevation survey of wells MW-15 through MW-29 July 13, 2010.

btoc = below top of casing

-- = Not Detected

NM = Not Measured

NA = Not Applicable

Table 2. Organic Constituent Concentrations in Groundwater

Table 2. Organic Constituent Concentrations in Groundwater, Navajo Refining Company, Lea Refinery, Lovington, NM

		WQCC Volatiles					WQCC Semi-Volatiles				
Monitor Well	**Sample Date**	**Benzene (mg/L)**	**Ethyl-benzene (mg/L)**	**Toluene (mg/L)**	**Total Xylenes (mg/L)**	**Total Naphthalene (8260, mg/L)**	**Total Naphthalenes (8270, mg/L)**	**Naphthalene (8270, mg/L)**	**1-Methylnaphthalene (mg/L)**	**2-Methylnaphthalene (mg/L)**	**Total Phenols (mg/L)**
NM WQCC Groundwater Standards:		**0.010**	**0.75**	**0.75**	**0.62**	**0.03**	**0.03**	- -	- -	- -	**0.005**
MW-1	06/19/09	<0.0050	**0.012**	<0.0050	**0.031**	<0.0050	- -	- -	- -	- -	- -
	01/19/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	<0.00020	<0.00020	<0.00020
	08/18/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	03/01/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/20/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	02/02/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/27/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-2	06/22/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	01/19/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	08/16/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	03/03/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/14/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	01/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/24/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-3	06/16/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	01/14/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
(duplicate)	01/14/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	08/19/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	02/24/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/15/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	01/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/25/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-4	06/16/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	01/13/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	08/19/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	02/28/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/15/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	**0.00044**	**0.00044**	- -	<0.00020	<0.00020
	01/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/24/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-5	06/16/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	01/18/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	08/20/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	02/28/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/19/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	01/31/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
(duplicate)	01/31/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/25/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-6	06/18/09	<0.0050	<0.0050	<0.0050	<0.015	**0.0075**	- -	- -	- -	- -	- -
(duplicate)	06/18/09	<0.0050	<0.0050	<0.0050	<0.015	**0.0074**	- -	- -	- -	- -	- -
	02/02/10	<0.0050	**0.013**	<0.0050	<0.015	**0.0099**	- -	- -	- -	- -	- -
	08/19/10	<0.0050	**0.015**	<0.0050	<0.015	<0.0050	- -	**0.0017**	- -	**0.0017**	<0.0010
	03/01/11	<0.0050	**0.018**	<0.0050	<0.015	**0.013**	**0.0094**	**0.0062**	<0.00020	**0.0032**	**0.0255**
	07/20/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	**0.0008**	**0.0008**	- -	<0.00020	<0.00020
	02/02/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/24/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020

Table 2. Organic Constituent Concentrations in Groundwater, Navajo Refining Company, Lea Refinery, Lovington, NM

		WQCC Volatiles					WQCC Semi-Volatiles				
Monitor Well	**Sample Date**	**Benzene (mg/L)**	**Ethyl-benzene (mg/L)**	**Toluene (mg/L)**	**Total Xylenes (mg/L)**	**Total Naphthalene (8260, mg/L)**	**Total Naphthalenes (8270, mg/L)**	**Naphthalene (8270, mg/L)**	**1-Methylnaphthalene (mg/L)**	**2-Methylnaphthalene (mg/L)**	**Total Phenols (mg/L)**
NM WQCC Groundwater Standards:		**0.010**	**0.75**	**0.75**	**0.62**	**0.03**	**0.03**	**- -**	**- -**	**- -**	**0.005**
MW-7	06/19/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	02/02/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	08/18/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	03/01/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/20/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	02/02/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/27/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-8	06/18/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	01/18/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	08/18/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	02/25/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/19/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	02/01/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/27/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-9	06/16/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	01/14/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	08/19/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	03/01/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/15/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	01/31/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/25/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-10	06/16/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	01/13/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	08/19/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	<0.00020	<0.00020
	03/03/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	**0.00028**	**0.00028**	<0.00020	<0.00020	<0.00020
	07/15/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	01/31/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/25/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-11	06/18/09	**0.10**	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	01/18/10	**0.20 E**	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	08/18/10	**0.078**	**0.021**	<0.0050	<0.015	<0.0050	**0.00036**	**0.00036**	- -	- -	**0.00122**
	02/25/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/19/11	**1.2**	<0.0050	<0.0050	<0.015	<0.0050	**0.00036**	**0.00036**	- -	<0.00020	**0.00089**
	02/01/12	**7.8**	**0.051**	<0.0050	**0.200**	**0.096**	**0.0435**	**0.039**	- -	**0.0045**	**0.0035**
	07/27/12	**0.049**	<0.0050	<0.0050	<0.015	<0.0050	**0.00022**	**0.00022**	<0.00020	<0.00020	**0.00023**
MW-12	06/16/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	01/18/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	08/20/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	02/25/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/19/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	02/01/12	**DAMAGED WELL - NO SAMPLES COLLECTED**									

Table 2. Organic Constituent Concentrations in Groundwater, Navajo Refining Company, Lea Refinery, Lovington, NM

		WQCC Volatiles					WQCC Semi-Volatiles				
Monitor Well	**Sample Date**	**Benzene (mg/L)**	**Ethyl-benzene (mg/L)**	**Toluene (mg/L)**	**Total Xylenes (mg/L)**	**Total Naphthalene (8260, mg/L)**	**Total Naphthalenes (8270, mg/L)**	**Naphthalene (8270, mg/L)**	**1-Methylnaphthalene (mg/L)**	**2-Methylnaphthalene (mg/L)**	**Total Phenols (mg/L)**
NM WQCC Groundwater Standards:		**0.010**	**0.75**	**0.75**	**0.62**	**0.03**	**0.03**	**- -**	**- -**	**- -**	**0.005**
MW-13	06/16/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	01/18/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	08/18/10	**0.016**	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	02/25/11	**0.0057**	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	**0.00091**
	07/19/11	**0.0063**	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	02/01/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/26/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-14	06/16/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	01/18/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	08/20/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	02/25/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/18/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	01/31/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/25/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-15	08/20/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	02/24/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/14/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	01/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/24/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-16	08/20/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	02/24/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/15/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	**0.00030**	**0.00030**	- -	<0.00020	<0.00020
(duplicate)	07/15/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	01/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/24/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-17	08/20/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	02/24/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/18/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	- -	**DAMAGED WELL - NO SAMPLES COLLECTED**									
MW-18	08/23/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	02/24/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/18/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	01/31/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	**0.00021**	**0.00021**	- -	<0.00020	<0.00020
	07/25/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-19	08/23/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	02/24/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/18/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	01/31/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/25/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-20	08/23/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	02/25/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/18/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	01/31/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/25/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020

Table 2. Organic Constituent Concentrations in Groundwater, Navajo Refining Company, Lea Refinery, Lovington, NM

		WQCC Volatiles					WQCC Semi-Volatiles				
Monitor Well	**Sample Date**	**Benzene (mg/L)**	**Ethyl-benzene (mg/L)**	**Toluene (mg/L)**	**Total Xylenes (mg/L)**	**Total Naphthalene (8260, mg/L)**	**Total Naphthalenes (8270, mg/L)**	**Naphthalene (8270, mg/L)**	**1-Methylnaphthalene (mg/L)**	**2-Methylnaphthalene (mg/L)**	**Total Phenols (mg/L)**
NM WQCC Groundwater Standards:		**0.010**	**0.75**	**0.75**	**0.62**	**0.03**	**0.03**	**- -**	**- -**	**- -**	**0.005**
MW-21	08/23/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	02/28/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
(duplicate)	02/28/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/19/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	01/31/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/26/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-22	08/23/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	02/28/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/19/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	01/31/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/26/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-23	08/23/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	02/28/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/19/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	02/01/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/26/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-24	08/24/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	02/28/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/14/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	02/01/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
(duplicate)	07/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-25	08/23/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	02/28/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/18/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	02/01/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/26/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-26	08/24/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	02/28/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/14/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	02/01/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/26/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-27	08/18/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	02/25/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	**0.00099**
	07/20/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	**0.00034**
	02/01/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/26/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
MW-28	08/28/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	02/23/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/14/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	01/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/24/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020

Table 2. Organic Constituent Concentrations in Groundwater, Navajo Refining Company, Lea Refinery, Lovington, NM

		WQCC Volatiles					WQCC Semi-Volatiles				
Monitor Well	**Sample Date**	**Benzene (mg/L)**	**Ethyl-benzene (mg/L)**	**Toluene (mg/L)**	**Total Xylenes (mg/L)**	**Total Naphthalene (8260, mg/L)**	**Total Naphthalenes (8270, mg/L)**	**Naphthalene (8270, mg/L)**	**1-Methylnaphthalene (mg/L)**	**2-Methylnaphthalene (mg/L)**	**Total Phenols (mg/L)**
NM WQCC Groundwater Standards:		**0.010**	**0.75**	**0.75**	**0.62**	**0.03**	**0.03**	**- -**	**- -**	**- -**	**0.005**
MW-29	08/24/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
(Dupl #1)	08/24/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	02/28/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/14/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	01/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	**0.00050**	**0.00050**	- -	<0.00020	<0.00020
	07/24/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
RW-1	06/19/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	02/02/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	08/19/10	<0.0050	<0.0050	<0.0050	**0.015**	<0.0050	- -	- -	- -	- -	- -
	03/01/11	<0.0050	<0.0050	<0.0050	**0.0054**	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/20/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	02/02/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/27/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
North Well	06/18/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	01/14/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	08/24/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	03/03/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/20/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	02/02/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
South Well	06/22/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	01/14/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	08/24/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	03/03/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/20/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	02/02/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
East Well	06/18/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	01/14/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	08/25/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -
	03/03/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	07/20/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	02/02/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020
	07/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	08/27/12	<0.0050	<0.0050	<0.0050	<0.015	--	<0.00020	<0.00020	<0.00020	--	<0.00020
	09/26/12	<0.0050	<0.0050	<0.0050	<0.015	--	<0.00020	<0.00020	<0.00020	--	<0.00020
	10/22/12	<0.0050	<0.0050	<0.0050	<0.015	--	<0.00020	<0.00020	<0.00020	--	<0.00020
	12/27/12	<0.0050	<0.0050	<0.0050	<0.015	--	<0.00020	<0.00020	<0.00020	--	<0.00020

Notes:

Bold indicates analyte was detected above the laboratory reporting limit

Shading indicates detected result exceeded the New Mexico Water Quality Control Commission (WQCC) Human Health Standard

mg/L = milligrams per liter

< = Not reported above laboratory reporting limit

-- = Not Analyzed

E = Value above quantitation range

Analyses performed by ALS Laboratory Group, Houston, Texas

Table 3. Inorganic Constituent Concentrations in Groundwater

Table 3. Inorganic Constituent Concentrations in Groundwater, Navajo Refinery Company, Lovington Refinery

Monitor Well	Sample Date	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
	NM WQCC Groundwater Standards:	250	1.6	10	600	1,000	5.0	0.1	1.0	0.75	0.01	0.05	0.05	1.0	1.0	0.05	0.20	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-1	06/19/09	**131**	**0.827**	**3.75**	**123**	**694**	<0.0100	**0.00914**	**0.147**	**0.175**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.974**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	**0.0124**
	01/19/10	**266**	**0.249**	**5.84**	**145**	**1,240**	**0.0202**	**0.00634**	**0.164**	**0.236**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**2.72**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	**0.00615**	**0.00989**
	08/18/10	**126**	**0.623**	**2.59**	**111**	**694**	<0.0100	**0.00841**	**0.117**	**0.182**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**1.62**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.00538**
	03/01/11	**100**	**0.502**	**1.84**	**83.4**	**580**	<0.0100	**0.00821**	**0.0984**	**0.189**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**1.62**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.00689**
	07/20/11	**34.7**	**0.623**	**1.14**	**73.9**	**492**	<0.0100	**0.00808**	**0.0903**	**0.168**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.485**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.00832**
	02/02/12	**29.9**	**0.773**	<1.00	**65.4**	**392**	<0.0100	**0.00782**	**0.0843**	**0.164**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.780**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.00766**
	07/27/12	**27.3**	**0.944**	<2.00	**59.5**	**358**	**0.0249**	**0.00870**	**0.0917**	**0.193**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**1.05**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.00759**
MW-2	06/22/09	**252**	**0.765**	**2.69**	**66.8**	**988**	**0.0657**	**0.0386**	**0.0803**	**0.190**	<0.00200	<0.00500	<0.00500	**0.00621**	<0.200	<0.00500	**0.00583**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	**0.110**
	01/19/10	**246**	**0.672**	**3.39**	**55.1**	**966**	<0.0100	<0.00500	**0.00500**	**0.191**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00538**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0166**
	08/16/10	**276**	**0.824**	**3.23**	**55.9**	**1,180**	**0.1367**	<0.00500	**0.193**	**0.155**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0204**
	03/03/11	**221**	**0.763**	**3.49**	**57.6**	**1,010**	<0.0100	<0.00500	**0.176**	**0.171**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0117**
	07/14/11	**190**	**0.647**	**2.98**	**58.4**	**966**	<0.0100	<0.00500	**0.160**	**0.192**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0230**
	01/30/12	**214**	**0.784**	**3.43**	**75.1**	**1,230**	<0.0100	<0.00500	**0.130**	**0.164**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0255**
	07/24/12	**201**	**0.898**	**3.24**	**76.3**	**908**	<0.0100	<0.00500	**0.140**	**0.233**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0191**
MW-3	06/16/09	**29.1**	**3.38**	**2.19**	**64.6**	**504**	**0.308**	**0.00815**	**0.115**	**0.160**	<0.00200	**0.00709**	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	**0.0151**	<0.00500	<0.00500	<0.00500	- -	<0.0100
	01/14/10	**49.9**	**3.18**	**2.11**	**76.5**	**540**	**0.144**	**0.00703**	**0.119**	**0.148**	<0.00200	**0.00977**	<0.00500	**0.121**	<0.200	<0.00500	**0.00597**	<0.000200	**0.0200**	**0.00842**	<0.00500	<0.00500	**0.000625**	**0.0195**
(duplicate)	01/14/10	**49.8**	**3.18**	**2.11**	**75.0**	**552**	**0.142**	**0.00798**	**0.125**	**0.167**	<0.00200	**0.01050**	<0.00500	**0.148**	<0.200	<0.00500	**0.00699**	<0.000200	**0.0216**	**0.0096**	<0.00500	<0.00500	**0.000721**	**0.0230**
	08/19/10	**72.7**	**2.99**	**1.52**	**77.7**	**518**	**0.0767**	**0.00935**	**0.127**	**0.151**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	**0.00790**	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/24/11	**88.2**	**2.58**	**3.02**	**80.5**	**566**	<0.0100	**0.00892**	**0.124**	**0.178**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0524**
	07/15/11	**67.3**	**2.37**	**2.59**	**74.7**	**568**	<0.0100	**0.0125**	**0.113**	**0.202**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	**0.00510**	<0.00500	<0.00500	<0.00500	<0.00500	**0.0156**
	01/30/12	**65.6**	**2.94**	**2.37**	**86.3**	**472**	<0.0100	**0.0117**	**0.0831**	**0.168**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	**0.00621**	<0.00500	<0.00500	<0.00500	<0.00500	**0.00886**
	07/25/12	**35.0**	**2.70**	<2.00	**81.3**	**436**	<0.0100	**0.0152**	**0.0773**	**0.209**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.00673**
MW-4	06/16/09	**28.9**	**0.841**	**1.84**	**61.5**	**422**	**0.180**	<0.00500	**0.174**	**0.160**	<0.00200	**0.00534**	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	**0.0120**
	01/13/10	**29.3**	**1.10**	**1.67**	**66.7**	**416**	**0.0345**	<0.00500	**0.0932**	**0.177**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	**0.00102**	<0.00500
	08/19/10	**26.1**	**1.10**	**1.10**	**65.8**	**324**	**0.0607**	<0.00500	**0.0862**	**0.136**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/28/11	**27.1**	**1.02**	**1.91**	**64.4**	**378**	**0.0131**	<0.00500	**0.0951**	**0.163**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.00533**
	07/15/11	**25.8**	**1.12**	**1.57**	**63.6**	**422**	**0.144**	<0.00500	**0.141**	**0.172**	<0.00200	0.00619	<0.00500	<0.00500	<0.200	<0.00500	**0.0114**	<0.000200	<0.00500	**0.0103**	<0.00500	<0.00500	<0.00500	**0.0211**
	01/30/12	**30.0**	**1.08**	**1.71**	**73.4**	**388**	**0.0119**	<0.00500	**0.0796**	**0.150**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0147**
	07/24/12	**28.9**	**1.18**	<2.00	**69.4**	**414**	<0.0100	<0.00500	**0.0883**	**0.199**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0102**
MW-5	06/16/09	**186**	**1.39**	**3.31**	**131**	**952**	**0.796**	**0.0233**	**0.0639**	**0.116**	<0.00200	<0.00500	<0.00500	<0.00500	**0.399**	<0.00500	**0.0067**	<0.000200	**0.0103**	<0.00500	<0.00500	<0.00500	- -	<0.0100
	01/18/10	**26.4**	**0.781**	**4.91**	**80.6**	**508**	<0.0100	<0.00500	**0.0966**	**0.135**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	08/20/10	**18.5**	**1.13**	**3.43**	**77.7**	**440**	**0.0814**	<0.00500	**0.0967**	**0.0986**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/28/11	**29.8**	**1.03**	**2.91**	**70.5**	**570**	**0.123**	<0.00500	**0.100**	**0.085**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.0142**	<0.000200	<0.00500	**0.0112**	<0.00500	<0.00500	<0.00500	**0.0368**
	07/19/11	**20.9**	**0.858**	**2.72**	**59.0**	**524**	<0.0100	<0.00500	**0.0968**	**0.087**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0309**
	01/31/12	**26.9**	**1.04**	**2.49**	**61.2**	**504**	<0.0100	<0.00500	**0.0972**	**0.0557**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.00948**
(duplicate)	01/31/12	**27.1**	**1.05**	**2.54**	**62.0**	**436**	<0.0100	<0.00500	**0.0947**	**0.0728**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0119**
	07/25/12	**15.9**	**1.10**	**2.22**	**50.1**	**434**	**0.0205**	<0.00500	**0.0931**	**0.134**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0562**
MW-6	06/18/09	**188**	**0.113**	**0.678**	**101**	**844**	<0.0100	**0.0201**	**0.186**	**0.175**	<0.00200	<0.00500	<0.00500	<0.00500	**0.418**	<0.00500	**2.86**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	**0.00996**
(duplicate)	06/18/09	**168**	<0.100	**0.682**	**90.4**	**812**	<0.0100	**0.0221**	**0.200**	**0.192**	<0.00200	<0.00500	<0.00500	<0.00500	**0.219**	<0.00500	**2.76**	<0.000200	<0.00500	**0.00653**	<0.00500	<0.00500	- -	**0.0141**
	02/02/10	**334**	<0.100	**0.822**	**90.2**	**1,400**	<0.0200	**0.0250**	**0.499**	**0.234**	<0.00200	<0.00500	<0.00500	<0.00500	**2.08**	<0.00500	**4.51**	<0.000200	<0.00500	**0.00634**	<0.00500	<0.00500	**0.0113**	<0.00500
	08/19/10	**285**	<0.100	<1.00	**111**	**1,350**	**0.0152**	**0.0456**	**0.376**	**0.244**	<0.00200	<0.00500	<0.00500	<0.00500	**1.86**	<0.00500	**6.61**	<0.000200	<0.00500	**0.00766**	<0.00500	<0.00500	**0.00785**	<0.00500
	03/01/11	**282**	<0.100	**0.750**	**80.7**	**1,340**	<0.0100	**0.0390**	**0.404**	**0.271**	<0.00200	<0.00500	<0.00500	<0.00500	**0.711**	<0.00500	**5.58**	<0.000200	<0.00500	**0.00896**	<0.00500	<0.00500	**0.00659**	<0.00500
	07/20/11	**174**	<0.500	<0.500	**114**	**970**	<0.0100	**0.0336**	**0.220**	**0.223**	<0.00200	**0.00972**	<0.00500	<0.00500	**1.57**	<0.00500	**4.51**	<0.000200	<0.00500	**0.00576**	<0.00500	<0.00500	<0.00500	**0.0176**
	02/02/12	**58.4**	**0.313**	<1.00	**88.0**	**398**	<0.0100	<0.00500	**0.0827**	**0.190**	<0.00200	<0.00500	<0.00500	<0.00500	**0.488**	<0.00500	**1.25**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	**0.00599**	**0.00858**
	07/24/12	**77.7**	**0.217**	<2.00	**80.1**	**690**	<0.0100	**0.0128**	**0.143**	**0.265**	<0.00200	<0.00500	<0.00500	<0.00500	**1.28**	<0.00500	**2.53**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	**0.0102**	**0.0194**

Table 3. Inorganic Constituent Concentrations in Groundwater, Navajo Refining Company, Lovington Refinery

Monitor Well	Sample Date	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
	NM WQCC Groundwater Standards:	250	1.6	10	600	1,000	5.0	0.1	1.0	0.75	0.01	0.05	0.05	1.0	1.0	0.05	0.20	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-7	06/19/09	30.6	1.12	1.66	67.2	384	<0.0100	0.00923	0.169	0.161	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.127	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	0.0137
	02/02/10	28.0	0.854	1.72	62.2	350	<0.0200	0.00869	0.199	0.169	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.125	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	08/18/10	27.2	0.570	1.12	60.2	370	0.0223	0.00532	0.252	0.161	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.343	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	03/01/11	26.5	0.599	1.91	58.2	376	<0.0100	0.00525	0.237	0.161	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.441	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00593
	07/20/11	23.3	0.626	1.35	56.8	396	<0.0100	0.00669	0.246	0.164	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.617	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/02/12	25.5	0.633	1.66	61.5	356	<0.0100	<0.00500	0.229	0.166	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.550	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00746
	07/27/12	23.6	0.796	2.01	55.2	342	0.0727	<0.00500	0.234	0.196	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.642	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0114
MW-8	06/18/09	219	0.730	3.46	73.3	798	<0.0100	0.00501	0.181	0.228	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00919	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	0.0458
	01/18/10	151	0.493	3.80	67.6	742	<0.0100	0.00726	0.157	0.215	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00545
	08/18/10	279	0.560	7.08	65.3	1,260	0.0377	0.00676	0.204	0.170	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00501	0.00760
	02/25/11	144	0.820	<0.500	87.5	694	<0.0100	<0.00500	0.106	0.175	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.281	<0.000200	<0.00500	0.00620	<0.00500	<0.00500	<0.00500	0.0316
	07/19/11	313	0.522	4.49	72.4	1,460	<0.0100	<0.00500	0.229	0.278	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00928	0.0213
	02/01/12	376	0.498	8.21	102	1,530	<0.0100	<0.00500	0.221	0.219	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00636	<0.000200	<0.00500	0.0119	<0.00500	<0.00500	0.00745	0.0339
	07/27/12	224	0.490	8.55	122	1,080	<0.0100	<0.00500	0.160	0.294	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00523	<0.00500	<0.00500	0.00714	0.00888
MW-9	06/16/09	23.0	1.69	0.748	73.2	380	0.0468	0.0373	0.0911	0.122	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	<0.0100
	01/14/10	23.9	1.78	1.72	74.4	450	0.0164	0.0351	0.0676	0.139	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.000656	<0.00500
	08/19/10	21.8	1.64	1.32	75.2	412	0.115	0.0358	0.0649	0.121	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00961	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	03/01/11	24.1	1.63	2.01	74.6	414	0.0112	0.0382	0.0586	0.131	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00662
	07/15/11	24.9	1.65	1.78	70.2	434	0.0371	0.0374	0.0647	0.166	<0.00200	0.00741	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00511	<0.00500	<0.00500	<0.00500	0.00932
	01/31/12	31.5	2.22	1.43	80.5	484	<0.0100	0.0341	0.0653	0.108	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00529
	07/25/12	30.4	1.99	<2.00	77.8	420	0.0306	0.0292	0.0721	0.182	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00708	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00716
MW-10	06/16/09	32.2	0.878	1.83	76.5	378	<0.0200	<0.00500	0.113	0.138	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	0.0127
	01/13/10	33.4	1.05	1.84	77.9	436	<0.0100	<0.00500	0.0815	0.162	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.000911	0.0133
	08/19/10	31.7	1.07	1.91	79.8	508	0.0556	<0.00500	0.0798	0.129	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00569
	03/03/11	32.8	0.945	2.06	79.1	422	<0.0100	<0.00500	0.0772	0.159	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0133
	07/15/11	30.7	1.06	1.68	75.7	470	0.0318	<0.00500	0.0855	0.177	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	01/31/12	42.9	1.00	1.85	87.4	444	<0.0100	<0.00500	0.0865	0.109	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0252
	07/25/12	42.7	1.10	<2.00	82.6	382	<0.0100	0.00516	0.0882	0.186	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00861
MW-11	06/18/09	204	0.579	1.23	43.1	994	<0.0100	<0.00500	0.194	0.199	<0.00200	<0.00500	<0.00500	<0.00500	0.571	<0.00500	0.387	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	0.0212
	01/18/10	164	0.527	1.37	71.4	842	<0.0100	<0.00500	0.147	0.238	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0559	<0.000200	<0.00500	0.0126	<0.00500	<0.00500	0.00635	<0.00500
	08/18/10	146	0.616	2.38	50.6	802	0.0125	<0.00500	0.471	0.255	<0.00200	<0.00500	<0.00500	<0.00500	0.347	<0.00500	0.571	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00718	<0.00500
	02/25/11	415	0.549	<0.500	82.3	1,510	<0.0100	<0.00500	0.241	0.244	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0101	<0.000200	<0.00500	0.00856	<0.00500	<0.00500	0.00878	0.0982
	07/19/11	134	0.575	0.778	57.0	894	<0.0100	<0.00500	0.150	0.232	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0301	<0.000200	<0.00500	0.00846	<0.00500	<0.00500	0.00616	0.0265
	02/01/12	175	0.749	<0.500	4.96	966	<0.0100	0.0176	1.40	0.288	<0.00200	<0.00500	<0.00500	<0.00500	1.77	<0.00500	1.05	<0.000200	<0.00500	0.0169	<0.00500	<0.00500	0.0138	0.0189
	07/27/12	133	0.708	<2.00	59.7	784	<0.0100	0.0128	0.827	0.374	<0.00200	<0.00500	<0.00500	<0.00500	2.02	<0.00500	2.54	<0.000200	<0.00500	0.0351	<0.00500	<0.00500	0.0330	<0.00500
MW-12	06/16/09	23.0	1.16	1.98	49.6	354	<0.0200	0.00516	0.0775	0.200	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	<0.0100
	01/18/10	26.1	1.05	2.31	49.8	398	<0.0100	<0.00500	0.0755	0.235	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0219	<0.000200	<0.00500	0.0182	<0.00500	<0.00500	<0.00500	<0.00500
	08/20/10	25.8	1.22	2.00	50.3	340	0.115	0.00550	0.0756	0.176	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/25/11	28.5	1.14	<0.500	50.8	402	<0.0100	0.00504	0.076	0.198	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0185
	07/19/11	26.8	0.856	2.91	51.2	410	<0.0100	<0.00500	0.0828	0.215	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00976	<0.000200	0.00575	0.00684	<0.00500	<0.00500	<0.00500	<0.00500
	--	DAMAGED WELL - NO SAMPLES COLLECTED																						

Table 3. Inorganic Constituent Concentrations in Groundwater, Navajo Refining Company, Lovington Refinery

Monitor Well	Sample Date	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
	NM WQCC Groundwater Standards:	**250**	**1.6**	**10**	**600**	**1,000**	**5.0**	**0.1**	**1.0**	**0.75**	**0.01**	**0.05**	**0.05**	**1.0**	**1.0**	**0.05**	**0.20**	**0.002**	**1.0**	**0.2**	**0.05**	**0.05**	**0.03**	**10.0**
MW-13	06/16/09	**425**	**0.220**	**2.65**	**138**	**1,790**	<0.0200	<0.00500	**0.0692**	**0.253**	<0.00200	<0.00500	**0.0285**	<0.00500	<0.200	<0.00500	**0.0176**	<0.000200	<0.00500	**0.0126**	<0.00500	<0.00500	- -	**0.0269**
	01/18/10	**604**	**0.170**	**1.08**	**79.8**	**2,210**	<0.0100	<0.00500	**0.111**	**0.231**	<0.00200	**0.00728**	**0.00624**	<0.00500	<0.200	<0.00500	**0.0591**	<0.000200	<0.00500	**0.0110**	<0.00500	<0.00500	**0.0119**	**0.00769**
	08/18/10	**390**	**0.278**	<1.00	**144**	**1,720**	**0.0196**	<0.00500	**0.106**	**0.221**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.256**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	**0.0128**	**0.00618**
	02/25/11	**340**	**0.281**	<0.500	**235**	**1,540**	<0.0100	<0.00500	**0.0692**	**0.242**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.225**	<0.000200	<0.00500	**0.0144**	<0.00500	<0.00500	**0.0170**	**0.0744**
	07/19/11	**351**	**0.327**	<0.500	**244**	**1,960**	<0.0100	<0.00500	**0.0800**	**0.249**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.302**	<0.000200	<0.00500	**0.0121**	<0.00500	<0.00500	**0.0188**	**0.00785**
	02/01/12	**418**	**0.322**	<0.500	**122**	**1,590**	<0.0100	<0.00500	**0.0752**	**0.228**	<0.00200	<0.00500	**0.00663**	<0.00500	<0.200	<0.00500	**0.341**	<0.000200	<0.00500	**0.0136**	<0.00500	<0.00500	**0.0128**	**0.0553**
	07/26/12	**462**	**0.422**	<2.00	**123**	**2,150**	<0.0100	<0.00500	**0.112**	**0.284**	<0.00200	<0.00500	**0.00644**	<0.00500	<0.200	<0.00500	**0.459**	<0.000200	<0.00500	**0.0108**	<0.00500	<0.00500	**0.0158**	**0.0361**
MW-14	06/16/09	**93.0**	**0.851**	**5.16**	**60.9**	**540**	<0.0200	<0.00500	**0.0770**	**0.132**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.0199**	<0.000200	**0.0215**	<0.00501	<0.00500	<0.00500	- -	**0.0255**
	01/18/10	**103**	**0.810**	**6.03**	**59.0**	**598**	<0.0100	<0.00500	<0.00500	<0.0200	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	08/20/10	**74.1**	**0.986**	**2.76**	**61.3**	**340**	**0.103**	<0.00500	**0.0774**	**0.131**	<0.00200	**0.0119**	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	**0.00964**	**0.0480**	<0.00500	<0.00500	**0.00527**	<0.00500
	02/25/11	**58.2**	**0.918**	**2.32**	**58.7**	**440**	**0.0101**	<0.00500	**0.0778**	**0.151**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.0234**	<0.000200	**0.00903**	**0.0138**	<0.00500	<0.00500	**0.00541**	**0.0532**
	07/18/11	**48.4**	**1.05**	**1.36**	**53.0**	**482**	**0.176**	**0.00615**	**0.110**	**0.156**	<0.00200	**12.5**	**0.122**	**0.218**	**54.9**	<0.00500	**1.45**	<0.000200	**0.0860**	**6.81**	<0.00500	<0.00500	**0.00544**	**0.0446**
	01/31/12	**59.7**	**0.984**	**1.58**	**58.3**	**444**	<0.0100	<0.00500	**0.0802**	**0.129**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.0276**	<0.000200	**0.00608**	**0.0186**	<0.00500	<0.00500	<0.00500	**0.0287**
	07/25/12	**69.3**	**1.03**	<2.00	**54.8**	**446**	**0.0116**	<0.00500	**0.0905**	**0.216**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.0321**	<0.000200	<0.00500	**0.0240**	<0.00500	<0.00500	<0.00500	**0.0448**
MW-15	08/20/10	**221**	**0.921**	**3.22**	**77.6**	**776**	**0.079**	<0.00500	**0.145**	**0.175**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0198**
	02/24/11	**190**	**0.885**	**4.28**	**67.0**	**738**	<0.0100	<0.00500	**0.127**	**0.165**	<0.00200	**0.0102**	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0385**
	07/14/11	**236**	**0.701**	**4.18**	**60.9**	**940**	<0.0100	<0.00500	**0.173**	**0.201**	<0.00200	**0.0132**	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	**0.00657**	<0.00500	<0.00500	<0.00500	**0.0122**
	01/30/12	**304**	**0.840**	**4.09**	**78.6**	**1,330**	<0.0100	<0.00500	**0.180**	**0.178**	<0.00200	**0.00644**	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.00967**
	07/24/12	**291**	**0.965**	**8.22**	**80.3**	**1,060**	<0.0100	<0.00500	**0.178**	**0.227**	<0.00200	**0.0110**	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.00636**
MW-16	08/20/10	**25.3**	**0.930**	**1.13**	**73.7**	**406**	**0.0746**	<0.00500	**0.109**	**0.156**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00554**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0145**
	02/24/11	**28.1**	**0.928**	**2.36**	**73.7**	**412**	<0.0100	<0.00500	**0.107**	**0.162**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00671**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0248**
	07/15/11	**25.5**	**1.04**	**1.82**	**72.0**	**484**	**0.188**	<0.00500	**0.129**	**0.181**	<0.00200	**0.115**	<0.00500	<0.00500	**0.613**	<0.00500	**0.0164**	<0.000200	<0.00500	**0.0591**	<0.00500	<0.00500	<0.00500	**0.0176**
(duplicate)	07/15/11	**21.0**	**0.733**	**1.98**	**54.1**	**476**	**0.0374**	<0.00500	**0.118**	**0.185**	<0.00200	**0.0251**	<0.00500	<0.00500	**0.241**	<0.00500	**0.00820**	<0.000200	<0.00500	**0.0234**	<0.00500	<0.00500	<0.00500	**0.0166**
	01/30/12	**27.9**	**0.994**	**1.79**	**77.6**	**398**	<0.0100	<0.00500	**0.0964**	**0.166**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.00899**
	07/24/12	**26.6**	**1.14**	<2.0	**72.6**	**404**	**0.0102**	<0.00500	**0.0966**	**0.202**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.0162**	<0.000200	<0.00500	**0.0112**	<0.00500	<0.00500	<0.00500	**0.0167**
MW-17	08/20/10	**426**	**0.517**	**4.27**	**72.6**	**1,650**	**0.146**	<0.00500	**0.180**	**0.157**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0142**
	02/24/11	**412**	**0.435**	**5.33**	**80.0**	**1,634**	<0.0100	<0.00500	**0.152**	**0.162**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0478**
	07/18/11	**336**	**0.753**	**4.07**	**82.7**	**1,850**	<0.0100	<0.00500	**0.141**	**0.165**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0126**
	- -	**DAMAGED WELL - NO SAMPLES COLLECTED**																						
MW-18	08/23/10	**176**	**0.456**	**0.733**	**287**	**1,080**	**0.0787**	<0.00500	**0.0575**	**0.334**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.314**	<0.000200	**0.00561**	**0.0298**	**0.00548**	<0.00500	**0.0123**	**0.0772**
	02/24/11	**286**	**0.514**	**4.14**	**298**	**1,240**	**0.0157**	<0.00500	**0.0766**	**0.330**	<0.00200	**0.0186**	<0.00500	<0.00500	<0.200	<0.00500	**0.00536**	<0.000200	<0.00500	**0.0144**	**0.00501**	<0.00500	**0.00883**	**0.0439**
	07/18/11	**218**	**0.800**	**5.74**	**234**	**1,290**	**0.0244**	<0.00500	**0.05636**	**0.396**	<0.00200	**0.0111**	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	**0.0129**	<0.00500	<0.00500	**0.00666**	**0.0661**
	01/31/12	**106**	**0.722**	**3.89**	**94.3**	**584**	**0.0113**	<0.00500	**0.0645**	**0.133**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0191**
	07/25/12	**103**	**0.753**	**2.01**	**63.4**	**562**	**0.0110**	<0.00500	**0.0780**	**0.230**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.00684**
MW-19	08/23/10	**469**	**0.536**	**2.94**	**178**	**1,650**	**0.101**	**0.0476**	**0.229**	<0.0200	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00666**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0227**
	02/24/11	**235**	**0.713**	**2.87**	**90.7**	**828**	<0.0100	<0.00500	**0.0764**	**0.180**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0318**
	07/18/11	**688**	**0.734**	**3.66**	**142**	**2,880**	<0.0100	<0.00500	**0.092**	**0.266**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00781**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0553**
	01/31/12	**610**	**0.568**	**4.12**	**121**	**1,770**	<0.0100	<0.00500	**0.0688**	**0.350**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00553**	<0.000200	<0.00500	**0.00525**	<0.00500	<0.00500	<0.00500	**0.0345**
	07/25/12	**1,130**	**0.450**	**5.11**	**117**	**3,570**	**0.0114**	<0.00500	**0.106**	**0.535**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00593**	<0.000200	<0.00500	**0.00664**	<0.00500	<0.00500	<0.00500	**0.0714**
MW-20	08/23/10	**169**	**0.570**	**1.74**	**65.1**	**868**	**0.0891**	<0.00500	**0.122**	**0.143**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.00970**
	02/25/11	**187**	**0.603**	**2.58**	**66.3**	**840**	<0.0100	<0.00500	**0.120**	**0.150**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0643**
	07/18/11	**148**	**0.765**	**2.06**	**51.3**	**1,020**	<0.0100	<0.00500	**0.134**	**0.159**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0278**
	01/31/12	**174**	**0.641**	**2.51**	**61.4**	**726**	<0.0100	<0.00500	**0.114**	**0.149**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0171**
	07/25/12	**189**	**0.742**	**2.24**	**56.0**	**848**	<0.0100	<0.00500	**0.107**	**0.217**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0187**

Table 3. Inorganic Constituent Concentrations in Groundwater, Navajo Refinery Company, Lovington Refinery

Monitor Well	Sample Date	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
	NM WQCC Groundwater Standards:	250	1.6	10	600	1,000	5.0	0.1	1.0	0.75	0.01	0.05	0.05	1.0	1.0	0.05	0.20	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-21	08/23/10	**115**	**0.250**	**2.12**	**52.7**	**966**	**0.195**	<0.00500	**0.232**	**0.208**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.0567**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	**0.00898**	**0.0307**
	02/28/11	**182**	**0.257**	**3.02**	**56.7**	**1,050**	<0.0100	<0.00500	**0.258**	**0.257**	<0.00200	**0.00620**	<0.00500	<0.00500	<0.200	<0.00500	**0.102**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	**0.0101**	**0.0184**
(duplicate)	02/28/11	**183**	**0.249**	**2.99**	**56.3**	**1,000**	<0.0100	<0.00500	**0.256**	**0.252**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.101**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	**0.00975**	**0.0213**
	07/19/11	**191**	**0.163**	**2.62**	**57.0**	**1,250**	<0.0100	<0.00500	**0.242**	**0.225**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.0346**	<0.000200	<0.00500	**0.00836**	<0.00500	<0.00500	**0.00873**	**0.0286**
	01/31/12	**200**	**0.229**	**2.84**	**64.7**	**1,040**	<0.0100	<0.00500	**0.245**	**0.216**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.0375**	<0.000200	<0.00500	**0.00746**	<0.00500	<0.00500	**0.00704**	**0.0170**
	07/26/12	**186**	**0.306**	**2.64**	**60.4**	**1,130**	<0.0100	<0.00500	**0.244**	**0.261**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.038**	<0.000200	<0.00500	**0.00827**	<0.00500	<0.00500	**0.00862**	**0.0163**
MW-22	08/23/10	**115**	**0.552**	**1.76**	**62.3**	**726**	**0.121**	<0.00500	**0.165**	**0.174**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.0306**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	**0.00604**	**0.0916**
	02/28/11	**117**	**0.587**	**2.36**	**68.6**	**678**	<0.0100	<0.00500	**0.146**	**0.173**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.0108**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	**0.00616**	**0.0487**
	07/19/11	**107**	**0.568**	**2.06**	**64.1**	**740**	<0.0100	<0.00500	**0.150**	**0.178**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00721**	<0.000200	<0.00500	**0.00546**	<0.00500	<0.00500	**0.00638**	**0.0203**
	01/31/12	**141**	**0.570**	**2.26**	**74.3**	**766**	<0.0100	<0.00500	**0.151**	**0.141**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.0103**	<0.000200	<0.00500	**0.00762**	<0.00500	<0.00500	**0.00501**	**0.0183**
	07/26/12	**149**	**0.628**	**2.09**	**68.3**	**830**	<0.0100	<0.00500	**0.143**	**0.196**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00949**	<0.000200	<0.00500	**0.00839**	<0.00500	<0.00500	**0.00564**	**0.0068**
MW-23	08/23/10	**645**	**0.782**	**2.92**	**121**	**2,260**	**0.237**	<0.00500	**0.245**	**0.157**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00669**	<0.000200	<0.00500	**0.00859**	<0.00500	<0.00500	<0.00500	**0.0570**
	02/28/11	**511**	**0.676**	**3.47**	**81.9**	**1,540**	<0.0100	<0.00500	**0.164**	**0.151**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00831**	<0.000200	<0.00500	**0.00930**	<0.00500	<0.00500	<0.00500	**0.0463**
	07/19/11	**712**	**0.670**	**3.79**	**108**	**3,090**	<0.0100	<0.00500	**0.272**	**0.181**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00647**	<0.000200	<0.00500	**0.00912**	<0.00500	<0.00500	<0.00500	**0.0213**
	02/01/12	**887**	**0.697**	**4.07**	**85.4**	**2,720**	**0.0108**	<0.00500	**0.268**	**0.159**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00658**	<0.000200	<0.00500	**0.00714**	<0.00500	<0.00500	<0.00500	**0.0207**
	07/26/12	**774**	**0.750**	**3.45**	**100**	**3,060**	<0.0100	<0.00500	**0.252**	**0.198**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0101**
MW-24	08/24/10	**34.6**	**2.31**	**2.40**	**53.9**	**422**	**0.187**	<0.00500	**0.0867**	**0.140**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.00922**
	02/28/11	**39.6**	**2.16**	**2.94**	**55.3**	**414**	<0.0100	<0.00500	**0.0878**	**0.154**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	**0.00634**	<0.00500	<0.00500	<0.00500	**0.0245**
	07/14/11	**43.1**	**1.55**	**2.38**	**48.1**	**504**	<0.0100	<0.00500	**0.0932**	**0.173**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	**0.00543**	<0.00500	<0.00500	<0.00500	**0.0249**
	02/01/12	**50.6**	**2.42**	**2.32**	**62.3**	**418**	<0.0100	<0.00500	**0.0946**	**0.127**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00760**	<0.000200	<0.00500	**0.00725**	<0.00500	<0.00500	<0.00500	**0.0101**
	07/30/12	**51.8**	**2.42**	**2.39**	**55.1**	**420**	<0.0100	<0.00500	**0.0889**	**0.179**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00508**	<0.000200	<0.00500	**0.00758**	<0.00500	<0.00500	<0.00500	**0.0127**
(duplicate)	07/30/12	**55.5**	**2.34**	**2.34**	**58.8**	**446**	<0.0100	<0.00500	**0.0851**	**0.160**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	**0.00731**	<0.00500	<0.00500	<0.00500	**0.0155**
MW-25	08/23/10	**178**	**0.871**	**2.42**	**182**	**946**	**0.244**	<0.00500	**0.246**	**0.174**	<0.00200	**0.0476**	<0.00500	<0.00500	<0.200	<0.00500	**0.0109**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0194**
	02/28/11	**256**	**0.729**	**2.83**	**93.9**	**998**	<0.0100	<0.00500	**0.205**	**0.198**	<0.00200	**0.0537**	<0.00500	<0.00500	<0.200	<0.00500	**0.00715**	<0.000200	<0.00500	**0.00516**	<0.00500	<0.00500	**0.00535**	**0.0424**
	07/18/11	**77.8**	**1.12**	**3.64**	**96.2**	**634**	**0.0444**	<0.00500	**0.186**	**0.173**	<0.00200	**0.00732**	<0.00500	<0.00500	<0.200	<0.00500	**0.00608**	<0.000200	<0.00500	**0.00832**	<0.00500	<0.00500	<0.00500	**0.00556**
	02/01/12	**175**	**0.813**	**4.56**	**84.4**	**820**	<0.0100	<0.00500	**0.228**	**0.175**	<0.00200	**0.00744**	<0.00500	<0.00500	<0.200	<0.00500	**0.00804**	<0.000200	<0.00500	**0.00708**	<0.00500	<0.00500	**0.00602**	**0.00582**
	07/26/12	**133**	**0.892**	**37.1**	**144**	**1,110**	<0.0100	<0.00500	**0.178**	**0.220**	<0.00200	**0.00961**	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0102**
MW-26	08/24/10	**217**	**0.484**	**2.88**	**98.5**	**958**	**0.115**	<0.00500	**0.131**	**0.169**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.0156**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0161**
	02/28/11	**202**	**0.517**	**3.86**	**125**	**940**	<0.0100	<0.00500	**0.110**	**0.187**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00890**	<0.000200	<0.00500	**0.00734**	<0.00500	<0.00500	**0.00602**	**0.0254**
	07/14/11	**184**	<0.500	**3.95**	**128**	**1,030**	<0.0100	<0.00500	**0.0994**	**0.192**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00679**	<0.000200	<0.00500	**0.00792**	<0.00500	<0.00500	**0.00546**	**0.0328**
	02/01/12	**196**	**0.568**	**3.68**	**131**	**952**	<0.0100	<0.00500	**0.0854**	**0.163**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.0122**	<0.000200	<0.00500	**0.0133**	<0.00500	<0.00500	<0.00500	**0.00949**
	07/26/12	**179**	**0.647**	**3.11**	**121**	**940**	**0.0121**	<0.00500	**0.0966**	**0.214**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00694**	<0.000200	<0.00500	**0.00568**	<0.00500	<0.00500	**0.00559**	**0.0117**
MW-27	08/18/10	**115**	**0.644**	**5.10**	**118**	**752**	**0.218**	<0.00500	**0.100**	**0.152**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.0534**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	**0.00544**	**0.0213**
	02/25/11	**144**	**0.595**	<0.500	**78.5**	**746**	<0.0100	<0.00500	**0.0985**	**0.139**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.0336**	<0.000200	<0.00500	**0.00769**	<0.00500	<0.00500	**0.00625**	**0.0453**
	07/20/11	**150**	**0.510**	**1.69**	**73.2**	**812**	**0.0378**	<0.00500	**0.112**	**0.165**	<0.00200	**0.0353**	<0.00500	<0.00500	**0.393**	<0.00500	**0.0179**	<0.000200	<0.00500	**0.0415**	<0.00500	<0.00500	**0.00571**	**0.0294**
	02/01/12	**164**	**0.691**	**2.43**	**99.8**	**676**	<0.0100	<0.00500	**0.0902**	**0.126**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00556**	<0.008000	<0.00500	**0.00533**	<0.00500	<0.00500	<0.00500	**0.0121**
	07/26/12	**164**	**0.680**	**2.95**	**65.3**	**754**	**0.0155**	<0.00500	**0.118**	**0.172**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00587**	<0.000200	<0.00500	**0.00737**	<0.00500	<0.00500	<0.00500	**0.0117**
MW-28	08/24/10	**71.2**	**1.66**	**1.70**	**60.3**	**440**	**0.129**	<0.00500	**0.0846**	**0.153**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/23/11	**106**	**1.57**	<0.500	**67.4**	**540**	<0.0100	<0.00500	**0.0923**	**0.147**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	07/14/11	**106**	**1.28**	**2.40**	**67.8**	**732**	<0.0100	<0.00500	**0.103**	**0.172**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00658**	<0.000200	<0.00500	**0.00696**	<0.00500	<0.00500	<0.00500	**0.0190**
	01/30/12	**80.6**	**1.68**	**2.53**	**81.1**	**572**	<0.0100	<0.00500	**0.0746**	**0.152**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0113**
	07/24/12	**74.9**	**1.79**	**2.33**	**81.6**	**500**	<0.0100	<0.00500	**0.0830**	**0.204**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.00812**

Table 3. Inorganic Constituent Concentrations in Groundwater, Navajo Refining Company, Lovington Refinery

Monitor Well	Sample Date	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
	NM WQCC Groundwater Standards:	**250**	**1.6**	**10**	**600**	**1,000**	**5.0**	**0.1**	**1.0**	**0.75**	**0.01**	**0.05**	**0.05**	**1.0**	**1.0**	**0.05**	**0.20**	**0.002**	**1.0**	**0.2**	**0.05**	**0.05**	**0.03**	**10.0**
MW-29	08/24/10	**456**	**0.753**	**2.18**	**167**	**726**	**0.0261**	<0.00500	**0.0644**	**0.189**	<0.00200	**0.0317**	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0433**
Dupl. #1	08/24/10	**132**	**0.741**	**2.15**	**100**	**742**	<0.0100	<0.00500	**0.0652**	**0.186**	<0.00200	**0.0321**	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0375**
	02/28/11	**119**	**0.819**	**3.05**	**101**	**670**	<0.0100	<0.00500	**0.0630**	**0.195**	<0.00200	**0.0694**	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0301**
	07/14/11	**135**	**0.707**	**2.61**	**71.6**	**798**	<0.0100	<0.00500	**0.0652**	**0.189**	<0.00200	**0.162**	<0.00500	<0.00500	<0.200	<0.00500	**0.00532**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0267**
	01/30/12	**152**	**0.769**	**3.22**	**96.3**	**898**	<0.0100	<0.00500	**0.0580**	**0.181**	<0.00200	**0.106**	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0240**
	07/24/12	**250**	**0.828**	**4.08**	**90.1**	**1,120**	<0.0100	<0.00500	**0.0978**	**0.249**	<0.00200	**0.261**	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0162**
RW-1	06/19/09	**34.8**	**1.21**	- -	**70.8**	**398**	<0.0100	**0.010**	**0.160**	**0.161**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.0380**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	**0.00548**
	02/02/10	**34.2**	**0.913**	**1.52**	**66.0**	**388**	<0.0200	**0.00857**	**0.190**	**0.166**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.0467**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	08/19/10	**27.8**	**0.991**	**1.42**	**72.3**	**380**	**0.0202**	**0.0104**	**0.162**	**0.154**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	03/01/11	**28.9**	**1.03**	**1.74**	**74.3**	**380**	<0.0100	**0.0121**	**0.148**	**0.153**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00933**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.00854**
	07/20/11	**26.4**	**0.883**	**1.36**	**72.5**	**484**	<0.0100	**0.0108**	**0.158**	**0.156**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/02/12	**29.6**	**1.11**	**1.44**	**79.9**	**384**	<0.0100	**0.0106**	**0.139**	**0.165**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00771**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.00526**
	07/27/12	**27.3**	**1.18**	<2.00	**68.9**	**344**	**0.0532**	**0.0103**	**0.163**	**0.177**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.0182**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.00764**
North Well	06/18/09	**140**	**0.933**	**2.72**	**80.6**	**664**	<0.0100	**0.00536**	**0.0997**	**0.151**	<0.00200	**0.0104**	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	<0.00500
	01/14/10	**143**	**0.793**	**2.90**	**74.2**	**638**	<0.0100	<0.00500	**0.107**	**0.172**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	**0.00134**	<0.00500
	08/24/10	**127**	**0.932**	**1.81**	**80.4**	**594**	<0.0100	**0.00552**	**0.100**	**0.147**	<0.00200	<0.00500	<0.00500	**0.00856**	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	**0.0161**	<0.00500	<0.00500	<0.00500	**0.00920**
	03/03/11	**137**	**0.932**	**2.76**	**75.2**	**804**	<0.0100	**0.00503**	**0.0968**	**0.159**	<0.00200	**0.0199**	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	07/20/11	**124**	**0.803**	**2.07**	**76.5**	**628**	<0.0100	<0.00500	**0.106**	**0.142**	<0.00200	**0.0140**	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0695**
	02/02/12	**149**	**0.977**	**2.54**	**82.1**	**656**	**0.0126**	<0.00500	**0.0944**	**0.132**	<0.00200	**0.0145**	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	07/30/12	**121**	**0.986**	**2.63**	**72.7**	**528**	<0.0100	**0.00523**	**0.106**	**0.159**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0178**
South Well	06/22/09	**497**	**0.665**	**3.02**	**106**	**1,450**	<0.0100	<0.00500	**0.154**	**0.189**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	**0.0195**
	01/14/10	**498**	**0.686**	**3.27**	**113**	**1,520**	**0.0176**	<0.00500	**0.138**	**0.229**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.0224**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	**0.00236**	<0.00500
	08/24/10	**477**	**0.651**	**2.18**	**101**	**1,760**	<0.0100	<0.00500	**0.172**	**0.186**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.00576**	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0207**
	03/03/11	**549**	**0.647**	**3.24**	**122**	**1,840**	<0.0100	<0.00500	**0.147**	**0.261**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	**0.0226**	<0.000200	<0.00500	<0.00500	0.00500	<0.00500	<0.00500	**0.0329**
	07/20/11	**420**	**0.687**	**2.48**	**103**	**1,600**	<0.0100	<0.00500	**0.157**	**0.195**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/12/12	**368**	**0.756**	**3.02**	**89.0**	**1,210**	<0.0100	<0.00500	**0.117**	**0.165**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.00777**
	07/30/12	**135**	**1.01**	**2.53**	**73.3**	**582**	<0.0100	<0.00500	**0.103**	**0.160**	<0.00200	**0.0111**	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0401**
East Well	06/18/09	**107**	**0.980**	**2.59**	**84.0**	**554**	**0.0131**	<0.00500	**0.0820**	**0.143**	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	**0.0172**
	01/14/10	**138**	**0.991**	**2.70**	**72.7**	**676**	<0.0100	<0.00500	**0.0941**	**0.154**	<0.00200	**0.0119**	<0.00500	**0.00953**	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	**0.00111**	**0.0291**
	08/25/10	**106**	**1.00**	**0.523**	**74.5**	**522**	<0.0100	<0.00500	**0.0873**	**0.136**	<0.00200	**0.0145**	<0.00500	**0.00745**	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0146**
	03/03/11	**135**	**0.905**	**2.68**	**75.6**	**644**	<0.0100	<0.00500	**0.0970**	**0.152**	<0.00200	**0.0189**	<0.00500	<0.00500	<0.200	**0.00662**	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0347**
	07/20/11	**124**	**0.810**	**1.83**	**73.8**	**596**	<0.0100	<0.00500	**0.1040**	**0.142**	<0.00200	**0.0200**	<0.00500	<0.00500	<0.200	**0.0116**	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.00936**
	02/02/12	**150**	**0.967**	**2.56**	**81.4**	**664**	**0.0150**	<0.00500	**0.0993**	**0.145**	<0.00200	**0.0166**	<0.00500	<0.00500	<0.200	**0.00988**	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0937**
	07/30/12	**144**	**0.962**	**2.40**	**80.9**	**636**	<0.0100	<0.00500	**0.0922**	**0.136**	<0.00200	**0.0157**	<0.00500	**0.00774**	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	**0.0166**

Notes:

Bold indicates analyte was detected above the laboratory reporting limit

Shading indicates detected result exceeded the New Mexico Water Quality Control Commission (WQCC) Human Health Standard

mg/L = milligrams per liter

< = Not reported above laboratory reporting limit

-- = Not Analyzed

Samples collected for metals analysis (except for Total Mercury) were field filtered with 0.45 micron filter

Analyses performed by ALS Laboratory Group, Houston, Texas

Table 4. Skinner List Constituent Concentrations in WW-East and Tank 1210

Table 4. Skinner List Constituent Concentrations in WW-East and Tank 1210, Navajo Refining Company, Lea Refinery, Lovington, NM

Analyte	NM WQCC Groundwater Standards	1210 Tank					East Water Well			
		8/27/2012	9/26/2012	10/22/2012	11/20/2012	12/27/2012	8/27/2012	9/26/2012	10/22/2012	12/27/2012
Volatiles mg/L (8260)										
1,1,1-Trichloroethane	- -	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
1,1-Dichloroethane	- -	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
1,2-Dibromoethane	- -	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
1,2-Dichloroethane	- -	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
1,4-Dioxane	- -	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
2-Butanone	- -	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzene	0.01	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Carbon disulfide	- -	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chlorobenzene	- -	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chloroform	- -	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Ethylbenzene	0.75	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Methyl tert-butyl ether	- -	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Styrene	- -	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Tetrachloroethene	- -	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Toluene	0.75	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Trichloroethene	- -	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Xylenes, Total	0.62	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Semivolatiles mg/L (8270)										
1,2-Dichlorobenzene	0.03	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
1,3-Dichlorobenzene	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
1,4-Dichlorobenzene	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
1-Methylnaphthalene	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
2,4-Dimethylphenol	0.005	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
2,4-Dinitrophenol	- -	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
2-Methylphenol	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
3&4-Methylphenol	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
4-Nitrophenol	- -	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Acenaphthylene	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Anthracene	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Benz(a)anthracene	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Benzenethiol	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Benzo(a)pyrene	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Benzo(b)fluoranthene	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Benzo(k)fluoranthene	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Bis(2-ethylhexyl)phthalate	- -	<0.00020	<0.00020	**0.00056**	**0.00036**	**0.00023**	<0.00020	<0.00020	<0.00020	**0.00079**
Chrysene	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dibenz(a,h)acridine	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dibenz(a,h)anthracene	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Diethyl phthalate	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dimethyl phthalate	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Di-n-butyl phthalate	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.054 J	<0.00020	<0.00020	<0.00020
Fluoranthene	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Fluorene	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Indene	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Indeno(1,2,3-cd)pyrene	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Naphthalene	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Phenanthrene	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Phenol	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Pyrene	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Pyridine	- -	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Quinoline	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Metals mg/L (6020/7470)										
Antimony	- -	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Arsenic	0.1	**0.00550**	**0.00532**	<0.00500	**0.00523**	**0.00547**	0.00485 J	**0.00622**	<0.00500	**0.00808**
Barium	1.0	**0.106**	**0.109**	**0.109**	**0.106**	**0.107**	**0.0944**	**0.220**	**0.110**	**0.120**
Beryllium	- -	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Cadmium	0.01	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Chromium	0.05	**0.0112**	**0.0112**	**0.00930**	<0.00500	**0.00873**	**0.0152**	**0.0180**	**0.0157**	**0.0226**
Cobalt	0.05	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Lead	0.05	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00454 J	**0.0365**	**0.0353**	**0.107**
Nickel	0.2	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Selenium	0.05	<0.00500	**0.00531**	<0.00500	**0.00524**	**0.00622**	0.00467 J	**0.00518**	<0.00500	<0.00500
Silver	0.05	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Vanadium	- -	**0.0269**	**0.0283**	**0.0241**	**0.0248**	**0.0296**	**0.0239**	**0.0338**	**0.0274**	**0.0440**
Zinc	10.0	**0.00821**	**0.0300**	<0.00500	**0.351**	**0.0111**	**0.0252**	**0.268**	**0.194**	**0.425**
Mercury	0.002	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Cyanide mg/L (E335.3/SW9014/M4500CN E&G)										
Cyanide	- -	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**0.00900 J**	<0.0200	<0.0200	<0.0200

Notes:

Bold indicates analyte was detected above the laboratory reporting limit

Shading indicates detected result exceeded the New Mexico Water Quality Control Commission (WQCC) Human Health Standard

J = analyte was detected below the laboratory reporting limit, reported value is estimated

mg/L = milligrams per liter

< = Not reported above laboratory reporting limit

-- = No Water Quality Standard Available

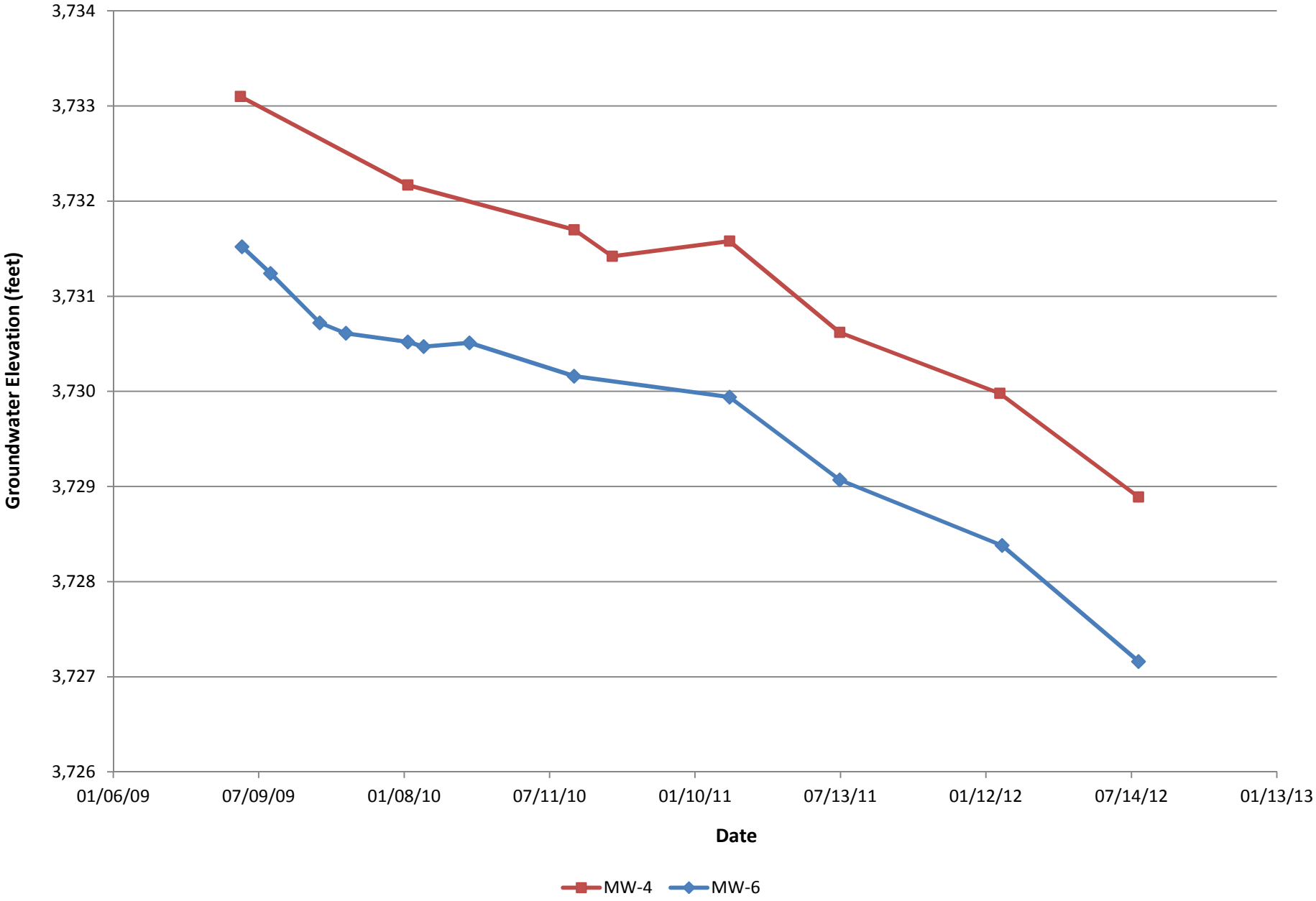
Samples collected for metals analysis (except for Mercury) were field filtered with 0.45 micron filter

Analyses performed by ALS Laboratory Group, Houston, Texas

APPENDIX A

PLOT OF GROUNDWATER ELEVATIONS OVER TIME

APPENDIX A - GROUNDWATER ELEVATIONS OVER TIME
Navajo Refining Company
Lea Refinery, Lovington, New Mexico



APPENDIX B

LABORATORY ANALYTICAL REPORTS

10-Feb-2012

Aaron Strange
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: Navajo Lea Refinery Semi-Annual Work Order: **1201933**

Dear Aaron,

ALS Environmental received 15 samples on 31-Jan-2012 09:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental 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 Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 81.

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

Sincerely,

Chris Bryson

Electronically approved by: Yvan K. Ty

Chris Bryson
Project Manager

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 10-Feb-12

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: **1201933**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1201933-01	MW-29-0112	Water		1/30/2012 09:30	1/31/2012 09:00	☐
1201933-02	MW-29-0112 (Dissolved)	Water		1/30/2012 09:30	1/31/2012 09:00	☐
1201933-03	MW-28-0112	Water		1/30/2012 10:30	1/31/2012 09:00	☐
1201933-04	MW-28-0112 (Dissolved)	Water		1/30/2012 10:30	1/31/2012 09:00	☐
1201933-05	MW-2-0112	Water		1/30/2012 11:35	1/31/2012 09:00	☐
1201933-06	MW-2-0112 (Dissolved)	Water		1/30/2012 11:35	1/31/2012 09:00	☐
1201933-07	MW-15-0112	Water		1/30/2012 12:15	1/31/2012 09:00	☐
1201933-08	MW-15-0112 (Dissolved)	Water		1/30/2012 12:15	1/31/2012 09:00	☐
1201933-09	MW-16-0112	Water		1/30/2012 13:35	1/31/2012 09:00	☐
1201933-10	MW-16-0112 (Dissolved)	Water		1/30/2012 13:35	1/31/2012 09:00	☐
1201933-11	MW-4-0112	Water		1/30/2012 14:30	1/31/2012 09:00	☐
1201933-12	MW-4-0112 (Dissolved)	Water		1/30/2012 14:30	1/31/2012 09:00	☐
1201933-13	MW-3-0112	Water		1/30/2012 15:20	1/31/2012 09:00	☐
1201933-14	MW-3-0112 (Dissolved)	Water		1/30/2012 15:20	1/31/2012 09:00	☐
1201933-15	Trip Blank	Water		1/30/2012	1/31/2012 09:00	☐

Client:	Navajo Refining Company
Project:	Navajo Lea Refinery Semi-Annual
Work Order:	1201933

Case Narrative

As the pH analyses were performed in the laboratory, the results are H-flagged as appropriate.

Batch 58621, Mercury, Sample 1201932-02 : MS/MSD is for an unrelated sample.

Batch 58576, Semivolatile Organics : LCSD RPD was above the control limits for multiple analytes. The individual recoveries were in control.

Batch 58576, Semivolatile Organics, Sample 1201932-02 : MS/MSD is for an unrelated sample.

Batch R122685, Volatile Organics, Sample 1201801-01 : MS/MSD is for an unrelated sample.

Batch R122904, Anions, Sample MW-15-0112 : MS recovery was below the control limits for Chloride. The associated LCS recovery was within the control limits.

Client requested that only Nitrate (as N) be analyzed. However, upon arrival at ALS Laboratory, the sample containers (for Nitrate as N) were preserved with H2SO4. This analysis requires that the sample(s) be non-preserved. Due to all the samples being preserved, the requested analysis (for Nitrate as N) had to be changed to Anions (300) Nitrate/Nitrite (as N). Client's request can be found in attached documents.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-29-0112
Lab ID: 1201933-01
Collection Date: 1/30/2012 09:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/2/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/2/2012 03:01 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **1/31/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/2/2012 04:02 AM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
2-Chlorophenol	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
2-Methylphenol	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
2-Nitroaniline	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
2-Nitrophenol	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
3-Nitroaniline	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
4-Chloroaniline	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
4-Nitroaniline	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
4-Nitrophenol	ND		0.0010	mg/L	1	2/2/2012 04:02 AM
Acenaphthene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Acenaphthylene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Acetophenone	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Anthracene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Atrazine	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Benzaldehyde	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/2/2012 04:02 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 1201933
Sample ID: MW-29-0112 **Lab ID:** 1201933-01
Collection Date: 1/30/2012 09:30 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Bis(2-ethylhexyl)phthalate	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Caprolactam	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Carbazole	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Chrysene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Dibenzofuran	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Diethyl phthalate	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Fluoranthene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Fluorene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Hexachloroethane	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Isophorone	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Naphthalene	**0.00050**		**0.00020**	**mg/L**	1	2/2/2012 04:02 AM
Nitrobenzene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Pentachlorophenol	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Phenanthrene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Phenol	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Pyrene	ND		0.00020	mg/L	1	2/2/2012 04:02 AM
Surr: Surr: 2,4,6-Tribromophenol	*80.9*		*34-129*	*%REC*	1	2/2/2012 04:02 AM
Surr: Surr: 2-Fluorobiphenyl	*75.3*		*40-125*	*%REC*	1	2/2/2012 04:02 AM
Surr: Surr: 2-Fluorophenol	*68.3*		*20-120*	*%REC*	1	2/2/2012 04:02 AM
Surr: Surr: 4-Terphenyl-d14	*86.0*		*40-135*	*%REC*	1	2/2/2012 04:02 AM
Surr: Surr: Nitrobenzene-d5	*77.4*		*41-120*	*%REC*	1	2/2/2012 04:02 AM
Surr: Surr: Phenol-d6	*69.6*		*20-120*	*%REC*	1	2/2/2012 04:02 AM
VOLATILES			**SW8260**			Analyst: **AKP**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/1/2012 03:54 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-29-0112
Lab ID: 1201933-01
Collection Date: 1/30/2012 09:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
2-Butanone	ND		0.010	mg/L	1	2/1/2012 03:54 AM
2-Hexanone	ND		0.010	mg/L	1	2/1/2012 03:54 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/1/2012 03:54 AM
Acetone	ND		0.010	mg/L	1	2/1/2012 03:54 AM
Benzene	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
Bromodichloromethane	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
Bromoform	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
Bromomethane	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
Carbon disulfide	ND		0.010	mg/L	1	2/1/2012 03:54 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
Chlorobenzene	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
Chloroethane	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
Chloroform	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
Chloromethane	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
Dibromochloromethane	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
Ethylbenzene	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
Isopropylbenzene	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
m,p-Xylene	ND		0.010	mg/L	1	2/1/2012 03:54 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
Methylene chloride	ND		0.010	mg/L	1	2/1/2012 03:54 AM
Naphthalene	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
n-Butylbenzene	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
n-Propylbenzene	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
o-Xylene	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
Styrene	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
Tetrachloroethene	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
Toluene	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/1/2012 03:54 AM
Trichloroethene	ND		0.0050	mg/L	1	2/1/2012 03:54 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 1201933
Sample ID: MW-29-0112 **Lab ID:** 1201933-01
Collection Date: 1/30/2012 09:30 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/1/2012 03:54 AM
Xylenes, Total	ND		0.015	mg/L	1	2/1/2012 03:54 AM
Surr: Surr: 1,2-Dichloroethane-d4	*98.3*		*70-125*	*%REC*	1	2/1/2012 03:54 AM
Surr: Surr: 4-Bromofluorobenzene	*98.8*		*72-125*	*%REC*	1	2/1/2012 03:54 AM
Surr: Surr: Dibromofluoromethane	*96.1*		*71-125*	*%REC*	1	2/1/2012 03:54 AM
Surr: Surr: Toluene-d8	*97.3*		*75-125*	*%REC*	1	2/1/2012 03:54 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**152**		**5.00**	**mg/L**	10	2/6/2012 01:05 AM
Fluoride	**0.769**		**0.100**	**mg/L**	1	2/3/2012 05:15 PM
Sulfate	**96.3**		**5.00**	**mg/L**	10	2/6/2012 01:05 AM
Nitrate/Nitrite (as N)	**3.22**		**1.00**	**mg/L**	5	2/3/2012 06:18 PM
Surr: Surr: Selenate (surr)	*108*		*85-115*	*%REC*	1	2/3/2012 05:15 PM
Surr: Surr: Selenate (surr)	*98.8*		*85-115*	*%REC*	5	2/3/2012 06:18 PM
Surr: Surr: Selenate (surr)	*97.6*		*85-115*	*%REC*	10	2/6/2012 01:05 AM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**287**		**5.00**	**mg/L**	1	2/6/2012 12:26 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 12:26 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 12:26 PM
Alkalinity, Total (As CaCO3)	**287**		**5.00**	**mg/L**	1	2/6/2012 12:26 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **TDW**
Specific Conductivity	**1,380**		**1.00**	**µmhos/cm**	1	2/2/2012 03:30 PM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**6.80**	H	**0.100**	**pH units**	1	1/31/2012 04:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **TDW**
Total Dissolved Solids (Residue, Filterable)	**898**		**10.0**	**mg/L**	1	1/31/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Sample ID: MW-29-0112 (Dissolved)
Collection Date: 1/30/2012 09:30 AM

Work Order: 1201933
Lab ID: 1201933-02
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **1/31/2012**	Analyst: **ALR**
Aluminum	ND		0.0100	mg/L	1	2/1/2012 03:54 PM
Arsenic	ND		0.00500	mg/L	1	2/1/2012 03:54 PM
Barium	**0.0580**		**0.00500**	**mg/L**	1	2/1/2012 03:54 PM
Boron	**0.181**		**0.0200**	**mg/L**	1	2/2/2012 02:25 PM
Cadmium	ND		0.00200	mg/L	1	2/1/2012 03:54 PM
Calcium	**108**		**0.500**	**mg/L**	1	2/1/2012 03:54 PM
Chromium	**0.106**		**0.00500**	**mg/L**	1	2/1/2012 03:54 PM
Cobalt	ND		0.00500	mg/L	1	2/1/2012 03:54 PM
Copper	ND		0.00500	mg/L	1	2/1/2012 03:54 PM
Iron	ND		0.200	mg/L	1	2/1/2012 03:54 PM
Lead	ND		0.00500	mg/L	1	2/1/2012 03:54 PM
Magnesium	**16.8**		**0.200**	**mg/L**	1	2/1/2012 03:54 PM
Manganese	ND		0.00500	mg/L	1	2/1/2012 03:54 PM
Molybdenum	ND		0.00500	mg/L	1	2/1/2012 03:54 PM
Nickel	ND		0.00500	mg/L	1	2/1/2012 03:54 PM
Potassium	**2.23**		**0.200**	**mg/L**	1	2/1/2012 03:54 PM
Selenium	ND		0.00500	mg/L	1	2/1/2012 03:54 PM
Silver	ND		0.00500	mg/L	1	2/1/2012 03:54 PM
Sodium	**48.9**		**0.200**	**mg/L**	1	2/1/2012 03:54 PM
Uranium	ND		0.00500	mg/L	1	2/1/2012 03:54 PM
Zinc	**0.0240**		**0.00500**	**mg/L**	1	2/1/2012 03:54 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-28-0112
Lab ID: 1201933-03
Collection Date: 1/30/2012 10:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/2/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/2/2012 03:03 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **1/31/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/2/2012 04:22 AM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
2,6-Dinitrotoluene	**0.0010**		**0.00020**	**mg/L**	1	2/2/2012 04:22 AM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
2-Chlorophenol	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
2-Methylphenol	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
2-Nitroaniline	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
2-Nitrophenol	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
3-Nitroaniline	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
4-Chloroaniline	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
4-Nitroaniline	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
4-Nitrophenol	ND		0.0010	mg/L	1	2/2/2012 04:22 AM
Acenaphthene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Acenaphthylene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Acetophenone	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Anthracene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Atrazine	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Benzaldehyde	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/2/2012 04:22 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-28-0112
Lab ID: 1201933-03
Collection Date: 1/30/2012 10:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Bis(2-ethylhexyl)phthalate	**0.00026**		**0.00020**	**mg/L**	1	2/2/2012 04:22 AM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Caprolactam	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Carbazole	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Chrysene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Dibenzofuran	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Diethyl phthalate	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Fluoranthene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Fluorene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Hexachloroethane	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Isophorone	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Naphthalene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Nitrobenzene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Pentachlorophenol	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Phenanthrene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Phenol	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Pyrene	ND		0.00020	mg/L	1	2/2/2012 04:22 AM
Surr: Surr: 2,4,6-Tribromophenol	*76.1*		*34-129*	*%REC*	1	2/2/2012 04:22 AM
Surr: Surr: 2-Fluorobiphenyl	*75.0*		*40-125*	*%REC*	1	2/2/2012 04:22 AM
Surr: Surr: 2-Fluorophenol	*70.3*		*20-120*	*%REC*	1	2/2/2012 04:22 AM
Surr: Surr: 4-Terphenyl-d14	*85.6*		*40-135*	*%REC*	1	2/2/2012 04:22 AM
Surr: Surr: Nitrobenzene-d5	*80.3*		*41-120*	*%REC*	1	2/2/2012 04:22 AM
Surr: Surr: Phenol-d6	*71.6*		*20-120*	*%REC*	1	2/2/2012 04:22 AM
VOLATILES			**SW8260**			Analyst: **AKP**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/1/2012 04:19 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-28-0112
Lab ID: 1201933-03
Collection Date: 1/30/2012 10:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
2-Butanone	ND		0.010	mg/L	1	2/1/2012 04:19 AM
2-Hexanone	ND		0.010	mg/L	1	2/1/2012 04:19 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/1/2012 04:19 AM
Acetone	ND		0.010	mg/L	1	2/1/2012 04:19 AM
Benzene	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
Bromodichloromethane	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
Bromoform	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
Bromomethane	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
Carbon disulfide	ND		0.010	mg/L	1	2/1/2012 04:19 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
Chlorobenzene	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
Chloroethane	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
Chloroform	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
Chloromethane	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
Dibromochloromethane	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
Ethylbenzene	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
Isopropylbenzene	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
m,p-Xylene	ND		0.010	mg/L	1	2/1/2012 04:19 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
Methylene chloride	ND		0.010	mg/L	1	2/1/2012 04:19 AM
Naphthalene	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
n-Butylbenzene	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
n-Propylbenzene	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
o-Xylene	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
Styrene	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
Tetrachloroethene	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
Toluene	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/1/2012 04:19 AM
Trichloroethene	ND		0.0050	mg/L	1	2/1/2012 04:19 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 1201933
Sample ID: MW-28-0112 **Lab ID:** 1201933-03
Collection Date: 1/30/2012 10:30 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/1/2012 04:19 AM
Xylenes, Total	ND		0.015	mg/L	1	2/1/2012 04:19 AM
Surr: Surr: 1,2-Dichloroethane-d4	*96.6*		*70-125*	*%REC*	1	2/1/2012 04:19 AM
Surr: Surr: 4-Bromofluorobenzene	*98.3*		*72-125*	*%REC*	1	2/1/2012 04:19 AM
Surr: Surr: Dibromofluoromethane	*95.1*		*71-125*	*%REC*	1	2/1/2012 04:19 AM
Surr: Surr: Toluene-d8	*96.7*		*75-125*	*%REC*	1	2/1/2012 04:19 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**80.6**		**0.500**	**mg/L**	1	2/3/2012 05:37 PM
Fluoride	**1.68**		**0.100**	**mg/L**	1	2/3/2012 05:37 PM
Sulfate	**81.1**		**0.500**	**mg/L**	1	2/3/2012 05:37 PM
Nitrate/Nitrite (as N)	**2.53**		**1.00**	**mg/L**	5	2/3/2012 06:40 PM
Surr: Surr: Selenate (surr)	*103*		*85-115*	*%REC*	1	2/3/2012 05:37 PM
Surr: Surr: Selenate (surr)	*99.4*		*85-115*	*%REC*	5	2/3/2012 06:40 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**198**		**5.00**	**mg/L**	1	2/6/2012 12:26 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 12:26 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 12:26 PM
Alkalinity, Total (As CaCO3)	**198**		**5.00**	**mg/L**	1	2/6/2012 12:26 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **TDW**
Specific Conductivity	**829**		**1.00**	**µmhos/cm**	1	2/2/2012 03:30 PM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**7.52**	H	**0.100**	**pH units**	1	1/31/2012 04:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **TDW**
Total Dissolved Solids (Residue, Filterable)	**572**		**10.0**	**mg/L**	1	1/31/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-28-0112 (Dissolved)
Lab ID: 1201933-04
Collection Date: 1/30/2012 10:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **1/31/2012**	Analyst: **ALR**
Aluminum	ND		0.0100	mg/L	1	2/1/2012 04:00 PM
Arsenic	ND		0.00500	mg/L	1	2/1/2012 04:00 PM
Barium	**0.0746**		**0.00500**	**mg/L**	1	2/1/2012 04:00 PM
Boron	**0.152**		**0.0200**	**mg/L**	1	2/2/2012 02:32 PM
Cadmium	ND		0.00200	mg/L	1	2/1/2012 04:00 PM
Calcium	**70.9**		**0.500**	**mg/L**	1	2/1/2012 04:00 PM
Chromium	ND		0.00500	mg/L	1	2/1/2012 04:00 PM
Cobalt	ND		0.00500	mg/L	1	2/1/2012 04:00 PM
Copper	ND		0.00500	mg/L	1	2/1/2012 04:00 PM
Iron	ND		0.200	mg/L	1	2/1/2012 04:00 PM
Lead	ND		0.00500	mg/L	1	2/1/2012 04:00 PM
Magnesium	**10.9**		**0.200**	**mg/L**	1	2/1/2012 04:00 PM
Manganese	ND		0.00500	mg/L	1	2/1/2012 04:00 PM
Molybdenum	ND		0.00500	mg/L	1	2/1/2012 04:00 PM
Nickel	ND		0.00500	mg/L	1	2/1/2012 04:00 PM
Potassium	**1.71**		**0.200**	**mg/L**	1	2/1/2012 04:00 PM
Selenium	ND		0.00500	mg/L	1	2/1/2012 04:00 PM
Silver	ND		0.00500	mg/L	1	2/1/2012 04:00 PM
Sodium	**32.9**		**0.200**	**mg/L**	1	2/1/2012 04:00 PM
Uranium	ND		0.00500	mg/L	1	2/1/2012 04:00 PM
Zinc	**0.0113**		**0.00500**	**mg/L**	1	2/1/2012 04:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-2-0112
Lab ID: 1201933-05
Collection Date: 1/30/2012 11:35 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/2/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/2/2012 03:04 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **1/31/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/3/2012 05:35 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/3/2012 05:35 PM
Acenaphthene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Acetophenone	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Anthracene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Atrazine	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/3/2012 05:35 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-2-0112
Lab ID: 1201933-05
Collection Date: 1/30/2012 11:35 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Bis(2-ethylhexyl)phthalate	**0.014**		**0.00080**	**mg/L**	4	2/4/2012 04:43 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Caprolactam	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Carbazole	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Chrysene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Dibenz(a,h)anthracene	**0.00028**		**0.00020**	**mg/L**	1	2/3/2012 05:35 PM
Dibenzofuran	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Diethyl phthalate	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Fluoranthene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Fluorene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Isophorone	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Naphthalene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Phenanthrene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Phenol	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Pyrene	ND		0.00020	mg/L	1	2/3/2012 05:35 PM
Surr: Surr: 2,4,6-Tribromophenol	*88.8*		*34-129*	*%REC*	4	2/4/2012 04:43 PM
Surr: Surr: 2,4,6-Tribromophenol	*66.5*		*34-129*	*%REC*	1	2/3/2012 05:35 PM
Surr: Surr: 2-Fluorobiphenyl	*67.6*		*40-125*	*%REC*	1	2/3/2012 05:35 PM
Surr: Surr: 2-Fluorobiphenyl	*79.5*		*40-125*	*%REC*	4	2/4/2012 04:43 PM
Surr: Surr: 2-Fluorophenol	*70.7*		*20-120*	*%REC*	4	2/4/2012 04:43 PM
Surr: Surr: 2-Fluorophenol	*49.8*		*20-120*	*%REC*	1	2/3/2012 05:35 PM
Surr: Surr: 4-Terphenyl-d14	*98.6*		*40-135*	*%REC*	4	2/4/2012 04:43 PM
Surr: Surr: 4-Terphenyl-d14	*80.5*		*40-135*	*%REC*	1	2/3/2012 05:35 PM
Surr: Surr: Nitrobenzene-d5	*63.3*		*41-120*	*%REC*	1	2/3/2012 05:35 PM
Surr: Surr: Nitrobenzene-d5	*71.6*		*41-120*	*%REC*	4	2/4/2012 04:43 PM
Surr: Surr: Phenol-d6	*55.9*		*20-120*	*%REC*	1	2/3/2012 05:35 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-2-0112
Lab ID: 1201933-05
Collection Date: 1/30/2012 11:35 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Surr: Phenol-d6	*68.4*		*20-120*	*%REC*	4	2/4/2012 04:43 PM
VOLATILES			**SW8260**			Analyst: **AKP**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
2-Butanone	ND		0.010	mg/L	1	2/1/2012 04:43 AM
2-Hexanone	ND		0.010	mg/L	1	2/1/2012 04:43 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/1/2012 04:43 AM
Acetone	ND		0.010	mg/L	1	2/1/2012 04:43 AM
Benzene	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
Bromodichloromethane	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
Bromoform	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
Bromomethane	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
Carbon disulfide	ND		0.010	mg/L	1	2/1/2012 04:43 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
Chlorobenzene	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
Chloroethane	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
Chloroform	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
Chloromethane	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
Dibromochloromethane	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
Ethylbenzene	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
Isopropylbenzene	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
m,p-Xylene	ND		0.010	mg/L	1	2/1/2012 04:43 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
Methylene chloride	ND		0.010	mg/L	1	2/1/2012 04:43 AM
Naphthalene	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
n-Butylbenzene	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
n-Propylbenzene	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
o-Xylene	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/1/2012 04:43 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-2-0112
Lab ID: 1201933-05
Collection Date: 1/30/2012 11:35 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Styrene	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
Tetrachloroethene	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
Toluene	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
Trichloroethene	ND		0.0050	mg/L	1	2/1/2012 04:43 AM
Vinyl chloride	ND		0.0020	mg/L	1	2/1/2012 04:43 AM
Xylenes, Total	ND		0.015	mg/L	1	2/1/2012 04:43 AM
Surr: Surr: 1,2-Dichloroethane-d4	*96.5*		*70-125*	*%REC*	1	2/1/2012 04:43 AM
Surr: Surr: 4-Bromofluorobenzene	*99.2*		*72-125*	*%REC*	1	2/1/2012 04:43 AM
Surr: Surr: Dibromofluoromethane	*94.7*		*71-125*	*%REC*	1	2/1/2012 04:43 AM
Surr: Surr: Toluene-d8	*97.5*		*75-125*	*%REC*	1	2/1/2012 04:43 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**214**		**5.00**	**mg/L**	10	2/6/2012 01:26 AM
Fluoride	**0.784**		**0.100**	**mg/L**	1	2/3/2012 05:58 PM
Sulfate	**75.1**		**0.500**	**mg/L**	1	2/3/2012 05:58 PM
Nitrate/Nitrite (as N)	**3.43**		**1.00**	**mg/L**	5	2/3/2012 07:02 PM
Surr: Surr: Selenate (surr)	*106*		*85-115*	*%REC*	1	2/3/2012 05:58 PM
Surr: Surr: Selenate (surr)	*98.7*		*85-115*	*%REC*	10	2/6/2012 01:26 AM
Surr: Surr: Selenate (surr)	*98.9*		*85-115*	*%REC*	5	2/3/2012 07:02 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**202**		**5.00**	**mg/L**	1	2/6/2012 12:26 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 12:26 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 12:26 PM
Alkalinity, Total (As CaCO3)	**202**		**5.00**	**mg/L**	1	2/6/2012 12:26 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **TDW**
Specific Conductivity	**1,300**		**1.00**	**µmhos/cm**	1	2/2/2012 03:30 PM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**7.05**	H	**0.100**	**pH units**	1	1/31/2012 04:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **TDW**
Total Dissolved Solids (Residue, Filterable)	**1,230**		**10.0**	**mg/L**	1	1/31/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-2-0112 (Dissolved)
Lab ID: 1201933-06
Collection Date: 1/30/2012 11:35 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **1/31/2012**	Analyst: **ALR**
Aluminum	ND		0.0100	mg/L	1	2/1/2012 04:07 PM
Arsenic	ND		0.00500	mg/L	1	2/1/2012 04:07 PM
Barium	**0.130**		**0.00500**	**mg/L**	1	2/1/2012 04:07 PM
Boron	**0.164**		**0.0200**	**mg/L**	1	2/2/2012 02:38 PM
Cadmium	ND		0.00200	mg/L	1	2/1/2012 04:07 PM
Calcium	**102**		**0.500**	**mg/L**	1	2/1/2012 04:07 PM
Chromium	ND		0.00500	mg/L	1	2/1/2012 04:07 PM
Cobalt	ND		0.00500	mg/L	1	2/1/2012 04:07 PM
Copper	ND		0.00500	mg/L	1	2/1/2012 04:07 PM
Iron	ND		0.200	mg/L	1	2/1/2012 04:07 PM
Lead	ND		0.00500	mg/L	1	2/1/2012 04:07 PM
Magnesium	**14.6**		**0.200**	**mg/L**	1	2/1/2012 04:07 PM
Manganese	ND		0.00500	mg/L	1	2/1/2012 04:07 PM
Molybdenum	ND		0.00500	mg/L	1	2/1/2012 04:07 PM
Nickel	ND		0.00500	mg/L	1	2/1/2012 04:07 PM
Potassium	**1.91**		**0.200**	**mg/L**	1	2/1/2012 04:07 PM
Selenium	ND		0.00500	mg/L	1	2/1/2012 04:07 PM
Silver	ND		0.00500	mg/L	1	2/1/2012 04:07 PM
Sodium	**49.2**		**0.200**	**mg/L**	1	2/1/2012 04:07 PM
Uranium	ND		0.00500	mg/L	1	2/1/2012 04:07 PM
Zinc	**0.0255**		**0.00500**	**mg/L**	1	2/1/2012 04:07 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-15-0112
Lab ID: 1201933-07
Collection Date: 1/30/2012 12:15 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/2/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/2/2012 03:06 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **1/31/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/2/2012 05:02 AM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
2-Chlorophenol	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
2-Methylphenol	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
2-Nitroaniline	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
2-Nitrophenol	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
3-Nitroaniline	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
4-Chloroaniline	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
4-Nitroaniline	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
4-Nitrophenol	ND		0.0010	mg/L	1	2/2/2012 05:02 AM
Acenaphthene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Acenaphthylene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Acetophenone	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Anthracene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Atrazine	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Benzaldehyde	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/2/2012 05:02 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-15-0112
Lab ID: 1201933-07
Collection Date: 1/30/2012 12:15 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Bis(2-ethylhexyl)phthalate	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Caprolactam	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Carbazole	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Chrysene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Dibenzofuran	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Diethyl phthalate	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Fluoranthene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Fluorene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Hexachloroethane	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Isophorone	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Naphthalene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Nitrobenzene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Pentachlorophenol	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Phenanthrene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Phenol	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Pyrene	ND		0.00020	mg/L	1	2/2/2012 05:02 AM
Surr: Surr: 2,4,6-Tribromophenol	*57.8*		*34-129*	*%REC*	1	2/2/2012 05:02 AM
Surr: Surr: 2-Fluorobiphenyl	*58.0*		*40-125*	*%REC*	1	2/2/2012 05:02 AM
Surr: Surr: 2-Fluorophenol	*42.5*		*20-120*	*%REC*	1	2/2/2012 05:02 AM
Surr: Surr: 4-Terphenyl-d14	*71.7*		*40-135*	*%REC*	1	2/2/2012 05:02 AM
Surr: Surr: Nitrobenzene-d5	*63.4*		*41-120*	*%REC*	1	2/2/2012 05:02 AM
Surr: Surr: Phenol-d6	*56.8*		*20-120*	*%REC*	1	2/2/2012 05:02 AM
VOLATILES			**SW8260**			Analyst: **AKP**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/1/2012 05:08 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-15-0112
Lab ID: 1201933-07
Collection Date: 1/30/2012 12:15 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
2-Butanone	ND		0.010	mg/L	1	2/1/2012 05:08 AM
2-Hexanone	ND		0.010	mg/L	1	2/1/2012 05:08 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/1/2012 05:08 AM
Acetone	ND		0.010	mg/L	1	2/1/2012 05:08 AM
Benzene	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
Bromodichloromethane	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
Bromoform	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
Bromomethane	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
Carbon disulfide	ND		0.010	mg/L	1	2/1/2012 05:08 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
Chlorobenzene	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
Chloroethane	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
Chloroform	**0.0095**		**0.0050**	**mg/L**	1	2/1/2012 05:08 AM
Chloromethane	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
Dibromochloromethane	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
Ethylbenzene	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
Isopropylbenzene	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
m,p-Xylene	ND		0.010	mg/L	1	2/1/2012 05:08 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
Methylene chloride	ND		0.010	mg/L	1	2/1/2012 05:08 AM
Naphthalene	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
n-Butylbenzene	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
n-Propylbenzene	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
o-Xylene	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
Styrene	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
Tetrachloroethene	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
Toluene	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/1/2012 05:08 AM
Trichloroethene	ND		0.0050	mg/L	1	2/1/2012 05:08 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 1201933
Sample ID: MW-15-0112 **Lab ID:** 1201933-07
Collection Date: 1/30/2012 12:15 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/1/2012 05:08 AM
Xylenes, Total	ND		0.015	mg/L	1	2/1/2012 05:08 AM
Surr: Surr: 1,2-Dichloroethane-d4	*97.5*		*70-125*	*%REC*	1	2/1/2012 05:08 AM
Surr: Surr: 4-Bromofluorobenzene	*98.3*		*72-125*	*%REC*	1	2/1/2012 05:08 AM
Surr: Surr: Dibromofluoromethane	*97.2*		*71-125*	*%REC*	1	2/1/2012 05:08 AM
Surr: Surr: Toluene-d8	*96.1*		*75-125*	*%REC*	1	2/1/2012 05:08 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**304**		**5.00**	**mg/L**	10	2/6/2012 01:48 AM
Fluoride	**0.840**		**0.100**	**mg/L**	1	2/3/2012 07:01 PM
Sulfate	**78.6**		**0.500**	**mg/L**	1	2/3/2012 07:01 PM
Nitrate/Nitrite (as N)	**4.09**		**1.00**	**mg/L**	5	2/3/2012 07:23 PM
Surr: Surr: Selenate (surr)	*98.5*		*85-115*	*%REC*	5	2/3/2012 07:23 PM
Surr: Surr: Selenate (surr)	*98.6*		*85-115*	*%REC*	10	2/6/2012 01:48 AM
Surr: Surr: Selenate (surr)	*106*		*85-115*	*%REC*	1	2/3/2012 07:01 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**180**		**5.00**	**mg/L**	1	2/6/2012 12:26 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 12:26 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 12:26 PM
Alkalinity, Total (As CaCO3)	**180**		**5.00**	**mg/L**	1	2/6/2012 12:26 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **TDW**
Specific Conductivity	**1,650**		**1.00**	**µmhos/cm**	1	2/2/2012 03:30 PM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**7.11**	H	**0.100**	**pH units**	1	1/31/2012 04:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **TDW**
Total Dissolved Solids (Residue, Filterable)	**1,330**		**10.0**	**mg/L**	1	1/31/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-15-0112 (Dissolved)
Lab ID: 1201933-08
Collection Date: 1/30/2012 12:15 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **1/31/2012**	Analyst: **ALR**
Aluminum	ND		0.0100	mg/L	1	2/1/2012 04:13 PM
Arsenic	ND		0.00500	mg/L	1	2/1/2012 04:13 PM
Barium	**0.180**		**0.00500**	**mg/L**	1	2/1/2012 04:13 PM
Boron	**0.178**		**0.0200**	**mg/L**	1	2/2/2012 03:02 PM
Cadmium	ND		0.00200	mg/L	1	2/1/2012 04:13 PM
Calcium	**114**		**0.500**	**mg/L**	1	2/1/2012 04:13 PM
Chromium	**0.00644**		**0.00500**	**mg/L**	1	2/1/2012 04:13 PM
Cobalt	ND		0.00500	mg/L	1	2/1/2012 04:13 PM
Copper	ND		0.00500	mg/L	1	2/1/2012 04:13 PM
Iron	ND		0.200	mg/L	1	2/1/2012 04:13 PM
Lead	ND		0.00500	mg/L	1	2/1/2012 04:13 PM
Magnesium	**17.5**		**0.200**	**mg/L**	1	2/1/2012 04:13 PM
Manganese	ND		0.00500	mg/L	1	2/1/2012 04:13 PM
Molybdenum	ND		0.00500	mg/L	1	2/1/2012 04:13 PM
Nickel	ND		0.00500	mg/L	1	2/1/2012 04:13 PM
Potassium	**3.15**		**0.200**	**mg/L**	1	2/1/2012 04:13 PM
Selenium	ND		0.00500	mg/L	1	2/1/2012 04:13 PM
Silver	ND		0.00500	mg/L	1	2/1/2012 04:13 PM
Sodium	**93.0**		**0.200**	**mg/L**	1	2/1/2012 04:13 PM
Uranium	ND		0.00500	mg/L	1	2/1/2012 04:13 PM
Zinc	**0.00967**		**0.00500**	**mg/L**	1	2/1/2012 04:13 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-16-0112
Lab ID: 1201933-09
Collection Date: 1/30/2012 01:35 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/2/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/2/2012 03:08 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **1/31/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/2/2012 05:23 AM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
2-Chlorophenol	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
2-Methylphenol	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
2-Nitroaniline	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
2-Nitrophenol	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
3-Nitroaniline	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
4-Chloroaniline	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
4-Nitroaniline	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
4-Nitrophenol	ND		0.0010	mg/L	1	2/2/2012 05:23 AM
Acenaphthene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Acenaphthylene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Acetophenone	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Anthracene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Atrazine	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Benzaldehyde	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/2/2012 05:23 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-16-0112
Lab ID: 1201933-09
Collection Date: 1/30/2012 01:35 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Bis(2-ethylhexyl)phthalate	**0.00094**		**0.00020**	**mg/L**	1	2/2/2012 05:23 AM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Caprolactam	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Carbazole	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Chrysene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Dibenzofuran	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Diethyl phthalate	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Fluoranthene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Fluorene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Hexachloroethane	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Isophorone	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Naphthalene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Nitrobenzene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Pentachlorophenol	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Phenanthrene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Phenol	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Pyrene	ND		0.00020	mg/L	1	2/2/2012 05:23 AM
Surr: Surr: 2,4,6-Tribromophenol	*36.8*		*34-129*	*%REC*	1	2/2/2012 05:23 AM
Surr: Surr: 2-Fluorobiphenyl	*46.5*		*40-125*	*%REC*	1	2/2/2012 05:23 AM
Surr: Surr: 2-Fluorophenol	*53.1*		*20-120*	*%REC*	1	2/2/2012 05:23 AM
Surr: Surr: 4-Terphenyl-d14	*64.2*		*40-135*	*%REC*	1	2/2/2012 05:23 AM
Surr: Surr: Nitrobenzene-d5	*56.2*		*41-120*	*%REC*	1	2/2/2012 05:23 AM
Surr: Surr: Phenol-d6	*50.7*		*20-120*	*%REC*	1	2/2/2012 05:23 AM
VOLATILES			**SW8260**			Analyst: **AKP**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/1/2012 05:32 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-16-0112
Lab ID: 1201933-09
Collection Date: 1/30/2012 01:35 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
2-Butanone	ND		0.010	mg/L	1	2/1/2012 05:32 AM
2-Hexanone	ND		0.010	mg/L	1	2/1/2012 05:32 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/1/2012 05:32 AM
Acetone	ND		0.010	mg/L	1	2/1/2012 05:32 AM
Benzene	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
Bromodichloromethane	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
Bromoform	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
Bromomethane	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
Carbon disulfide	ND		0.010	mg/L	1	2/1/2012 05:32 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
Chlorobenzene	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
Chloroethane	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
Chloroform	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
Chloromethane	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
Dibromochloromethane	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
Ethylbenzene	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
Isopropylbenzene	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
m,p-Xylene	ND		0.010	mg/L	1	2/1/2012 05:32 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
Methylene chloride	ND		0.010	mg/L	1	2/1/2012 05:32 AM
Naphthalene	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
n-Butylbenzene	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
n-Propylbenzene	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
o-Xylene	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
Styrene	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
Tetrachloroethene	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
Toluene	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/1/2012 05:32 AM
Trichloroethene	ND		0.0050	mg/L	1	2/1/2012 05:32 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 1201933
Sample ID: MW-16-0112 **Lab ID:** 1201933-09
Collection Date: 1/30/2012 01:35 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/1/2012 05:32 AM
Xylenes, Total	ND		0.015	mg/L	1	2/1/2012 05:32 AM
Surr: Surr: 1,2-Dichloroethane-d4	*98.1*		*70-125*	*%REC*	1	2/1/2012 05:32 AM
Surr: Surr: 4-Bromofluorobenzene	*100*		*72-125*	*%REC*	1	2/1/2012 05:32 AM
Surr: Surr: Dibromofluoromethane	*96.1*		*71-125*	*%REC*	1	2/1/2012 05:32 AM
Surr: Surr: Toluene-d8	*97.1*		*75-125*	*%REC*	1	2/1/2012 05:32 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**27.9**		**0.500**	**mg/L**	1	2/3/2012 07:22 PM
Fluoride	**0.994**		**0.100**	**mg/L**	1	2/3/2012 07:22 PM
Sulfate	**77.6**		**0.500**	**mg/L**	1	2/3/2012 07:22 PM
Nitrate/Nitrite (as N)	**1.79**		**1.00**	**mg/L**	5	2/3/2012 08:28 PM
Surr: Surr: Selenate (surr)	*109*		*85-115*	*%REC*	1	2/3/2012 07:22 PM
Surr: Surr: Selenate (surr)	*98.8*		*85-115*	*%REC*	5	2/3/2012 08:28 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**199**		**5.00**	**mg/L**	1	2/6/2012 12:26 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 12:26 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 12:26 PM
Alkalinity, Total (As CaCO3)	**199**		**5.00**	**mg/L**	1	2/6/2012 12:26 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **TDW**
Specific Conductivity	**656**		**1.00**	**µmhos/cm**	1	2/2/2012 03:30 PM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**7.30**	H	**0.100**	**pH units**	1	1/31/2012 04:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **TDW**
Total Dissolved Solids (Residue, Filterable)	**398**		**10.0**	**mg/L**	1	1/31/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-16-0112 (Dissolved)
Lab ID: 1201933-10
Collection Date: 1/30/2012 01:35 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **1/31/2012**	Analyst: **ALR**
Aluminum	ND		0.0100	mg/L	1	2/1/2012 04:19 PM
Arsenic	ND		0.00500	mg/L	1	2/1/2012 04:19 PM
Barium	**0.0964**		**0.00500**	**mg/L**	1	2/1/2012 04:19 PM
Boron	**0.166**		**0.0200**	**mg/L**	1	2/2/2012 03:08 PM
Cadmium	ND		0.00200	mg/L	1	2/1/2012 04:19 PM
Calcium	**64.8**		**0.500**	**mg/L**	1	2/1/2012 04:19 PM
Chromium	ND		0.00500	mg/L	1	2/1/2012 04:19 PM
Cobalt	ND		0.00500	mg/L	1	2/1/2012 04:19 PM
Copper	ND		0.00500	mg/L	1	2/1/2012 04:19 PM
Iron	ND		0.200	mg/L	1	2/1/2012 04:19 PM
Lead	ND		0.00500	mg/L	1	2/1/2012 04:19 PM
Magnesium	**7.71**		**0.200**	**mg/L**	1	2/1/2012 04:19 PM
Manganese	ND		0.00500	mg/L	1	2/1/2012 04:19 PM
Molybdenum	ND		0.00500	mg/L	1	2/1/2012 04:19 PM
Nickel	ND		0.00500	mg/L	1	2/1/2012 04:19 PM
Potassium	**1.72**		**0.200**	**mg/L**	1	2/1/2012 04:19 PM
Selenium	ND		0.00500	mg/L	1	2/1/2012 04:19 PM
Silver	ND		0.00500	mg/L	1	2/1/2012 04:19 PM
Sodium	**30.9**		**0.200**	**mg/L**	1	2/1/2012 04:19 PM
Uranium	ND		0.00500	mg/L	1	2/1/2012 04:19 PM
Zinc	**0.00899**		**0.00500**	**mg/L**	1	2/1/2012 04:19 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-4-0112
Lab ID: 1201933-11
Collection Date: 1/30/2012 02:30 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/2/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/2/2012 03:10 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **1/31/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/2/2012 05:43 AM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
2-Chlorophenol	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
2-Methylphenol	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
2-Nitroaniline	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
2-Nitrophenol	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
3-Nitroaniline	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
4-Chloroaniline	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
4-Nitroaniline	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
4-Nitrophenol	ND		0.0010	mg/L	1	2/2/2012 05:43 AM
Acenaphthene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Acenaphthylene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Acetophenone	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Anthracene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Atrazine	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Benzaldehyde	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/2/2012 05:43 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 1201933
Sample ID: MW-4-0112 **Lab ID:** 1201933-11
Collection Date: 1/30/2012 02:30 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Bis(2-ethylhexyl)phthalate	**0.00066**		**0.00020**	**mg/L**	1	2/2/2012 05:43 AM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Caprolactam	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Carbazole	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Chrysene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Dibenzofuran	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Diethyl phthalate	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Fluoranthene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Fluorene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Hexachloroethane	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Isophorone	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Naphthalene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Nitrobenzene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Pentachlorophenol	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Phenanthrene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Phenol	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Pyrene	ND		0.00020	mg/L	1	2/2/2012 05:43 AM
Surr: Surr: 2,4,6-Tribromophenol	*75.2*		*34-129*	*%REC*	1	2/2/2012 05:43 AM
Surr: Surr: 2-Fluorobiphenyl	*61.3*		*40-125*	*%REC*	1	2/2/2012 05:43 AM
Surr: Surr: 2-Fluorophenol	*47.6*		*20-120*	*%REC*	1	2/2/2012 05:43 AM
Surr: Surr: 4-Terphenyl-d14	*85.5*		*40-135*	*%REC*	1	2/2/2012 05:43 AM
Surr: Surr: Nitrobenzene-d5	*62.3*		*41-120*	*%REC*	1	2/2/2012 05:43 AM
Surr: Surr: Phenol-d6	*53.6*		*20-120*	*%REC*	1	2/2/2012 05:43 AM
VOLATILES			**SW8260**			Analyst: **AKP**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/1/2012 05:56 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-4-0112
Lab ID: 1201933-11
Collection Date: 1/30/2012 02:30 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
2-Butanone	ND		0.010	mg/L	1	2/1/2012 05:56 AM
2-Hexanone	ND		0.010	mg/L	1	2/1/2012 05:56 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/1/2012 05:56 AM
Acetone	ND		0.010	mg/L	1	2/1/2012 05:56 AM
Benzene	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
Bromodichloromethane	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
Bromoform	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
Bromomethane	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
Carbon disulfide	ND		0.010	mg/L	1	2/1/2012 05:56 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
Chlorobenzene	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
Chloroethane	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
Chloroform	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
Chloromethane	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
Dibromochloromethane	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
Ethylbenzene	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
Isopropylbenzene	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
m,p-Xylene	ND		0.010	mg/L	1	2/1/2012 05:56 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
Methylene chloride	ND		0.010	mg/L	1	2/1/2012 05:56 AM
Naphthalene	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
n-Butylbenzene	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
n-Propylbenzene	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
o-Xylene	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
Styrene	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
Tetrachloroethene	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
Toluene	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/1/2012 05:56 AM
Trichloroethene	ND		0.0050	mg/L	1	2/1/2012 05:56 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 1201933
Sample ID: MW-4-0112 **Lab ID:** 1201933-11
Collection Date: 1/30/2012 02:30 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/1/2012 05:56 AM
Xylenes, Total	ND		0.015	mg/L	1	2/1/2012 05:56 AM
Surr: Surr: 1,2-Dichloroethane-d4	*98.5*		*70-125*	*%REC*	1	2/1/2012 05:56 AM
Surr: Surr: 4-Bromofluorobenzene	*97.4*		*72-125*	*%REC*	1	2/1/2012 05:56 AM
Surr: Surr: Dibromofluoromethane	*97.4*		*71-125*	*%REC*	1	2/1/2012 05:56 AM
Surr: Surr: Toluene-d8	*96.2*		*75-125*	*%REC*	1	2/1/2012 05:56 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**30.0**		**0.500**	**mg/L**	1	2/3/2012 07:43 PM
Fluoride	**1.08**		**0.100**	**mg/L**	1	2/3/2012 07:43 PM
Sulfate	**73.4**		**0.500**	**mg/L**	1	2/3/2012 07:43 PM
Nitrate/Nitrite (as N)	**1.71**		**1.00**	**mg/L**	5	2/3/2012 08:50 PM
Surr: Surr: Selenate (surr)	*107*		*85-115*	*%REC*	1	2/3/2012 07:43 PM
Surr: Surr: Selenate (surr)	*99.1*		*85-115*	*%REC*	5	2/3/2012 08:50 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**188**		**5.00**	**mg/L**	1	2/6/2012 12:26 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 12:26 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 12:26 PM
Alkalinity, Total (As CaCO3)	**188**		**5.00**	**mg/L**	1	2/6/2012 12:26 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **TDW**
Specific Conductivity	**664**		**1.00**	**µmhos/cm**	1	2/2/2012 03:30 PM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**7.33**	H	**0.100**	**pH units**	1	1/31/2012 04:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **TDW**
Total Dissolved Solids (Residue, Filterable)	**388**		**10.0**	**mg/L**	1	1/31/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Sample ID: MW-4-0112 (Dissolved)
Collection Date: 1/30/2012 02:30 PM

Work Order: 1201933
Lab ID: 1201933-12
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **1/31/2012**	Analyst: **ALR**
Aluminum	**0.0119**		**0.0100**	**mg/L**	1	2/1/2012 04:26 PM
Arsenic	ND		0.00500	mg/L	1	2/1/2012 04:26 PM
Barium	**0.0796**		**0.00500**	**mg/L**	1	2/1/2012 04:26 PM
Boron	**0.150**		**0.0200**	**mg/L**	1	2/2/2012 03:15 PM
Cadmium	ND		0.00200	mg/L	1	2/1/2012 04:26 PM
Calcium	**60.6**		**0.500**	**mg/L**	1	2/1/2012 04:26 PM
Chromium	ND		0.00500	mg/L	1	2/1/2012 04:26 PM
Cobalt	ND		0.00500	mg/L	1	2/1/2012 04:26 PM
Copper	ND		0.00500	mg/L	1	2/1/2012 04:26 PM
Iron	ND		0.200	mg/L	1	2/1/2012 04:26 PM
Lead	ND		0.00500	mg/L	1	2/1/2012 04:26 PM
Magnesium	**7.38**		**0.200**	**mg/L**	1	2/1/2012 04:26 PM
Manganese	ND		0.00500	mg/L	1	2/1/2012 04:26 PM
Molybdenum	ND		0.00500	mg/L	1	2/1/2012 04:26 PM
Nickel	ND		0.00500	mg/L	1	2/1/2012 04:26 PM
Potassium	**1.92**		**0.200**	**mg/L**	1	2/1/2012 04:26 PM
Selenium	ND		0.00500	mg/L	1	2/1/2012 04:26 PM
Silver	ND		0.00500	mg/L	1	2/1/2012 04:26 PM
Sodium	**29.7**		**0.200**	**mg/L**	1	2/1/2012 04:26 PM
Uranium	ND		0.00500	mg/L	1	2/1/2012 04:26 PM
Zinc	**0.0147**		**0.00500**	**mg/L**	1	2/1/2012 04:26 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-3-0112
Lab ID: 1201933-13
Collection Date: 1/30/2012 03:20 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/2/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/2/2012 03:12 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **1/31/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/3/2012 06:04 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/3/2012 06:04 PM
Acenaphthene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Acetophenone	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Anthracene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Atrazine	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/3/2012 06:04 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-3-0112
Lab ID: 1201933-13
Collection Date: 1/30/2012 03:20 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Bis(2-ethylhexyl)phthalate	**0.0013**		**0.00020**	**mg/L**	1	2/3/2012 06:04 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Caprolactam	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Carbazole	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Chrysene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Dibenzofuran	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Diethyl phthalate	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Fluoranthene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Fluorene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Isophorone	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Naphthalene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Phenanthrene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Phenol	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Pyrene	ND		0.00020	mg/L	1	2/3/2012 06:04 PM
Surr: Surr: 2,4,6-Tribromophenol	*63.2*		*34-129*	*%REC*	1	2/3/2012 06:04 PM
Surr: Surr: 2-Fluorobiphenyl	*55.4*		*40-125*	*%REC*	1	2/3/2012 06:04 PM
Surr: Surr: 2-Fluorophenol	*54.5*		*20-120*	*%REC*	1	2/3/2012 06:04 PM
Surr: Surr: 4-Terphenyl-d14	*71.8*		*40-135*	*%REC*	1	2/3/2012 06:04 PM
Surr: Surr: Nitrobenzene-d5	*59.9*		*41-120*	*%REC*	1	2/3/2012 06:04 PM
Surr: Surr: Phenol-d6	*57.9*		*20-120*	*%REC*	1	2/3/2012 06:04 PM
VOLATILES			**SW8260**			Analyst: **AKP**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/1/2012 06:21 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: MW-3-0112
Lab ID: 1201933-13
Collection Date: 1/30/2012 03:20 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
2-Butanone	ND		0.010	mg/L	1	2/1/2012 06:21 AM
2-Hexanone	ND		0.010	mg/L	1	2/1/2012 06:21 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/1/2012 06:21 AM
Acetone	ND		0.010	mg/L	1	2/1/2012 06:21 AM
Benzene	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
Bromodichloromethane	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
Bromoform	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
Bromomethane	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
Carbon disulfide	ND		0.010	mg/L	1	2/1/2012 06:21 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
Chlorobenzene	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
Chloroethane	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
Chloroform	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
Chloromethane	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
Dibromochloromethane	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
Ethylbenzene	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
Isopropylbenzene	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
m,p-Xylene	ND		0.010	mg/L	1	2/1/2012 06:21 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
Methylene chloride	ND		0.010	mg/L	1	2/1/2012 06:21 AM
Naphthalene	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
n-Butylbenzene	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
n-Propylbenzene	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
o-Xylene	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
Styrene	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
Tetrachloroethene	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
Toluene	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/1/2012 06:21 AM
Trichloroethene	ND		0.0050	mg/L	1	2/1/2012 06:21 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 1201933
Sample ID: MW-3-0112 **Lab ID:** 1201933-13
Collection Date: 1/30/2012 03:20 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/1/2012 06:21 AM
Xylenes, Total	ND		0.015	mg/L	1	2/1/2012 06:21 AM
Surr: Surr: 1,2-Dichloroethane-d4	*99.5*		*70-125*	*%REC*	1	2/1/2012 06:21 AM
Surr: Surr: 4-Bromofluorobenzene	*98.1*		*72-125*	*%REC*	1	2/1/2012 06:21 AM
Surr: Surr: Dibromofluoromethane	*97.5*		*71-125*	*%REC*	1	2/1/2012 06:21 AM
Surr: Surr: Toluene-d8	*96.5*		*75-125*	*%REC*	1	2/1/2012 06:21 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**65.6**		**0.500**	**mg/L**	1	2/3/2012 08:04 PM
Fluoride	**2.94**		**0.100**	**mg/L**	1	2/3/2012 08:04 PM
Sulfate	**86.3**		**0.500**	**mg/L**	1	2/3/2012 08:04 PM
Nitrate/Nitrite (as N)	**2.37**		**1.00**	**mg/L**	5	2/3/2012 09:12 PM
Surr: Surr: Selenate (surr)	*104*		*85-115*	*%REC*	1	2/3/2012 08:04 PM
Surr: Surr: Selenate (surr)	*98.5*		*85-115*	*%REC*	5	2/3/2012 09:12 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**232**		**5.00**	**mg/L**	1	2/6/2012 12:26 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 12:26 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 12:26 PM
Alkalinity, Total (As CaCO3)	**232**		**5.00**	**mg/L**	1	2/6/2012 12:26 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **TDW**
Specific Conductivity	**872**		**1.00**	**µmhos/cm**	1	2/2/2012 03:30 PM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**7.50**	H	**0.100**	**pH units**	1	1/31/2012 04:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **TDW**
Total Dissolved Solids (Residue, Filterable)	**472**		**10.0**	**mg/L**	1	1/31/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Sample ID: MW-3-0112 (Dissolved)
Collection Date: 1/30/2012 03:20 PM

Work Order: 1201933
Lab ID: 1201933-14
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **1/31/2012**	Analyst: **ALR**
Aluminum	ND		0.0100	mg/L	1	2/1/2012 04:32 PM
Arsenic	**0.0117**		**0.00500**	**mg/L**	1	2/1/2012 04:32 PM
Barium	**0.0831**		**0.00500**	**mg/L**	1	2/1/2012 04:32 PM
Boron	**0.168**		**0.0200**	**mg/L**	1	2/2/2012 03:21 PM
Cadmium	ND		0.00200	mg/L	1	2/1/2012 04:32 PM
Calcium	**27.2**		**0.500**	**mg/L**	1	2/1/2012 04:32 PM
Chromium	ND		0.00500	mg/L	1	2/1/2012 04:32 PM
Cobalt	ND		0.00500	mg/L	1	2/1/2012 04:32 PM
Copper	ND		0.00500	mg/L	1	2/1/2012 04:32 PM
Iron	ND		0.200	mg/L	1	2/1/2012 04:32 PM
Lead	ND		0.00500	mg/L	1	2/1/2012 04:32 PM
Magnesium	**2.96**		**0.200**	**mg/L**	1	2/1/2012 04:32 PM
Manganese	ND		0.00500	mg/L	1	2/1/2012 04:32 PM
Molybdenum	**0.00621**		**0.00500**	**mg/L**	1	2/1/2012 04:32 PM
Nickel	ND		0.00500	mg/L	1	2/1/2012 04:32 PM
Potassium	**2.05**		**0.200**	**mg/L**	1	2/1/2012 04:32 PM
Selenium	ND		0.00500	mg/L	1	2/1/2012 04:32 PM
Silver	ND		0.00500	mg/L	1	2/1/2012 04:32 PM
Sodium	**103**		**0.200**	**mg/L**	1	2/1/2012 04:32 PM
Uranium	ND		0.00500	mg/L	1	2/1/2012 04:32 PM
Zinc	**0.00886**		**0.00500**	**mg/L**	1	2/1/2012 04:32 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: Trip Blank
Lab ID: 1201933-15
Collection Date: 1/30/2012
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILES			**SW8260**			Analyst: **AKP**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
2-Butanone	ND		0.010	mg/L	1	2/1/2012 01:28 AM
2-Hexanone	ND		0.010	mg/L	1	2/1/2012 01:28 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/1/2012 01:28 AM
Acetone	ND		0.010	mg/L	1	2/1/2012 01:28 AM
Benzene	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
Bromodichloromethane	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
Bromoform	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
Bromomethane	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
Carbon disulfide	ND		0.010	mg/L	1	2/1/2012 01:28 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
Chlorobenzene	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
Chloroethane	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
Chloroform	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
Chloromethane	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
Dibromochloromethane	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
Ethylbenzene	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
Isopropylbenzene	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
m,p-Xylene	ND		0.010	mg/L	1	2/1/2012 01:28 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
Methylene chloride	ND		0.010	mg/L	1	2/1/2012 01:28 AM
Naphthalene	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
n-Butylbenzene	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
n-Propylbenzene	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
o-Xylene	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
Styrene	ND		0.0050	mg/L	1	2/1/2012 01:28 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1201933
Sample ID: Trip Blank
Lab ID: 1201933-15
Collection Date: 1/30/2012
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
Toluene	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
Trichloroethene	ND		0.0050	mg/L	1	2/1/2012 01:28 AM
Vinyl chloride	ND		0.0020	mg/L	1	2/1/2012 01:28 AM
Xylenes, Total	ND		0.015	mg/L	1	2/1/2012 01:28 AM
Surr: Surr: 1,2-Dichloroethane-d4	*96.7*		*70-125*	*%REC*	1	2/1/2012 01:28 AM
Surr: Surr: 4-Bromofluorobenzene	*99.7*		*72-125*	*%REC*	1	2/1/2012 01:28 AM
Surr: Surr: Dibromofluoromethane	*95.7*		*71-125*	*%REC*	1	2/1/2012 01:28 AM
Surr: Surr: Toluene-d8	*98.1*		*75-125*	*%REC*	1	2/1/2012 01:28 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Batch ID: **58557** Instrument ID: **ICPMS03** Method: **SW6020** **(Dissolve)**

MBLK Sample ID: **MBLKW5-013112-58557** Units: **mg/L** Analysis Date: **2/1/2012 02:38 PM**

Client ID: Run ID: **ICPMS03_120201A** SeqNo: **2673123** Prep Date: **1/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	ND	0.010								
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Boron	ND	0.050								
Cadmium	ND	0.0020								
Calcium	ND	0.50								
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Copper	ND	0.0050								
Iron	ND	0.20								
Lead	ND	0.0050								
Magnesium	ND	0.20								
Manganese	ND	0.0050								
Molybdenum	ND	0.0050								
Nickel	ND	0.0050								
Potassium	ND	0.20								
Selenium	0.001078	0.0050								J
Silver	ND	0.0050								
Sodium	ND	0.20								
Uranium	ND	0.0050								
Zinc	ND	0.0050								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58557** Instrument ID: **ICPMS03** Method: **SW6020** **(Dissolve)**

LCS Sample ID: **MLCSW5-013112-58557** Units: **mg/L** Analysis Date: **2/1/2012 01:53 PM**

Client ID: Run ID: **ICPMS03_120201A** SeqNo: **2673113** Prep Date: **1/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.08821	0.010	0.1	0	88.2	80-120	0			
Arsenic	0.04525	0.0050	0.05	0	90.5	80-120	0			
Barium	0.04494	0.0050	0.05	0	89.9	80-120	0			
Boron	0.4222	0.050	0.5	0	84.4	80-120	0			
Cadmium	0.04409	0.0020	0.05	0	88.2	80-120	0			
Calcium	4.395	0.50	5	0	87.9	80-120	0			
Chromium	0.04292	0.0050	0.05	0	85.8	80-120	0			
Cobalt	0.04321	0.0050	0.05	0	86.4	80-120	0			
Copper	0.04328	0.0050	0.05	0	86.6	80-120	0			
Iron	4.416	0.20	5	0	88.3	80-120	0			
Lead	0.04358	0.0050	0.05	0	87.2	80-120	0			
Magnesium	4.23	0.20	5	0	84.6	80-120	0			
Manganese	0.04351	0.0050	0.05	0	87	80-120	0			
Molybdenum	0.04467	0.0050	0.05	0	89.3	80-120	0			
Nickel	0.0436	0.0050	0.05	0	87.2	80-120	0			
Potassium	4.401	0.20	5	0	88	80-120	0			
Selenium	0.04379	0.0050	0.05	0	87.6	80-120	0			
Silver	0.04291	0.0050	0.05	0	85.8	80-120	0			
Sodium	4.19	0.20	5	0	83.8	80-120	0			
Uranium	0.09041	0.0050	0.1	0	90.4	80-120	0			
Zinc	0.0451	0.0050	0.05	0	90.2	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58557** Instrument ID: **ICPMS03** Method: **SW6020** **(Dissolve)**

MS Sample ID: **1201838-02FMS** Units: **mg/L** Analysis Date: **2/1/2012 02:45 PM**

Client ID: Run ID: **ICPMS03_120201A** SeqNo: **2673162** Prep Date: **1/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09351	0.010	0.1	0.005347	88.2	75-125	0			
Arsenic	0.04537	0.0050	0.05	0.0006008	89.5	75-125	0			
Barium	0.04615	0.0050	0.05	0.0006283	91	75-125	0			
Boron	0.424	0.050	0.5	0.01836	81.1	75-125	0			
Cadmium	0.04492	0.0020	0.05	0.00006734	89.7	75-125	0			
Calcium	4.465	0.50	5	0.03267	88.6	75-125	0			
Chromium	0.04306	0.0050	0.05	0.0004318	85.3	75-125	0			
Cobalt	0.04343	0.0050	0.05	0.00001048	86.8	75-125	0			
Copper	0.04497	0.0050	0.05	0.002626	84.7	75-125	0			
Iron	4.459	0.20	5	-0.0006211	89.2	75-125	0			
Lead	0.04395	0.0050	0.05	0.0004443	87	75-125	0			
Magnesium	4.341	0.20	5	0.01776	86.5	75-125	0			
Manganese	0.04472	0.0050	0.05	0.0006151	88.2	75-125	0			
Molybdenum	0.04311	0.0050	0.05	0.002609	81	75-125	0			
Nickel	0.04479	0.0050	0.05	0.001178	87.2	75-125	0			
Potassium	4.475	0.20	5	0.02188	89.1	75-125	0			
Selenium	0.04433	0.0050	0.05	0.001372	85.9	75-125	0			
Silver	0.04358	0.0050	0.05	-0.000202	87.6	75-125	0			
Sodium	4.28	0.20	5	0.0678	84.2	75-125	0			
Uranium	0.09016	0.0050	0.1	0.0008652	89.3	75-125	0			
Zinc	0.05059	0.0050	0.05	0.004074	93	75-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58557** Instrument ID: **ICPMS03** Method: **SW6020** **(Dissolve)**

MSD Sample ID: **1201838-02FMSD** Units: **mg/L** Analysis Date: **2/1/2012 02:51 PM**

Client ID: Run ID: **ICPMS03_120201A** SeqNo: **2673163** Prep Date: **1/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.0946	0.010	0.1	0.005347	89.3	75-125	0.09351	1.16	25	
Arsenic	0.04386	0.0050	0.05	0.0006008	86.5	75-125	0.04537	3.38	25	
Barium	0.04548	0.0050	0.05	0.0006283	89.7	75-125	0.04615	1.46	25	
Boron	0.4174	0.050	0.5	0.01836	79.8	75-125	0.424	1.57	25	
Cadmium	0.04394	0.0020	0.05	0.00006734	87.7	75-125	0.04492	2.21	25	
Calcium	4.408	0.50	5	0.03267	87.5	75-125	4.465	1.28	25	
Chromium	0.04298	0.0050	0.05	0.0004318	85.1	75-125	0.04306	0.186	25	
Cobalt	0.04254	0.0050	0.05	0.00001048	85.1	75-125	0.04343	2.07	25	
Copper	0.04391	0.0050	0.05	0.002626	82.6	75-125	0.04497	2.39	25	
Iron	4.387	0.20	5	-0.0006211	87.8	75-125	4.459	1.63	25	
Lead	0.04277	0.0050	0.05	0.0004443	84.7	75-125	0.04395	2.72	25	
Magnesium	4.391	0.20	5	0.01776	87.5	75-125	4.341	1.15	25	
Manganese	0.04369	0.0050	0.05	0.0006151	86.1	75-125	0.04472	2.33	25	
Molybdenum	0.04309	0.0050	0.05	0.002609	81	75-125	0.04311	0.0464	25	
Nickel	0.04311	0.0050	0.05	0.001178	83.9	75-125	0.04479	3.82	25	
Potassium	4.399	0.20	5	0.02188	87.5	75-125	4.475	1.71	25	
Selenium	0.04431	0.0050	0.05	0.001372	85.9	75-125	0.04433	0.0451	25	
Silver	0.04287	0.0050	0.05	-0.000202	86.1	75-125	0.04358	1.64	25	
Sodium	4.339	0.20	5	0.0678	85.4	75-125	4.28	1.37	25	
Uranium	0.0902	0.0050	0.1	0.0008652	89.3	75-125	0.09016	0.0444	25	
Zinc	0.04516	0.0050	0.05	0.004074	82.2	75-125	0.05059	11.3	25	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58557** Instrument ID: **ICPMS03** Method: **SW6020** **(Dissolve)**

DUP Sample ID: **1201838-02FDUP** Units: **mg/L** Analysis Date: **2/1/2012 02:26 PM**

Client ID: Run ID: **ICPMS03_120201A** SeqNo: **2673119** Prep Date: **1/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.004814	0.010	0	0	0	0-0	0.005347	0	25	J
Arsenic	ND	0.0050	0	0	0	0-0	0.0006008	0	25	
Barium	ND	0.0050	0	0	0	0-0	0.0006283	0	25	
Boron	ND	0.050	0	0	0	0-0	0.01836	0	25	
Cadmium	ND	0.0020	0	0	0	0-0	0.00006734	0	25	
Calcium	ND	0.50	0	0	0	0-0	0.03267	0	25	
Chromium	ND	0.0050	0	0	0	0-0	0.0004318	0	25	
Cobalt	ND	0.0050	0	0	0	0-0	0.00001048	0	25	
Copper	ND	0.0050	0	0	0	0-0	0.002626	0	25	
Iron	ND	0.20	0	0	0	0-0	-0.0006211	0	25	
Lead	ND	0.0050	0	0	0	0-0	0.0004443	0	25	
Magnesium	ND	0.20	0	0	0	0-0	0.01776	0	25	
Manganese	ND	0.0050	0	0	0	0-0	0.0006151	0	25	
Molybdenum	0.001566	0.0050	0	0	0	0-0	0.002609	0	25	J
Nickel	ND	0.0050	0	0	0	0-0	0.001178	0	25	
Potassium	ND	0.20	0	0	0	0-0	0.02188	0	25	
Selenium	0.001024	0.0050	0	0	0	0-0	0.001372	0	25	J
Silver	ND	0.0050	0	0	0	0-0	-0.000202	0	25	
Sodium	ND	0.20	0	0	0	0-0	0.0678	0	25	
Uranium	ND	0.0050	0	0	0		0.0008652	0	25	
Zinc	ND	0.0050	0	0	0	0-0	0.004074	0	25	

The following samples were analyzed in this batch:

1201933-02A	1201933-04A	1201933-06A
1201933-08A	1201933-10A	1201933-12A
1201933-14A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58621** Instrument ID: **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW1-020212-58621** Units: **mg/L** Analysis Date: **2/2/2012 02:31 PM**
Client ID: Run ID: **MERCURY_120202A** SeqNo: **2674924** Prep Date: **2/2/2012** 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: **GLCSW1-020212-58621** Units: **mg/L** Analysis Date: **2/2/2012 02:33 PM**
Client ID: Run ID: **MERCURY_120202A** SeqNo: **2674925** Prep Date: **2/2/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00487	0.00020	0.005	0	97.4	85-115	0			

MS Sample ID: **1201932-02DMS** Units: **mg/L** Analysis Date: **2/2/2012 02:41 PM**
Client ID: Run ID: **MERCURY_120202A** SeqNo: **2674928** Prep Date: **2/2/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00398	0.00020	0.005	-0.000021	80	85-115	0			S

MSD Sample ID: **1201932-02DMSD** Units: **mg/L** Analysis Date: **2/2/2012 02:46 PM**
Client ID: Run ID: **MERCURY_120202A** SeqNo: **2674929** Prep Date: **2/2/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00404	0.00020	0.005	-0.000021	81.2	85-115	0.00398	1.5	20	S

DUP Sample ID: **1201932-02DDUP** Units: **mg/L** Analysis Date: **2/2/2012 02:38 PM**
Client ID: Run ID: **MERCURY_120202A** SeqNo: **2674927** Prep Date: **2/2/2012** 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	-0.000021	0	20	

The following samples were analyzed in this batch:

1201933-01C	1201933-03C	1201933-05C
1201933-07C	1201933-09C	1201933-11C
1201933-13C		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58576** Instrument ID: **SV-4** Method: **SW8270**

MBLK Sample ID: **SBLKW1120131-58576** Units: **µg/L** Analysis Date: **2/1/2012 02:59 PM**

Client ID: Run ID: **SV-4_120201C** SeqNo: **2676856** Prep Date: **1/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	ND	0.20								
2,4,5-Trichlorophenol	ND	0.20								
2,4,6-Trichlorophenol	ND	0.20								
2,4-Dichlorophenol	ND	0.20								
2,4-Dimethylphenol	ND	0.20								
2,4-Dinitrophenol	ND	1.0								
2,4-Dinitrotoluene	ND	0.20								
2,6-Dinitrotoluene	ND	0.20								
2-Chloronaphthalene	ND	0.20								
2-Chlorophenol	ND	0.20								
2-Methylnaphthalene	ND	0.20								
2-Methylphenol	ND	0.20								
2-Nitroaniline	ND	0.20								
2-Nitrophenol	ND	0.20								
3&4-Methylphenol	ND	0.20								
3,3´-Dichlorobenzidine	ND	0.20								
3-Nitroaniline	ND	0.20								
4,6-Dinitro-2-methylphenol	ND	0.20								
4-Bromophenyl phenyl ether	ND	0.20								
4-Chloro-3-methylphenol	ND	0.20								
4-Chloroaniline	ND	0.20								
4-Chlorophenyl phenyl ether	ND	0.20								
4-Nitroaniline	ND	0.20								
4-Nitrophenol	ND	1.0								
Acenaphthene	ND	0.20								
Acenaphthylene	ND	0.20								
Acetophenone	ND	0.20								
Anthracene	ND	0.20								
Atrazine	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzaldehyde	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								
Bis(2-chloroethoxy)methane	ND	0.20								
Bis(2-chloroethyl)ether	ND	0.20								
Bis(2-chloroisopropyl)ether	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.20								
Butyl benzyl phthalate	ND	0.20								
Caprolactam	ND	0.20								
Carbazole	ND	0.20								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **58576** Instrument ID: **SV-4** Method: **SW8270**

Chrysene	ND	0.20					
Dibenz(a,h)anthracene	ND	0.20					
Dibenzofuran	ND	0.20					
Diethyl phthalate	ND	0.20					
Dimethyl phthalate	ND	0.20					
Di-n-butyl phthalate	ND	0.20					
Di-n-octyl phthalate	ND	0.20					
Fluoranthene	ND	0.20					
Fluorene	ND	0.20					
Hexachlorobenzene	ND	0.20					
Hexachlorobutadiene	ND	0.20					
Hexachlorocyclopentadiene	ND	0.20					
Hexachloroethane	ND	0.20					
Indeno(1,2,3-cd)pyrene	ND	0.20					
Isophorone	ND	0.20					
Naphthalene	ND	0.20					
Nitrobenzene	ND	0.20					
N-Nitrosodi-n-propylamine	ND	0.20					
N-Nitrosodiphenylamine	ND	0.20					
Pentachlorophenol	ND	0.20					
Phenanthrene	ND	0.20					
Phenol	ND	0.20					
Pyrene	ND	0.20					
Surr: 2,4,6-Tribromophenol	*2.734*	0.20	*5*	0	*54.7*	*34-129*	0
Surr: 2-Fluorobiphenyl	*3.296*	0.20	*5*	0	*65.9*	*40-125*	0
Surr: 2-Fluorophenol	*2.956*	0.20	*5*	0	*59.1*	*20-120*	0
Surr: 4-Terphenyl-d14	*3.669*	0.20	*5*	0	*73.4*	*40-135*	0
Surr: Nitrobenzene-d5	*3.257*	0.20	*5*	0	*65.1*	*41-120*	0
Surr: Phenol-d6	*3.122*	0.20	*5*	0	*62.4*	*20-120*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58576** Instrument ID: **SV-4** Method: **SW8270**

LCS Sample ID: **SLCSW1-120131-58576** Units: **µg/L** Analysis Date: **2/1/2012 03:19 PM**

Client ID: Run ID: **SV-4_120201C** SeqNo: **2676857** Prep Date: **1/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	2.855	0.20	5	0	57.1	45-125	0			
2,4,5-Trichlorophenol	3.044	0.20	5	0	60.9	46-120	0			
2,4,6-Trichlorophenol	3.118	0.20	5	0	62.4	42-120	0			
2,4-Dichlorophenol	3	0.20	5	0	60	49-120	0			
2,4-Dimethylphenol	2.945	0.20	5	0	58.9	35-120	0			
2,4-Dinitrophenol	2.301	1.0	5	0	46	15-120	0			
2,4-Dinitrotoluene	3.045	0.20	5	0	60.9	50-122	0			
2,6-Dinitrotoluene	3.118	0.20	5	0	62.4	50-120	0			
2-Chloronaphthalene	2.883	0.20	5	0	57.7	50-120	0			
2-Chlorophenol	3.333	0.20	5	0	66.7	40-120	0			
2-Methylnaphthalene	3.101	0.20	5	0	62	50-120	0			
2-Methylphenol	3.226	0.20	5	0	64.5	45-120	0			
2-Nitroaniline	3.762	0.20	5	0	75.2	28-139	0			
2-Nitrophenol	3.474	0.20	5	0	69.5	40-120	0			
3&4-Methylphenol	3.117	0.20	5	0	62.3	35-120	0			
3,3´-Dichlorobenzidine	3.252	0.20	5	0	65	15-120	0			
3-Nitroaniline	3.261	0.20	5	0	65.2	30-120	0			
4,6-Dinitro-2-methylphenol	3.299	0.20	5	0	66	25-121	0			
4-Bromophenyl phenyl ether	3.328	0.20	5	0	66.6	45-120	0			
4-Chloro-3-methylphenol	3.073	0.20	5	0	61.5	47-120	0			
4-Chloroaniline	3.198	0.20	5	0	64	20-120	0			
4-Chlorophenyl phenyl ether	3.073	0.20	5	0	61.5	50-120	0			
4-Nitroaniline	2.883	0.20	5	0	57.7	30-133	0			
4-Nitrophenol	2.671	1.0	5	0	53.4	30-130	0			
Acenaphthene	3.033	0.20	5	0	60.7	45-120	0			
Acenaphthylene	3.064	0.20	5	0	61.3	47-120	0			
Acetophenone	3.082	0.20	5	0	61.6	40-120	0			
Anthracene	3.452	0.20	5	0	69	45-120	0			
Atrazine	3.297	0.20	5	0	65.9	40-130	0			
Benz(a)anthracene	3.343	0.20	5	0	66.9	40-120	0			
Benzaldehyde	1.877	0.20	5	0	37.5	15-120	0			
Benzo(a)pyrene	3.618	0.20	5	0	72.4	45-120	0			
Benzo(b)fluoranthene	3.62	0.20	5	0	72.4	50-120	0			
Benzo(g,h,i)perylene	3.686	0.20	5	0	73.7	42-127	0			
Benzo(k)fluoranthene	4.077	0.20	5	0	81.5	45-127	0			
Bis(2-chloroethoxy)methane	3.402	0.20	5	0	68	45-120	0			
Bis(2-chloroethyl)ether	3.448	0.20	5	0	69	37-121	0			
Bis(2-chloroisopropyl)ether	3.048	0.20	5	0	61	40-120	0			
Bis(2-ethylhexyl)phthalate	3.391	0.20	5	0	67.8	40-139	0			
Butyl benzyl phthalate	3.461	0.20	5	0	69.2	47-123	0			
Caprolactam	3.504	0.20	5	0	70.1	35-134	0			
Carbazole	3.461	0.20	5	0	69.2	42-128	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **58576** Instrument ID: **SV-4** Method: **SW8270**

Chrysene	3.285	0.20	5	0	65.7	43-120	0
Dibenz(a,h)anthracene	3.524	0.20	5	0	70.5	45-125	0
Dibenzofuran	3.098	0.20	5	0	62	50-120	0
Diethyl phthalate	3.065	0.20	5	0	61.3	41-120	0
Dimethyl phthalate	3.092	0.20	5	0	61.8	40-122	0
Di-n-butyl phthalate	3.748	0.20	5	0	75	45-123	0
Di-n-octyl phthalate	3.479	0.20	5	0	69.6	45-129	0
Fluoranthene	3.482	0.20	5	0	69.6	45-125	0
Fluorene	3.027	0.20	5	0	60.5	49-120	0
Hexachlorobenzene	3.361	0.20	5	0	67.2	48-120	0
Hexachlorobutadiene	3.407	0.20	5	0	68.1	40-120	0
Hexachlorocyclopentadiene	2.915	0.20	5	0	58.3	34-136	0
Hexachloroethane	3.306	0.20	5	0	66.1	40-120	0
Indeno(1,2,3-cd)pyrene	3.357	0.20	5	0	67.1	41-128	0
Isophorone	3.23	0.20	5	0	64.6	40-121	0
Naphthalene	3.246	0.20	5	0	64.9	45-120	0
Nitrobenzene	3.095	0.20	5	0	61.9	44-120	0
N-Nitrosodi-n-propylamine	3.25	0.20	5	0	65	40-120	0
N-Nitrosodiphenylamine	3.58	0.20	5	0	71.6	40-125	0
Pentachlorophenol	3.099	0.20	5	0	62	19-121	0
Phenanthrene	3.31	0.20	5	0	66.2	45-121	0
Phenol	3.245	0.20	5	0	64.9	20-124	0
Pyrene	3.193	0.20	5	0	63.9	40-130	0
Surr: 2,4,6-Tribromophenol	*3.183*	0.20	*5*	0	*63.7*	*34-129*	0
Surr: 2-Fluorobiphenyl	*3.45*	0.20	*5*	0	*69*	*40-125*	0
Surr: 2-Fluorophenol	*3.149*	0.20	*5*	0	*63*	*20-120*	0
Surr: 4-Terphenyl-d14	*3.792*	0.20	*5*	0	*75.8*	*40-135*	0
Surr: Nitrobenzene-d5	*3.646*	0.20	*5*	0	*72.9*	*41-120*	0
Surr: Phenol-d6	*3.501*	0.20	*5*	0	*70*	*20-120*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58576** Instrument ID: **SV-4** Method: **SW8270**

LCSD Sample ID: **SLCSDW1-120131-58576** Units: **µg/L** Analysis Date: **2/1/2012 03:39 PM**

Client ID: Run ID: **SV-4_120201C** SeqNo: **2676858** Prep Date: **1/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	2.61	0.20	5	0	52.2	45-125	2.855	8.98	20	
2,4,5-Trichlorophenol	2.583	0.20	5	0	51.7	46-120	3.044	16.4	20	
2,4,6-Trichlorophenol	2.543	0.20	5	0	50.9	42-120	3.118	20.3	20	R
2,4-Dichlorophenol	2.804	0.20	5	0	56.1	49-120	3	6.75	20	
2,4-Dimethylphenol	2.815	0.20	5	0	56.3	35-120	2.945	4.51	20	
2,4-Dinitrophenol	1.993	1.0	5	0	39.9	15-120	2.301	14.3	20	
2,4-Dinitrotoluene	2.836	0.20	5	0	56.7	50-122	3.045	7.11	20	
2,6-Dinitrotoluene	2.635	0.20	5	0	52.7	50-120	3.118	16.8	20	
2-Chloronaphthalene	2.914	0.20	5	0	58.3	50-120	2.883	1.09	20	
2-Chlorophenol	2.714	0.20	5	0	54.3	40-120	3.333	20.5	20	R
2-Methylnaphthalene	2.776	0.20	5	0	55.5	50-120	3.101	11.1	20	
2-Methylphenol	2.889	0.20	5	0	57.8	45-120	3.226	11	20	
2-Nitroaniline	3.351	0.20	5	0	67	28-139	3.762	11.5	20	
2-Nitrophenol	2.901	0.20	5	0	58	40-120	3.474	18	20	
3&4-Methylphenol	2.73	0.20	5	0	54.6	35-120	3.117	13.3	20	
3,3´-Dichlorobenzidine	3.005	0.20	5	0	60.1	15-120	3.252	7.88	20	
3-Nitroaniline	2.867	0.20	5	0	57.3	30-120	3.261	12.8	20	
4,6-Dinitro-2-methylphenol	2.641	0.20	5	0	52.8	25-121	3.299	22.1	20	R
4-Bromophenyl phenyl ether	2.92	0.20	5	0	58.4	45-120	3.328	13.1	20	
4-Chloro-3-methylphenol	2.761	0.20	5	0	55.2	47-120	3.073	10.7	20	
4-Chloroaniline	2.856	0.20	5	0	57.1	20-120	3.198	11.3	20	
4-Chlorophenyl phenyl ether	2.828	0.20	5	0	56.6	50-120	3.073	8.32	20	
4-Nitroaniline	2.568	0.20	5	0	51.4	30-133	2.883	11.6	20	
4-Nitrophenol	2.338	1.0	5	0	46.8	30-130	2.671	13.3	20	
Acenaphthene	2.818	0.20	5	0	56.4	45-120	3.033	7.36	20	
Acenaphthylene	2.833	0.20	5	0	56.7	47-120	3.064	7.83	20	
Acetophenone	2.745	0.20	5	0	54.9	40-120	3.082	11.6	20	
Anthracene	3.11	0.20	5	0	62.2	45-120	3.452	10.4	20	
Atrazine	2.714	0.20	5	0	54.3	40-130	3.297	19.4	20	
Benz(a)anthracene	3.016	0.20	5	0	60.3	40-120	3.343	10.3	20	
Benzaldehyde	1.624	0.20	5	0	32.5	15-120	1.877	14.4	20	
Benzo(a)pyrene	3.111	0.20	5	0	62.2	45-120	3.618	15.1	20	
Benzo(b)fluoranthene	2.927	0.20	5	0	58.5	50-120	3.62	21.2	20	R
Benzo(g,h,i)perylene	3.034	0.20	5	0	60.7	42-127	3.686	19.4	20	
Benzo(k)fluoranthene	3.349	0.20	5	0	67	45-127	4.077	19.6	20	
Bis(2-chloroethoxy)methane	2.996	0.20	5	0	59.9	45-120	3.402	12.7	20	
Bis(2-chloroethyl)ether	3.009	0.20	5	0	60.2	37-121	3.448	13.6	20	
Bis(2-chloroisopropyl)ether	2.679	0.20	5	0	53.6	40-120	3.048	12.9	20	
Bis(2-ethylhexyl)phthalate	2.871	0.20	5	0	57.4	40-139	3.391	16.6	20	
Butyl benzyl phthalate	3.06	0.20	5	0	61.2	47-123	3.461	12.3	20	
Caprolactam	2.873	0.20	5	0	57.5	35-134	3.504	19.8	20	
Carbazole	3.061	0.20	5	0	61.2	42-128	3.461	12.3	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **58576** Instrument ID: **SV-4** Method: **SW8270**

Chrysene	3.15	0.20	5	0	63	43-120	3.285	4.19	20	
Dibenz(a,h)anthracene	3.186	0.20	5	0	63.7	45-125	3.524	10.1	20	
Dibenzofuran	2.865	0.20	5	0	57.3	50-120	3.098	7.8	20	
Diethyl phthalate	2.815	0.20	5	0	56.3	41-120	3.065	8.52	20	
Dimethyl phthalate	2.976	0.20	5	0	59.5	40-122	3.092	3.82	20	
Di-n-butyl phthalate	3.24	0.20	5	0	64.8	45-123	3.748	14.5	20	
Di-n-octyl phthalate	3.022	0.20	5	0	60.4	45-129	3.479	14.1	20	
Fluoranthene	2.972	0.20	5	0	59.4	45-125	3.482	15.8	20	
Fluorene	2.725	0.20	5	0	54.5	49-120	3.027	10.5	20	
Hexachlorobenzene	2.652	0.20	5	0	53	48-120	3.361	23.6	20	R
Hexachlorobutadiene	3.021	0.20	5	0	60.4	40-120	3.407	12	20	
Hexachlorocyclopentadiene	2.726	0.20	5	0	54.5	34-136	2.915	6.69	20	
Hexachloroethane	2.585	0.20	5	0	51.7	40-120	3.306	24.5	20	R
Indeno(1,2,3-cd)pyrene	3.036	0.20	5	0	60.7	41-128	3.357	10	20	
Isophorone	2.873	0.20	5	0	57.5	40-121	3.23	11.7	20	
Naphthalene	2.838	0.20	5	0	56.8	45-120	3.246	13.4	20	
Nitrobenzene	2.82	0.20	5	0	56.4	44-120	3.095	9.31	20	
N-Nitrosodi-n-propylamine	2.695	0.20	5	0	53.9	40-120	3.25	18.7	20	
N-Nitrosodiphenylamine	3.141	0.20	5	0	62.8	40-125	3.58	13.1	20	
Pentachlorophenol	2.577	0.20	5	0	51.5	19-121	3.099	18.4	20	
Phenanthrene	2.927	0.20	5	0	58.5	45-121	3.31	12.3	20	
Phenol	2.82	0.20	5	0	56.4	20-124	3.245	14	20	
Pyrene	2.879	0.20	5	0	57.6	40-130	3.193	10.3	20	
Surr: 2,4,6-Tribromophenol	*2.907*	0.20	*5*	0	*58.1*	*34-129*	3.183	*9.08*	*0*	
Surr: 2-Fluorobiphenyl	*3.095*	0.20	*5*	0	*61.9*	*40-125*	3.45	*10.8*	*0*	
Surr: 2-Fluorophenol	*2.702*	0.20	*5*	0	*54*	*20-120*	3.149	*15.3*	*0*	
Surr: 4-Terphenyl-d14	*3.333*	0.20	*5*	0	*66.7*	*40-135*	3.792	*12.9*	*0*	
Surr: Nitrobenzene-d5	*3.171*	0.20	*5*	0	*63.4*	*41-120*	3.646	*13.9*	*0*	
Surr: Phenol-d6	*2.941*	0.20	*5*	0	*58.8*	*20-120*	3.501	*17.4*	*0*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58576** Instrument ID: **SV-4** Method: **SW8270**

MS Sample ID: **1201932-02GMS** Units: **µg/L** Analysis Date: **2/1/2012 11:41 PM**

Client ID: Run ID: **SV-4_120201C** SeqNo: **2676860** Prep Date: **1/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	3.35	0.20	5	0.09143	65.2	45-125	0			
2,4,5-Trichlorophenol	3.571	0.20	5	0.2531	66.4	46-120	0			
2,4,6-Trichlorophenol	4.543	0.20	5	0.5656	79.6	42-120	0			
2,4-Dichlorophenol	3.878	0.20	5	0.3782	70	49-120	0			
2,4-Dimethylphenol	4.341	0.20	5	0.6125	74.6	35-120	0			
2,4-Dinitrophenol	4.582	1.0	5	0	91.6	15-120	0			
2,4-Dinitrotoluene	3.953	0.20	5	0	79.1	50-122	0			
2,6-Dinitrotoluene	3.913	0.20	5	0	78.3	50-120	0			
2-Chloronaphthalene	3.049	0.20	5	0.2808	55.4	50-120	0			
2-Chlorophenol	3.756	0.20	5	0	75.1	40-120	0			
2-Methylnaphthalene	15.26	0.20	5	13.05	44.2	50-120	0			SE
2-Methylphenol	4.025	0.20	5	0	80.5	45-120	0			
2-Nitroaniline	4.891	0.20	5	0	97.8	28-139	0			
2-Nitrophenol	3.762	0.20	5	0	75.2	40-120	0			
3&4-Methylphenol	4.083	0.20	5	0	81.7	35-120	0			
3,3´-Dichlorobenzidine	ND	0.20	5	0	0	15-120	0			S
3-Nitroaniline	3.823	0.20	5	0	76.5	30-120	0			
4,6-Dinitro-2-methylphenol	4.007	0.20	5	0	80.1	25-121	0			
4-Bromophenyl phenyl ether	3.504	0.20	5	0	70.1	45-120	0			
4-Chloro-3-methylphenol	5.707	0.20	5	0	114	47-120	0			
4-Chloroaniline	1.767	0.20	5	0	35.3	20-120	0			
4-Chlorophenyl phenyl ether	3.908	0.20	5	0	78.2	50-120	0			
4-Nitroaniline	3.973	0.20	5	0	79.5	30-133	0			
4-Nitrophenol	7.67	1.0	5	0	153	30-130	0			S
Acenaphthene	4.093	0.20	5	0.4972	71.9	45-120	0			
Acenaphthylene	4.038	0.20	5	0.2231	76.3	47-120	0			
Acetophenone	4.752	0.20	5	1.333	68.4	40-120	0			
Anthracene	4.063	0.20	5	0.1255	78.7	45-120	0			
Atrazine	2.941	0.20	5	0	58.8	40-130	0			
Benz(a)anthracene	4.123	0.20	5	0	82.5	40-120	0			
Benzaldehyde	4.306	0.20	5	0	86.1	15-120	0			
Benzo(a)pyrene	3.997	0.20	5	0	79.9	45-120	0			
Benzo(b)fluoranthene	4.086	0.20	5	0	81.7	50-120	0			
Benzo(g,h,i)perylene	4.308	0.20	5	0	86.2	42-127	0			
Benzo(k)fluoranthene	4.243	0.20	5	0	84.9	45-127	0			
Bis(2-chloroethoxy)methane	3.861	0.20	5	0	77.2	45-120	0			
Bis(2-chloroethyl)ether	4.347	0.20	5	0	86.9	37-121	0			
Bis(2-chloroisopropyl)ether	3.807	0.20	5	0	76.1	40-120	0			
Bis(2-ethylhexyl)phthalate	4.479	0.20	5	0.2233	85.1	40-139	0			
Butyl benzyl phthalate	4.324	0.20	5	0	86.5	47-123	0			
Caprolactam	4.914	0.20	5	0	98.3	35-134	0			
Carbazole	4.081	0.20	5	0.1961	77.7	42-128	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **58576** Instrument ID: **SV-4** Method: **SW8270**

Chrysene	3.898	0.20	5	0	78	43-120	0	
Dibenz(a,h)anthracene	4.266	0.20	5	0	85.3	45-125	0	
Dibenzofuran	4.675	0.20	5	0.7812	77.9	50-120	0	
Diethyl phthalate	4.006	0.20	5	0	80.1	41-120	0	
Dimethyl phthalate	4.008	0.20	5	0	80.2	40-122	0	
Di-n-butyl phthalate	8.838	0.20	5	4.459	87.6	45-123	0	
Di-n-octyl phthalate	4.426	0.20	5	0	88.5	45-129	0	
Fluoranthene	4.016	0.20	5	0.0534	79.2	45-125	0	
Fluorene	4.313	0.20	5	0.5452	75.4	49-120	0	
Hexachlorobenzene	3.272	0.20	5	0	65.4	48-120	0	
Hexachlorobutadiene	3.725	0.20	5	0	74.5	40-120	0	
Hexachlorocyclopentadiene	3.817	0.20	5	0	76.3	34-136	0	
Hexachloroethane	11.38	0.20	5	0	228	40-120	0	SE
Indeno(1,2,3-cd)pyrene	4.103	0.20	5	0	82.1	41-128	0	
Isophorone	3.469	0.20	5	0	69.4	40-121	0	
Naphthalene	10.21	0.20	5	7.335	57.5	45-120	0	E
Nitrobenzene	4.37	0.20	5	0	87.4	44-120	0	
N-Nitrosodi-n-propylamine	3.656	0.20	5	0	73.1	40-120	0	
N-Nitrosodiphenylamine	4.517	0.20	5	0	90.3	40-125	0	
Pentachlorophenol	3.856	0.20	5	0.209	72.9	19-121	0	
Phenanthrene	4.638	0.20	5	1.088	71	45-121	0	
Phenol	3.829	0.20	5	0	76.6	20-124	0	
Pyrene	4.183	0.20	5	0.1212	81.2	40-130	0	
Surr: 2,4,6-Tribromophenol	*4.563*	0.20	*5*	0	*91.3*	*34-129*	0	
Surr: 2-Fluorobiphenyl	*3.825*	0.20	*5*	0	*76.5*	*40-125*	0	
Surr: 2-Fluorophenol	*4.247*	0.20	*5*	0	*84.9*	*20-120*	0	
Surr: 4-Terphenyl-d14	*4.691*	0.20	*5*	0	*93.8*	*40-135*	0	
Surr: Nitrobenzene-d5	*3.735*	0.20	*5*	0	*74.7*	*41-120*	0	
Surr: Phenol-d6	*4.122*	0.20	*5*	0	*82.4*	*20-120*	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58576** Instrument ID: **SV-4** Method: **SW8270**

MSD Sample ID: **1201932-02GMSD** Units: **µg/L** Analysis Date: **2/2/2012 12:01 AM**

Client ID: Run ID: **SV-4_120201C** SeqNo: **2676861** Prep Date: **1/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	3.248	0.20	5	0.09143	63.1	45-125	3.35	3.11	20	
2,4,5-Trichlorophenol	3.531	0.20	5	0.2531	65.6	46-120	3.571	1.13	20	
2,4,6-Trichlorophenol	4.253	0.20	5	0.5656	73.7	42-120	4.543	6.6	20	
2,4-Dichlorophenol	4.013	0.20	5	0.3782	72.7	49-120	3.878	3.41	20	
2,4-Dimethylphenol	4.6	0.20	5	0.6125	79.8	35-120	4.341	5.8	20	
2,4-Dinitrophenol	4.405	1.0	5	0	88.1	15-120	4.582	3.94	20	
2,4-Dinitrotoluene	4.288	0.20	5	0	85.8	50-122	3.953	8.15	20	
2,6-Dinitrotoluene	4.042	0.20	5	0	80.8	50-120	3.913	3.24	20	
2-Chloronaphthalene	3.189	0.20	5	0.2808	58.2	50-120	3.049	4.49	20	
2-Chlorophenol	3.566	0.20	5	0	71.3	40-120	3.756	5.19	20	
2-Methylnaphthalene	14.79	0.20	5	13.05	34.7	50-120	15.26	3.17	20	SE
2-Methylphenol	3.81	0.20	5	0	76.2	45-120	4.025	5.48	20	
2-Nitroaniline	4.516	0.20	5	0	90.3	28-139	4.891	7.97	20	
2-Nitrophenol	3.984	0.20	5	0	79.7	40-120	3.762	5.74	20	
3&4-Methylphenol	3.987	0.20	5	0	79.7	35-120	4.083	2.39	20	
3,3´-Dichlorobenzidine	ND	0.20	5	0	0	15-120	0	0	20	S
3-Nitroaniline	3.15	0.20	5	0	63	30-120	3.823	19.3	20	
4,6-Dinitro-2-methylphenol	3.937	0.20	5	0	78.7	25-121	4.007	1.77	20	
4-Bromophenyl phenyl ether	3.554	0.20	5	0	71.1	45-120	3.504	1.42	20	
4-Chloro-3-methylphenol	6.38	0.20	5	0	128	47-120	5.707	11.1	20	S
4-Chloroaniline	1.941	0.20	5	0	38.8	20-120	1.767	9.38	20	
4-Chlorophenyl phenyl ether	3.76	0.20	5	0	75.2	50-120	3.908	3.86	20	
4-Nitroaniline	3.852	0.20	5	0	77	30-133	3.973	3.08	20	
4-Nitrophenol	4.751	1.0	5	0	95	30-130	7.67	47	20	R
Acenaphthene	4.149	0.20	5	0.4972	73	45-120	4.093	1.38	20	
Acenaphthylene	3.69	0.20	5	0.2231	69.3	47-120	4.038	9	20	
Acetophenone	4.754	0.20	5	1.333	68.4	40-120	4.752	0.043	20	
Anthracene	4.019	0.20	5	0.1255	77.9	45-120	4.063	1.08	20	
Atrazine	2.259	0.20	5	0	45.2	40-130	2.941	26.2	20	R
Benz(a)anthracene	3.858	0.20	5	0	77.2	40-120	4.123	6.64	20	
Benzaldehyde	7.554	0.20	5	0	151	15-120	4.306	54.8	20	SR
Benzo(a)pyrene	4.168	0.20	5	0	83.4	45-120	3.997	4.19	20	
Benzo(b)fluoranthene	4.295	0.20	5	0	85.9	50-120	4.086	4.99	20	
Benzo(g,h,i)perylene	4.279	0.20	5	0	85.6	42-127	4.308	0.669	20	
Benzo(k)fluoranthene	3.73	0.20	5	0	74.6	45-127	4.243	12.9	20	
Bis(2-chloroethoxy)methane	3.965	0.20	5	0	79.3	45-120	3.861	2.66	20	
Bis(2-chloroethyl)ether	3.638	0.20	5	0	72.8	37-121	4.347	17.8	20	
Bis(2-chloroisopropyl)ether	3.349	0.20	5	0	67	40-120	3.807	12.8	20	
Bis(2-ethylhexyl)phthalate	4.211	0.20	5	0.2233	79.8	40-139	4.479	6.15	20	
Butyl benzyl phthalate	4.255	0.20	5	0	85.1	47-123	4.324	1.61	20	
Caprolactam	3.87	0.20	5	0	77.4	35-134	4.914	23.8	20	R
Carbazole	3.999	0.20	5	0.1961	76.1	42-128	4.081	2.02	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **58576** Instrument ID: **SV-4** Method: **SW8270**

Chrysene	3.926	0.20	5	0	78.5	43-120	3.898	0.717	20	
Dibenz(a,h)anthracene	4.383	0.20	5	0	87.7	45-125	4.266	2.71	20	
Dibenzofuran	4.642	0.20	5	0.7812	77.2	50-120	4.675	0.716	20	
Diethyl phthalate	3.968	0.20	5	0	79.4	41-120	4.006	0.948	20	
Dimethyl phthalate	3.837	0.20	5	0	76.7	40-122	4.008	4.36	20	
Di-n-butyl phthalate	8.121	0.20	5	4.459	73.2	45-123	8.838	8.46	20	
Di-n-octyl phthalate	4.621	0.20	5	0	92.4	45-129	4.426	4.31	20	
Fluoranthene	3.989	0.20	5	0.0534	78.7	45-125	4.016	0.668	20	
Fluorene	4.239	0.20	5	0.5452	73.9	49-120	4.313	1.73	20	
Hexachlorobenzene	3.262	0.20	5	0	65.2	48-120	3.272	0.292	20	
Hexachlorobutadiene	3.637	0.20	5	0	72.7	40-120	3.725	2.4	20	
Hexachlorocyclopentadiene	3.713	0.20	5	0	74.3	34-136	3.817	2.77	20	
Hexachloroethane	3.139	0.20	5	0	62.8	40-120	11.38	114	20	R
Indeno(1,2,3-cd)pyrene	4.47	0.20	5	0	89.4	41-128	4.103	8.57	20	
Isophorone	3.609	0.20	5	0	72.2	40-121	3.469	3.95	20	
Naphthalene	9.297	0.20	5	7.335	39.2	45-120	10.21	9.34	20	S
Nitrobenzene	4.314	0.20	5	0	86.3	44-120	4.37	1.29	20	
N-Nitrosodi-n-propylamine	3.699	0.20	5	0	74	40-120	3.656	1.16	20	
N-Nitrosodiphenylamine	3.765	0.20	5	0	75.3	40-125	4.517	18.2	20	
Pentachlorophenol	4.052	0.20	5	0.209	76.9	19-121	3.856	4.97	20	
Phenanthrene	4.418	0.20	5	1.088	66.6	45-121	4.638	4.85	20	
Phenol	3.633	0.20	5	0	72.7	20-124	3.829	5.25	20	
Pyrene	4.055	0.20	5	0.1212	78.7	40-130	4.183	3.1	20	
Surr: 2,4,6-Tribromophenol	*4.412*	0.20	*5*	0	*88.2*	*34-129*	4.563	*3.35*	*0*	
Surr: 2-Fluorobiphenyl	*3.596*	0.20	*5*	0	*71.9*	*40-125*	3.825	*6.16*	*0*	
Surr: 2-Fluorophenol	*3.113*	0.20	*5*	0	*62.3*	*20-120*	4.247	*30.8*	*0*	
Surr: 4-Terphenyl-d14	*4.262*	0.20	*5*	0	*85.2*	*40-135*	4.691	*9.58*	*0*	
Surr: Nitrobenzene-d5	*3.85*	0.20	*5*	0	*77*	*41-120*	3.735	*3.04*	*0*	
Surr: Phenol-d6	*3.421*	0.20	*5*	0	*68.4*	*20-120*	4.122	*18.6*	*0*	

The following samples were analyzed in this batch:

1201933-01E	1201933-03E	1201933-05E
1201933-07E	1201933-09E	1201933-11E
1201933-13E		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R122685** Instrument ID: **VOA8** Method: **SW8260**

MBLK Sample ID: **VBLKW2-120131-R122685** Units: **µg/L** Analysis Date: **2/1/2012 01:04 AM**

Client ID: Run ID: **VOA8_120131C** SeqNo: **2672816** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
2-Butanone	ND	10								
2-Hexanone	ND	10								
4-Isopropyltoluene	ND	5.0								
4-Methyl-2-pentanone	ND	10								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	10								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								
Ethylbenzene	ND	5.0								
Isopropylbenzene	ND	5.0								
m,p-Xylene	ND	10								
Methyl tert-butyl ether	ND	5.0								
Methylene chloride	ND	10								
Naphthalene	ND	5.0								
n-Butylbenzene	ND	5.0								
n-Propylbenzene	ND	5.0								
o-Xylene	ND	5.0								
sec-Butylbenzene	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
trans-1,2-Dichloroethene	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R122685** Instrument ID: **VOA8** Method: **SW8260**

trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Vinyl chloride	ND	2.0					
Xylenes, Total	ND	15					
Surr: 1,2-Dichloroethane-d4	*47.88*	5.0	*50*	0	*95.8*	*70-125*	0
Surr: 4-Bromofluorobenzene	*48.92*	5.0	*50*	0	*97.8*	*72-125*	0
Surr: Dibromofluoromethane	*48.06*	5.0	*50*	0	*96.1*	*71-125*	0
Surr: Toluene-d8	*48.37*	5.0	*50*	0	*96.7*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R122685** Instrument ID: **VOA8** Method: **SW8260**

LCS Sample ID: **VLCSW2-120131-R122685** Units: **µg/L** Analysis Date: **1/31/2012 11:02 PM**

Client ID: Run ID: **VOA8_120131C** SeqNo: **2672814** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	48.46	5.0	50	0	96.9	80-120	0			
1,1,2,2-Tetrachloroethane	45.27	5.0	50	0	90.5	72-120	0			
1,1,2-Trichloroethane	47.43	5.0	50	0	94.9	80-120	0			
1,1-Dichloroethane	46.57	5.0	50	0	93.1	76-120	0			
1,1-Dichloroethene	49.3	5.0	50	0	98.6	73-124	0			
1,2,4-Trimethylbenzene	48.34	5.0	50	0	96.7	68-123	0			
1,2-Dibromoethane	49.66	5.0	50	0	99.3	80-120	0			
1,2-Dichloroethane	46.6	5.0	50	0	93.2	78-120	0			
1,2-Dichloropropane	47.54	5.0	50	0	95.1	80-120	0			
1,3,5-Trimethylbenzene	50.26	5.0	50	0	101	80-120	0			
2-Butanone	84.43	10	100	0	84.4	58-132	0			
2-Hexanone	93.71	10	100	0	93.7	61-130	0			
4-Isopropyltoluene	52.91	5.0	50	0	106	79-120	0			
4-Methyl-2-pentanone	92.58	10	100	0	92.6	65-127	0			
Acetone	87.61	10	100	0	87.6	59-137	0			
Benzene	45.05	5.0	50	0	90.1	73-121	0			
Bromodichloromethane	48.53	5.0	50	0	97.1	80-120	0			
Bromoform	53.11	5.0	50	0	106	79-120	0			
Bromomethane	44.04	5.0	50	0	88.1	66-137	0			
Carbon disulfide	92.49	10	100	0	92.5	68-141	0			
Carbon tetrachloride	50.54	5.0	50	0	101	75-124	0			
Chlorobenzene	49.18	5.0	50	0	98.4	80-120	0			
Chloroethane	43.81	5.0	50	0	87.6	76-121	0			
Chloroform	47.13	5.0	50	0	94.3	80-120	0			
Chloromethane	46.51	5.0	50	0	93	67-123	0			
cis-1,2-Dichloroethene	44.98	5.0	50	0	90	78-120	0			
cis-1,3-Dichloropropene	48.01	5.0	50	0	96	80-120	0			
Dibromochloromethane	50.73	5.0	50	0	101	80-120	0			
Ethylbenzene	47.97	5.0	50	0	95.9	80-120	0			
Isopropylbenzene	51.08	5.0	50	0	102	80-120	0			
m,p-Xylene	98.52	10	100	0	98.5	78-121	0			
Methyl tert-butyl ether	46.19	5.0	50	0	92.4	73-121	0			
Methylene chloride	46.21	10	50	0	92.4	65-133	0			
Naphthalene	47.05	5.0	50	0	94.1	65-135	0			
n-Butylbenzene	54.61	5.0	50	0	109	77-120	0			
n-Propylbenzene	50.84	5.0	50	0	102	78-120	0			
o-Xylene	49.77	5.0	50	0	99.5	80-120	0			
sec-Butylbenzene	50.26	5.0	50	0	101	78-120	0			
Styrene	51.78	5.0	50	0	104	80-120	0			
Tetrachloroethene	47.96	5.0	50	0	95.9	79-120	0			
Toluene	47.51	5.0	50	0	95	80-120	0			
trans-1,2-Dichloroethene	47.05	5.0	50	0	94.1	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R122685** Instrument ID: **VOA8** Method: **SW8260**

trans-1,3-Dichloropropene	49.4	5.0	50	0	98.8	80-120	0
Trichloroethene	51.62	5.0	50	0	103	80-120	0
Vinyl chloride	46.95	2.0	50	0	93.9	70-127	0
Xylenes, Total	148.3	15	150	0	98.9	80-120	0
Surr: 1,2-Dichloroethane-d4	*47.79*	5.0	*50*	0	*95.6*	*70-125*	0
Surr: 4-Bromofluorobenzene	*49.28*	5.0	*50*	0	*98.6*	*72-125*	0
Surr: Dibromofluoromethane	*48.47*	5.0	*50*	0	*96.9*	*71-125*	0
Surr: Toluene-d8	*48.95*	5.0	*50*	0	*97.9*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R122685** Instrument ID: **VOA8** Method: **SW8260**

MS Sample ID: **1201801-01AMS** Units: **µg/L** Analysis Date: **2/1/2012 08:47 AM**

Client ID: Run ID: **VOA8_120131C** SeqNo: **2672832** Prep Date: DF: **250**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	12510	1,200	12500	0	100	80-120	0			
1,1,2,2-Tetrachloroethane	12650	1,200	12500	0	101	72-120	0			
1,1,2-Trichloroethane	11960	1,200	12500	0	95.6	80-120	0			
1,1-Dichloroethane	12100	1,200	12500	0	96.8	76-120	0			
1,1-Dichloroethene	12490	1,200	12500	0	99.9	73-124	0			
1,2,4-Trimethylbenzene	12150	1,200	12500	0	97.2	68-123	0			
1,2-Dibromoethane	12460	1,200	12500	0	99.7	80-120	0			
1,2-Dichloroethane	11980	1,200	12500	0	95.9	78-120	0			
1,2-Dichloropropane	12550	1,200	12500	0	100	80-120	0			
1,3,5-Trimethylbenzene	12550	1,200	12500	0	100	80-120	0			
2-Butanone	22400	2,500	25000	0	89.6	58-132	0			
2-Hexanone	24140	2,500	25000	0	96.6	61-130	0			
4-Isopropyltoluene	13040	1,200	12500	0	104	79-120	0			
4-Methyl-2-pentanone	24420	2,500	25000	0	97.7	65-127	0			
Acetone	23030	2,500	25000	0	92.1	59-137	0			
Benzene	20000	1,200	12500	0	160	73-121	0			S
Bromodichloromethane	12110	1,200	12500	0	96.9	80-120	0			
Bromoform	13400	1,200	12500	0	107	79-120	0			
Bromomethane	11770	1,200	12500	0	94.2	66-137	0			
Carbon disulfide	21830	2,500	25000	0	87.3	68-141	0			
Carbon tetrachloride	12830	1,200	12500	0	103	75-124	0			
Chlorobenzene	12300	1,200	12500	0	98.4	80-120	0			
Chloroethane	11470	1,200	12500	0	91.8	76-121	0			
Chloroform	12050	1,200	12500	0	96.4	80-120	0			
Chloromethane	12100	1,200	12500	0	96.8	67-123	0			
cis-1,2-Dichloroethene	26410	1,200	12500	15150	90.1	78-120	0			
cis-1,3-Dichloropropene	11770	1,200	12500	0	94.1	80-120	0			
Dibromochloromethane	12670	1,200	12500	0	101	80-120	0			
Ethylbenzene	12080	1,200	12500	0	96.6	80-120	0			
Isopropylbenzene	24580	1,200	12500	0	197	80-120	0			S
m,p-Xylene	24800	2,500	25000	0	99.2	78-121	0			
Methyl tert-butyl ether	11980	1,200	12500	0	95.8	73-121	0			
Methylene chloride	12030	2,500	12500	0	96.2	65-133	0			
Naphthalene	12210	1,200	12500	0	97.7	65-135	0			
n-Butylbenzene	12870	1,200	12500	0	103	77-120	0			
n-Propylbenzene	12610	1,200	12500	0	101	78-120	0			
o-Xylene	12460	1,200	12500	0	99.7	80-120	0			
sec-Butylbenzene	12550	1,200	12500	0	100	78-120	0			
Styrene	13160	1,200	12500	0	105	80-120	0			
Tetrachloroethene	17720	1,200	12500	6176	92.4	79-120	0			
Toluene	12240	1,200	12500	0	97.9	80-120	0			
trans-1,2-Dichloroethene	11970	1,200	12500	0	95.8	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R122685** Instrument ID: **VOA8** Method: **SW8260**

trans-1,3-Dichloropropene	12070	1,200	12500	0	96.6	80-120	0
Trichloroethene	16420	1,200	12500	3963	99.7	80-120	0
Vinyl chloride	12220	500	12500	748.7	91.8	70-127	0
Xylenes, Total	37260	3,800	37500	0	99.4	80-120	0
Surr: 1,2-Dichloroethane-d4	*12020*	1,200	*12500*	0	*96.2*	*70-125*	0
Surr: 4-Bromofluorobenzene	*12360*	1,200	*12500*	0	*98.9*	*72-125*	0
Surr: Dibromofluoromethane	*12200*	1,200	*12500*	0	*97.6*	*71-125*	0
Surr: Toluene-d8	*12250*	1,200	*12500*	0	*98*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R122685** Instrument ID: **VOA8** Method: **SW8260**

MSD Sample ID: **1201801-01AMSD** Units: **µg/L** Analysis Date: **2/1/2012 09:11 AM**

Client ID: Run ID: **VOA8_120131C** SeqNo: **2672833** Prep Date: DF: **250**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	12250	1,200	12500	0	98	80-120	12510	2.15	20	
1,1,2,2-Tetrachloroethane	12380	1,200	12500	0	99	72-120	12650	2.22	20	
1,1,2-Trichloroethane	12180	1,200	12500	0	97.4	80-120	11960	1.85	20	
1,1-Dichloroethane	11990	1,200	12500	0	95.9	76-120	12100	0.903	20	
1,1-Dichloroethene	11700	1,200	12500	0	93.6	73-124	12490	6.51	20	
1,2,4-Trimethylbenzene	12270	1,200	12500	0	98.2	68-123	12150	0.991	20	
1,2-Dibromoethane	12460	1,200	12500	0	99.6	80-120	12460	0.0381	20	
1,2-Dichloroethane	11910	1,200	12500	0	95.3	78-120	11980	0.603	20	
1,2-Dichloropropane	12200	1,200	12500	0	97.6	80-120	12550	2.82	20	
1,3,5-Trimethylbenzene	12330	1,200	12500	0	98.7	80-120	12550	1.79	20	
2-Butanone	23060	2,500	25000	0	92.3	58-132	22400	2.93	20	
2-Hexanone	23520	2,500	25000	0	94.1	61-130	24140	2.6	20	
4-Isopropyltoluene	13020	1,200	12500	0	104	79-120	13040	0.214	20	
4-Methyl-2-pentanone	23420	2,500	25000	0	93.7	65-127	24420	4.2	20	
Acetone	23510	2,500	25000	0	94.1	59-137	23030	2.06	20	
Benzene	13320	1,200	12500	0	107	73-121	20000	40.1	20	R
Bromodichloromethane	12130	1,200	12500	0	97	80-120	12110	0.121	20	
Bromoform	13230	1,200	12500	0	106	79-120	13400	1.33	20	
Bromomethane	11280	1,200	12500	0	90.3	66-137	11770	4.25	20	
Carbon disulfide	22410	2,500	25000	0	89.6	68-141	21830	2.6	20	
Carbon tetrachloride	12720	1,200	12500	0	102	75-124	12830	0.829	20	
Chlorobenzene	11960	1,200	12500	0	95.7	80-120	12300	2.79	20	
Chloroethane	11040	1,200	12500	0	88.3	76-121	11470	3.83	20	
Chloroform	12030	1,200	12500	0	96.3	80-120	12050	0.166	20	
Chloromethane	11570	1,200	12500	0	92.5	67-123	12100	4.48	20	
cis-1,2-Dichloroethene	26240	1,200	12500	15150	88.8	78-120	26410	0.613	20	
cis-1,3-Dichloropropene	11820	1,200	12500	0	94.6	80-120	11770	0.48	20	
Dibromochloromethane	12690	1,200	12500	0	102	80-120	12670	0.158	20	
Ethylbenzene	11960	1,200	12500	0	95.7	80-120	12080	0.994	20	
Isopropylbenzene	16430	1,200	12500	0	131	80-120	24580	39.7	20	SR
m,p-Xylene	24600	2,500	25000	0	98.4	78-121	24800	0.812	20	
Methyl tert-butyl ether	12120	1,200	12500	0	97	73-121	11980	1.22	20	
Methylene chloride	11720	2,500	12500	0	93.8	65-133	12030	2.61	20	
Naphthalene	11980	1,200	12500	0	95.8	65-135	12210	1.9	20	
n-Butylbenzene	12810	1,200	12500	0	102	77-120	12870	0.484	20	
n-Propylbenzene	12360	1,200	12500	0	98.9	78-120	12610	2.03	20	
o-Xylene	12240	1,200	12500	0	97.9	80-120	12460	1.83	20	
sec-Butylbenzene	12330	1,200	12500	0	98.7	78-120	12550	1.79	20	
Styrene	12980	1,200	12500	0	104	80-120	13160	1.43	20	
Tetrachloroethene	17320	1,200	12500	6176	89.2	79-120	17720	2.28	20	
Toluene	11950	1,200	12500	0	95.6	80-120	12240	2.34	20	
trans-1,2-Dichloroethene	11990	1,200	12500	0	95.9	78-120	11970	0.147	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R122685**	Instrument ID: **VOA8**		Method: **SW8260**						
trans-1,3-Dichloropropene	11930	1,200	12500	0	95.4	80-120	12070	1.19	20
Trichloroethene	16270	1,200	12500	3963	98.4	80-120	16420	0.967	20
Vinyl chloride	12250	500	12500	748.7	92	70-127	12220	0.223	20
Xylenes, Total	36830	3,800	37500	0	98.2	80-120	37260	1.15	20
Surr: 1,2-Dichloroethane-d4	*12100*	1,200	*12500*	0	*96.8*	*70-125*	12020	*0.638*	*20*
Surr: 4-Bromofluorobenzene	*12420*	1,200	*12500*	0	*99.3*	*72-125*	12360	*0.441*	*20*
Surr: Dibromofluoromethane	*12440*	1,200	*12500*	0	*99.5*	*71-125*	12200	*1.92*	*20*
Surr: Toluene-d8	*12170*	1,200	*12500*	0	*97.3*	*75-125*	12250	*0.651*	*20*

The following samples were analyzed in this batch:

1201933-01A	1201933-03A	1201933-05A
1201933-07A	1201933-09A	1201933-11A
1201933-13A	1201933-15A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R122666** Instrument ID: **WetChem** Method: **SM4500H+ B**

LCS Sample ID: **WLCSW1-013112-R122666** Units: **pH units** Analysis Date: **1/31/2012 04:00 PM**

Client ID: Run ID: **WETCHEM_120131G** SeqNo: **2672215** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6	0.10	6	0	100	90-110	0			

DUP Sample ID: **1201933-01DDUP** Units: **pH units** Analysis Date: **1/31/2012 04:00 PM**

Client ID: **MW-29-0112** Run ID: **WETCHEM_120131G** SeqNo: **2672225** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.79	0.10	0	0	0	0-0	6.8	0.147	20	H

The following samples were analyzed in this batch:

1201933-01D	1201933-03D	1201933-05D
1201933-07D	1201933-09D	1201933-11D
1201933-13D		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R122721** Instrument ID: **Balance1** Method: **M2540C**

MBLK Sample ID: **BLANK-R122721** Units: **mg/L** Analysis Date: **1/31/2012 05:00 PM**

Client ID: Run ID: **BALANCE1_120131D** SeqNo: **2673586** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	ND	10								

LCS Sample ID: **LCS-R122721** Units: **mg/L** Analysis Date: **1/31/2012 05:00 PM**

Client ID: Run ID: **BALANCE1_120131D** SeqNo: **2673587** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	908	10	1000	0	90.8	85-115	0			

DUP Sample ID: **1201749-01CDUP** Units: **mg/L** Analysis Date: **1/31/2012 05:00 PM**

Client ID: Run ID: **BALANCE1_120131D** SeqNo: **2673600** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	5950	10	0	0	0	0-0	5630	5.53	20	

The following samples were analyzed in this batch:

1201933-01D	1201933-03D	1201933-05D
1201933-07D	1201933-09D	1201933-11D
1201933-13D		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R122900** Instrument ID: **ICS3000** Method: **E300**

MBLK Sample ID: **WBLKS1-020112-R122900** Units: **mg/L** Analysis Date: **2/3/2012 01:04 PM**
Client ID: Run ID: **ICS3000_120203A** SeqNo: **2677217** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Fluoride	0.087	0.10								J
Sulfate	ND	0.50								
Surr: Selenate (surr)	*5.047*	0.10	*5*	0	*101*	*85-115*	0			

LCS Sample ID: **WLCSS1-020112-R122900** Units: **mg/L** Analysis Date: **2/3/2012 01:25 PM**
Client ID: Run ID: **ICS3000_120203A** SeqNo: **2677218** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.97	0.50	20	0	110	90-110	0			
Fluoride	4.291	0.10	4	0	107	90-110	0			
Sulfate	19.86	0.50	20	0	99.3	90-110	0			
Surr: Selenate (surr)	*5.102*	0.10	*5*	0	*102*	*85-115*	0			

LCSD Sample ID: **WLCSDS1-020112-R122900** Units: **mg/L** Analysis Date: **2/3/2012 02:48 PM**
Client ID: Run ID: **ICS3000_120203A** SeqNo: **2677219** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.81	0.50	20	0	109	90-110	21.97	0.745	20	
Fluoride	4.374	0.10	4	0	109	90-110	4.291	1.92	20	
Sulfate	20.89	0.50	20	0	104	90-110	19.86	5.05	20	
Surr: Selenate (surr)	*5.32*	0.10	*5*	0	*106*	*85-115*	5.102	*4.18*	*20*	

MS Sample ID: **1202011-01EMS** Units: **mg/L** Analysis Date: **2/3/2012 11:14 PM**
Client ID: Run ID: **ICS3000_120203A** SeqNo: **2677249** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	27.08	0.50	10	16.37	107	80-120	0			
Fluoride	2.152	0.10	2	0.024	106	80-120	0			
Sulfate	57.8	0.50	10	48.35	94.5	80-120	0			O
Surr: Selenate (surr)	*5.391*	0.10	*5*	0	*108*	*85-115*	0			

MSD Sample ID: **1202011-01EMSD** Units: **mg/L** Analysis Date: **2/3/2012 11:35 PM**
Client ID: Run ID: **ICS3000_120203A** SeqNo: **2677251** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	26.73	0.50	10	16.37	104	80-120	27.08	1.28	20	
Fluoride	2.139	0.10	2	0.024	106	80-120	2.152	0.606	20	
Sulfate	57.29	0.50	10	48.35	89.4	80-120	57.8	0.891	20	O
Surr: Selenate (surr)	*5.345*	0.10	*5*	0	*107*	*85-115*	5.391	*0.857*	*20*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R122900** Instrument ID: **ICS3000** Method: **E300**

The following samples were analyzed in this batch:

1201933-01D	1201933-03D	1201933-05D
1201933-07D	1201933-09D	1201933-11D
1201933-13D		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R122904** Instrument ID: **ICS3K2** Method: **E300**

MBLK Sample ID: **WBLKW2-020212-R122904** Units: **mg/L** Analysis Date: **2/6/2012**
Client ID: Run ID: **ICS3K2_120206A** SeqNo: **2677382** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Sulfate	0.256	0.50								J
Surr: Selenate (surr)	*4.646*	0.10	*5*	0	*92.9*	*85-115*	0			

LCS Sample ID: **WLCSW2-020212-R122904** Units: **mg/L** Analysis Date: **2/6/2012 12:21 AM**
Client ID: Run ID: **ICS3K2_120206A** SeqNo: **2677383** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.48	0.50	20	0	97.4	90-110	0			
Sulfate	18.34	0.50	20	0	91.7	90-110	0			
Surr: Selenate (surr)	*4.801*	0.10	*5*	0	*96*	*85-115*	0			

LCSD Sample ID: **WLCSDW2-020212-R122904** Units: **mg/L** Analysis Date: **2/6/2012 12:43 AM**
Client ID: Run ID: **ICS3K2_120206A** SeqNo: **2677384** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.48	0.50	20	0	97.4	90-110	19.48	0.0359	20	
Sulfate	18.8	0.50	20	0	94	90-110	18.34	2.47	20	
Surr: Selenate (surr)	*4.909*	0.10	*5*	0	*98.2*	*85-115*	4.801	*2.22*	*20*	

MS Sample ID: **1201933-07DMS** Units: **mg/L** Analysis Date: **2/6/2012 02:10 AM**
Client ID: **MW-15-0112** Run ID: **ICS3K2_120206A** SeqNo: **2677388** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	383.6	5.0	100	303.8	79.8	80-120	0			S
Sulfate	159.4	5.0	100	67.92	91.5	80-120	0			
Surr: Selenate (surr)	*48.01*	1.0	*50*	0	*96*	*85-115*	0			

MSD Sample ID: **1201933-07DMSD** Units: **mg/L** Analysis Date: **2/6/2012 02:32 AM**
Client ID: **MW-15-0112** Run ID: **ICS3K2_120206A** SeqNo: **2677389** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	384.6	5.0	100	303.8	80.8	80-120	383.6	0.258	20	
Sulfate	160.3	5.0	100	67.92	92.4	80-120	159.4	0.53	20	
Surr: Selenate (surr)	*48.15*	1.0	*50*	0	*96.3*	*85-115*	48.01	*0.297*	*20*	

The following samples were analyzed in this batch: 1201933-01D 1201933-05D 1201933-07D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R122905** Instrument ID: **ICS3K2** Method: **E300**

MBLK Sample ID: **WBLKW1-020312-R122905** Units: **mg/L** Analysis Date: **2/3/2012 04:51 PM**
Client ID: Run ID: **ICS3K2_120203A** SeqNo: **2677394** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	ND	0.20								
Surr: Selenate (surr)	*4.871*	0.10	*5*	0	*97.4*	*85-115*	0			

LCS Sample ID: **WLCSW1-020312-R122905** Units: **mg/L** Analysis Date: **2/3/2012 05:13 PM**
Client ID: Run ID: **ICS3K2_120203A** SeqNo: **2677395** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	8.076	0.20	8	0	101	90-110	0			
Surr: Selenate (surr)	*4.912*	0.10	*5*	0	*98.2*	*85-115*	0			

LCSD Sample ID: **WLCSDW1-020312-R122905** Units: **mg/L** Analysis Date: **2/3/2012 05:35 PM**
Client ID: Run ID: **ICS3K2_120203A** SeqNo: **2677396** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	8.093	0.20	8	0	101	90-110	8.076	0.21	20	
Surr: Selenate (surr)	*4.908*	0.10	*5*	0	*98.2*	*85-115*	4.912	*0.0815*	*20*	

MS Sample ID: **1201933-13BMS** Units: **mg/L** Analysis Date: **2/3/2012 09:34 PM**
Client ID: **MW-3-0112** Run ID: **ICS3K2_120203A** SeqNo: **2677407** Prep Date: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	22.06	1.0	20	2.372	98.4	80-120	0			
Surr: Selenate (surr)	*24.86*	0.50	*25*	0	*99.4*	*85-115*	0			

MSD Sample ID: **1201933-13BMSD** Units: **mg/L** Analysis Date: **2/3/2012 09:55 PM**
Client ID: **MW-3-0112** Run ID: **ICS3K2_120203A** SeqNo: **2677408** Prep Date: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	22.31	1.0	20	2.372	99.7	80-120	22.06	1.12	20	
Surr: Selenate (surr)	*24.79*	0.50	*25*	0	*99.2*	*85-115*	24.86	*0.266*	*20*	

The following samples were analyzed in this batch:

1201933-01B	1201933-03B	1201933-05B
1201933-07B	1201933-09B	1201933-11B
1201933-13B		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R122911** Instrument ID: **WetChem** Method: **SM2320B**

MBLK Sample ID: **WBLKW1-020612-R122911** Units: **mg/L** Analysis Date: **2/6/2012 12:26 PM**

Client ID: Run ID: **WETCHEM_120206E** SeqNo: **2677536** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.0								
Alkalinity, Carbonate (As CaCO3)	ND	5.0								
Alkalinity, Hydroxide (As CaCO3)	ND	5.0								
Alkalinity, Total (As CaCO3)	ND	5.0								

LCS Sample ID: **WLCSW1-020612-R122911** Units: **mg/L** Analysis Date: **2/6/2012 12:26 PM**

Client ID: Run ID: **WETCHEM_120206E** SeqNo: **2677537** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1050	5.0	1000	0	105	80-120	0			

DUP Sample ID: **1201933-01DDUP** Units: **mg/L** Analysis Date: **2/6/2012 12:26 PM**

Client ID: **MW-29-0112** Run ID: **WETCHEM_120206E** SeqNo: **2677552** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	293.1	5.0	0	0	0	0-0	286.7	2.19	20	
Alkalinity, Carbonate (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	293.1	5.0	0	0	0	0-0	286.7	2.19	20	

The following samples were analyzed in this batch:

1201933-01D	1201933-03D	1201933-05D
1201933-07D	1201933-09D	1201933-11D
1201933-13D		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1201933
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R122919** Instrument ID: **WetChem** Method: **M2510 B**

MBLK Sample ID: **WBLKW1-020212-R122919** Units: **µmhos/cm** Analysis Date: **2/2/2012 03:30 PM**
Client ID: Run ID: **WETCHEM_120202K** SeqNo: **2677633** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	ND	1.0								

LCS Sample ID: **WLCSW1-020212-R122919** Units: **µmhos/cm** Analysis Date: **2/2/2012 03:30 PM**
Client ID: Run ID: **WETCHEM_120202K** SeqNo: **2677634** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	1440	1.0	1413	0	102	80-120	0			

DUP Sample ID: **1201839-04EDUP** Units: **µmhos/cm** Analysis Date: **2/2/2012 03:30 PM**
Client ID: Run ID: **WETCHEM_120202K** SeqNo: **2677650** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	3880	1.0	0	0	0		3880	0	20	

The following samples were analyzed in this batch:

1201933-01D	1201933-03D	1201933-05D
1201933-07D	1201933-09D	1201933-11D
1201933-13D		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 10-Feb-12

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
WorkOrder: **1201933**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µmhos/cm	
mg/L	Milligrams per Liter
pH units	

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **31-Jan-12 09:00**

Work Order: **1201933** Received by: **RNG**

Checklist completed by: Raymond N Gamboa (eSignature) 31-Jan-12 (Date) Reviewed by: Chris Bryson (eSignature) 31-Jan-12 (Date)

Matrices: 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):	2.2c, 3.1c, 2.5c, 2.9c	002	
Cooler(s)/Kit(s):	4023, 4583, 3319, 3619		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes: Client added Nitrate (as N)analysis to this project. Client deleted Nitrite (as N) analysis on this project. CB 2/1/12. Had to change analyte from Nitrate (as N) back to Nitrate/Nitrite (as N) due to sample being preserved. CB 2/9/12

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

ALS Environmental

Chain of Custody Form

Page 1 of 2

COC ID: 46584

☐ Ci +1 ☐ Ev +3 ☐ Fo +1

1201933

NAVAJO REFINING: Navajo Refining Company

Project: Navajo Lea Refinery Semi-Annual

ALS Project Manager:

Customer Information		Project Information			
Purchase Order	106881	Project Name	Navajo Lea Refinery Semi-Annual	A	VOC (8260) Select
Work Order		Project Number		B	LL SVOC (8270) TCL
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (6020/7000) Hg
Send Report To	Aaron Strange	Invoice Attn	Carrie Hernandez	D	Dissolved Metals (6020/7000) Select
Address	P.O. Box 159	Address	PO Box 159	E	Anions (300) Cl,F,SO4
				F	Alkalinity
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	pH
Phone	(505) 748-3311	Phone	(575) 748-6733	H	Specific Conductivity
Fax	(505) 746-5421	Fax	(575) 746-5421	I	TDS
e-Mail Address	aaron.strange@hollycorp.com	e-Mail Address	carrie.hernandez@hollycorp.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-29-0112	01/30/12	0930	H2O	4,2,3,8	6		X	X	X	X	X	X	X	X		
2	MW-28-0112	01/30/12	1030	H2O		6		X	X	X	X	X	X	X	X		
3	MW-2-0112	01/30/12	1135	H2O		6		X	X	X	X	X	X	X	X		
4	MW-15-0112	01/30/12	1215	H2O		6		X	X	X	X	X	X	X	X		
5	MW-16-0112	01/30/12	1335	H2O		6		X	X	X	X	X	X	X	X		
6	MW-4-0112	01/30/12	1430	H2O		6		X	X	X	X	X	X	X	X		
7	MW-3-0112	01/30/12	1520	H2O	2,3,8	6		X	X	X	X	X	X	X	X		
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Jerry Sanjuan

Shipment Method: FED-X

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

Results Due Date:

Relinquished by: Jerry Sanjuan Date: 01/30/12 Time: 1630

Received by:

Relinquished by: Date: Time:

Received by (Laboratory): 1/31/12 09:00

Logged by (Laboratory): Date: Time:

Checked by (Laboratory):

Notes: 10 Day TAT. Cc Dave Boyer on Final Report. dgboyer@SESI-nm.com

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)

☑ Level II Std QC ☐ TRRP CheckList

☐ Level III Std QC/Raw Data ☐ TRRP Level IV

☐ Level IV SW846/CLP

☐ Other / EDD _____

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 Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental 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.

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Chain of Custody Form

ALS Environmental

Page 2 of 2

COC ID: 46583

☐ Cincinnati, OH +1 513 733 5336 ☐ Holland, MI +1 513 733 5336 ☐ Salt Lake City, UT +1 801 266 7700
☐ Everett, WA +1 425 356 2600 ☒ Houston, TX +1 281 530 5656 ☐ Spring City, PA +1 610 948 4903
☐ Fort Collins, CO +1 970 490 1511 ☐ Middletown, PA +1 717 944 5541 ☐ York, PA +1 717 505 5280

ALS Project Manager: ALS Work Order #: 1201933

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	106881	Project Name	Navajo Lea Refinery Semi-Annual	A	VOC (8260) Select
Work Order		Project Number		B	LL SVOC (8270) TCL
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (6020/7000) Hg
Send Report To	Aaron Strange	Invoice Attn	Carrie Hernandez	D	Dissolved Metals (6020/7000) Select
Address	P.O. Box 159	Address	PO Box 159	E	Anions (300) Cl,F,SO4
				F	Alkalinity
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	pH
Phone	(505) 748-3311	Phone	(575) 748-6733	H	Specific Conductivity
Fax	(505) 746-5421	Fax	(575) 746-5421	I	TDS
e-Mail Address	aaron.strange@hollycorp.com	e-Mail Address	carrie.hernandez@hollycorp.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-29-0112	01/30/12	0930	H2O	1,8	3	X										
2	MW-28-0112	01/30/12	1030			3	X										
3	MW-2-0112	01/30/12	1135			3	X										
4	MW-15-0112	01/30/12	1215			3	X										
5	MW-16-0112	01/30/12	1335			3	X										
6	MW-4-0112	01/30/12	1430			3	X										
7	MW-3-0112	01/30/12	1520	H2O	1,8	3	X										
8	Trip Blank 0117 12-09	-	-	H2O	1,8	2	X										
9																	
10																	

Sampler(s) Please Print & Sign: Jose Loya

Shipment Method: FED X

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

Results Due Date:

Relinquished by: Jose Loya	Date: 01/30/12	Time: 1630	Received by:		
Relinquished by:	Date:	Time:	Received by (Laboratory):	1/31/12	09:00
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):		

Notes: 10 Day TAT. Cc Dave Boyer on Final Report. dgboyer@SESI-nm.com

Cooler ID	Cooler Temp.

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

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 Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
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W.O.# 1201933

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

Date 01/30/12 FedEx Tracking Number 875882545045

Sender's Name Sosa, Jerry Phone 575 397 0510

Company Safety & Environmental Sol

Address 203 E Clinton

City Hobbs Dept./Floor/Suite/Room 4023

State NM ZIP 88240

Your Internal Billing Reference NAVAJO Lovington

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

Date:
Name:
Company:

CUSTODY SEAL
Date: 1/30/12 Time: 1630
Signature

Seal Broken By: RMS
Date: 1/31/12

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Date 1/30/12 FedEx Tracking Number 875882545023

Sender's Name [illegible] Phone [illegible]

Company [illegible]

Address [illegible]

City [illegible] Dept./Floor/Suite/Room 4513

State NM ZIP [illegible]

Your Internal Billing Reference NAVAJO LOVINGTON

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

Date: 01/3
Name:
Company:

CUST SEAL
[illegible] 1630
[illegible]

Seal Broken By: RMS
Date: 1/31/12

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

Date 01/30/12 FedEx Tracking Number 875882545012

Sender's Name Sosa, Jerry Phone 575 397 0510

Company Safety & Environment Sol

Address 203 E. Clinton

City Hobbs Dept./Floor/Suite/Room 539

State NM ZIP 88240

Your Internal Billing Reference NAVAJO LOVINGTON

ALS Environmental
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Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Date: 01
Name:
Company:

CUSTODY SEAL
30/12 Time: 163
Signature

Seal Broken By: RMS
Date: 1/31/12

WO# 1201933

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e 01/30/12 FedEx Tracking Number 875882545034

der's ne Sosa, John Phone 575 397. 0510

Company Sapere & Environmental Sol

ddress 703 E Clinton 369 Dept./Floor/Suite/Room

Hobbs State NM ZIP 88240

r Internal Billing Reference WNOMD Navajo

Chris Bryson

From: Chris Bryson
Sent: Wednesday, February 01, 2012 10:38 AM
To: 'David Boyer'
Cc: carrie.hernandez@hollycorp.com; aaron.strange@hollycorp.com; robert.combs@hollyfrontier.com
Subject: 1201933 Navajo Lea Refinery Semi-Annual (WOA) REVISED (2/1/12)
Importance: High
Attachments: 1201933 Navajo Lea Refinery Semi-Annual WOA (REV).pdf; 1201933 COC.pdf

Dave,

Per your request, I have deleted the Anions (300) Nitrite (as N) analysis from the above Work Order/Project.

Attached, you will find the Revised WOA. The Total Estimated Cost has been corrected. If you have any questions, please let me know.

Thank you for all your help with this.

Have a good day!

How was your customer experience? Please send us your feedback.

Regards,

Chris Bryson

PROJECT MANAGER - ENVIRONMENTAL

ALS | Environmental

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Houston, Texas, USA 77099

PHONE: +1 281 530 5656
DIRECT: +1 281 575 2195
CELL: +1 281 900 8553
FAX: +1 281 530 5887
EMAIL: Chris.Bryson@ALSGlobal.com

www.alsglobal.com

Gspn ;!Ebwje!Cpzfs!\n bjmp;ehcpzfsA tft.jon /dpn ^!!
Tfou;!X feoftebz-!Gfcsvbsz!12-!3123!21;39!BN !
Up;!Disjt!Cszbo!
Dd;!kbssjf/ifsoboef{A ipnmzdpsq/dpn <!bbspo/tusbohfA ipnmzdpsq/dpn <!spcfsu/dpn ctA ipnmzgspoufs/dpn !
Tvckfdu;!SF;!2312:44!Obwbkp!Mfb!Sfgjofsz!Tfn j.Boovbm)Sfwjfe!X PB*!

Chris,
I didn't catch that nitrate was not on the COC. As the WQCC regulations do not require **nitrite**, please analyze for **nitrate** (NO3 as N) only.
I will add nitrate to future COC's.
Thanks for catching that.
Dave

David G. Boyer, P.G.

Hydrogeologist

Safety and Environmental Solutions, Inc.

P.O. Box 1613

703 E. Clinton

Hobbs, NM 88241

office: 575-397-0510

fax: 575-393-4388

cell: 575-390-7067

email: dgboyer@sesi-nm.com

Gspn ;!Disjt!Cszbo!\n bjmp;Disjt/CszbnA BMTHimpcbm/dpn ^!!
Tfou;!X feoftebz-!Gfcsvbsz!12-!3123!:;23!BN !
Up;!Ebwje!Cpzfs<!bbspo/tusbohfA ipnmzdpsq/dpn <!spcfsu/dpn ctA ipnmzgspoufs/dpn !

Dd;!dbssjf/ifsoboef{A ipnnzdpsq/dpn !
Tvckfdu;!SF;!2312:44!Obwbkp!Mfb!Sfgjpfsz!Tfn j.Boovbm)Sfwjfe!X PB*!
Jn qpsubodf;!Ijhi!

Good Morning David,
I will make sure to add Mr. Combs to your Contact List (for this particular Project).
Just to confirm, you are saying that you do want the Anions (300) Nitrate (as N) and Nitrite (as N) analysis added to this Work Order/Project. Correct?
Please Confirm Again
Thank you!

How was your customer experience? Please send us your feedback.

Regards,

Chris Bryson

PROJECT MANAGER - ENVIRONMENTAL

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EMAIL: Chris.Bryson@ALSGlobal.com

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Gspn ;!Ebwje!Cpzfs!\n bjmp;ehcpzfsA tftj.on /dpn ^!!
Tfou;!X feoftebz-!Gfcsvbsz!12-!3123!:;2:!BN !
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Dd;!dbssjf/ifsoboef{A ipnnzdpsq/dpn !
Tvckfdu;!SF;!2312:44!Obwbkp!Mfb!Sfgjpfsz!Tfn j.Boovbm)Sfwjfe!X PB*!

Chris,
The referenced revised analysis list is correct.
As per meeting with Navajo yesterday p.m., please add Robert Combs (robert.combs@hollyfrontier.com) to reporting list for this project.
Thank you,

David G. Boyer, P.G.

Hydrogeologist

Safety and Environmental Solutions, Inc.

P.O. Box 1613

703 E. Clinton

Hobbs, NM 88241

office: 575-397-0510

fax: 575-393-4388

cell: 575-390-7067

email: dgboyer@sesi-nm.com

Gspn ;!Disj!Csztpo!\n bjmp;Disj/CsztpoA BMTHmpcbm/dpn ^!!
Tfou;!Uvftebz-!Kbovbsz!42-!3123!4;5:!QN !
Up;!bbspo/tusbohfA ipnnzdpsq/dpn !
Dd;!ehcpzfsA TFTJ.on /dpn <!dbssjf/ifsoboef{A ipnnzdpsq/dpn !
Tvckfdu;!2312:44!Obwbkp!Mfb!Sfgjpfsz!Tfn j.Boovbm)Sfwjfe!X PB*!
Jn qpsubodf;!Ijhi!

Aaron,
Attached is the correct Revised WOA.
I apologie for any confusion.
Thank you.

How was your customer experience? Please send us your feedback.

Regards,

Chris Bryson

PROJECT MANAGER - ENVIRONMENTAL

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Gspn ;!Disj!Csztpo!!
Tfou;!Uvftebz-!Kbovbsz!42-!3123!5;58!QN!
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Dd;!ehcpzfsA TFTJ.on /dpn (<!dbssjf/ifsoboef{A ipnzdpsq/dpn (!
Tvckfdu;!2312:44!Obwbkp!Mfb!Sfgjofsz!Tfn j.Boovbm)X PB*!
Jn qpsubodf;!I jhi!

Good Evening Aaron,

Please see the attached file that contains the sample IDs, test assignment, and costs associated with the recent samples you submitted. Please let me know if you have any changes, otherwise we will proceed as shown. Modifications to the final report, after issue, may incur additional cost.

I noticed that the COC, we received, did not have Anions (300) Nitrate & Nitrite (as N) as a requested analysis. Based on previous Navajo Lea Refinery Semi-
Annual Projects, I added the analysis to this Work Order/Project. If you do not require this particular analysis, please let me know and I will remove

Please Confirm.
Also, Login made the Dissolved Metals analysis its "own" sample on this Work Order/Project. All of the samples receiving Dissolved Metals analysis have "(Dissolved)" at the
end of the Sample ID. Please see attached WOA.
Thank you!

Regards,

Chris Bryson

PROJECT MANAGER

ALS | Environmental

ADDRESS

10450 Stancliff Rd, Suite 210

Houston, Texas 77099-4338

Direct Phone #: 281-575-2195

(281) 530-5656

http://www.alsglobal.com

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13-Feb-2012

Aaron Strange
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: Navajo Lea Refinery Semi-Annual Work Order: **1202144**

Dear Aaron,

ALS Environmental received 15 samples on 03-Feb-2012 09:25 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental 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 Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 80.

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

Sincerely,

Chris Bryson

Electronically approved by: Mary K. Knowles

Chris Bryson
Project Manager

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 13-Feb-12

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: **1202144**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1202144-01	MW-6-0212	Water		2/2/2012 09:05	2/3/2012 09:25	☐
1202144-02	MW-6-0212 (Dissolved)	Water		2/2/2012 09:05	2/3/2012 09:25	☐
1202144-03	RW-1-0212	Water		2/2/2012 10:00	2/3/2012 09:25	☐
1202144-04	RW-1-0212 (Dissolved)	Water		2/2/2012 10:00	2/3/2012 09:25	☐
1202144-05	MW-7-0212	Water		2/2/2012 10:45	2/3/2012 09:25	☐
1202144-06	MW-7-0212 (Dissolved)	Water		2/2/2012 11:35	2/3/2012 09:25	☐
1202144-07	MW-1-0212	Water		2/2/2012 11:35	2/3/2012 09:25	☐
1202144-08	MW-1-0212 (Dissolved)	Water		2/2/2012 11:35	2/3/2012 09:25	☐
1202144-09	South Well-0212	Water		2/2/2012 12:05	2/3/2012 09:25	☐
1202144-10	South Well-0212 (Dissolved)	Water		2/2/2012 12:05	2/3/2012 09:25	☐
1202144-11	North Well-0212	Water		2/2/2012 12:18	2/3/2012 09:25	☐
1202144-12	North Well-0212 (Dissolved)	Water		2/2/2012 12:18	2/3/2012 09:25	☐
1202144-13	East Well-0212	Water		2/2/2012 12:40	2/3/2012 09:25	☐
1202144-14	East Well-0212 (Dissolved)	Water		2/2/2012 12:40	2/3/2012 09:25	☐
1202144-15	Trip Blank ID 121611-44	Water		2/2/2012	2/3/2012 09:25	☐

Client:	Navajo Refining Company
Project:	Navajo Lea Refinery Semi-Annual
Work Order:	1202144

Case Narrative

As the pH analyses were performed in the laboratory, the results are H-flagged as appropriate.

Batch 58711, Dissolved Metals, Sample 1202014-13 : MS/MSD is for an unrelated sample.

Batch 58695, Semivolatile Organics : LCSD RPD was above the control limits for Butyl benzyl phthalate. The individual recoveries were in control.

Batch 58695 : Insufficient sample to perform MS/MSD. LCS/LCSD performed as batch quality control.

Batch R123191, Volatile Organics, Sample 1202137-21 : MS/MSD is for an unrelated sample.

Batch R123221, Volatile Organics, Sample 1202275-07 : MS/MSD is for an unrelated sample.

Batch R123067, Anions, Sample East Well-0212 : MS/MSD recoveries were above the control limits for Sulfate due to concentration in the background sample. The associated LCS and MS/MSDRPD were within the control limits.

Client requested that only Nitrate (as N) be analyzed. However, upon arrival at ALS Laboratory, the sample containers (for Nitrate as N) were preserved with H2SO4. This analysis requires that the sample(s) be non-preserved. Due to all the samples being preserved, the requested analysis (for Nitrate as N) had to be changed to Anions (300) Nitrate/Nitrite (as N).

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: MW-6-0212
Lab ID: 1202144-01
Collection Date: 2/2/2012 09:05 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/8/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/8/2012 05:33 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/9/2012 02:53 AM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
2-Chlorophenol	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
2-Methylphenol	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
2-Nitroaniline	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
2-Nitrophenol	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
3-Nitroaniline	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
4-Bromophenylphenylether	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
4-Chloroaniline	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
4-Chlorophenylphenylether	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
4-Nitroaniline	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
4-Nitrophenol	ND		0.0010	mg/L	1	2/9/2012 02:53 AM
Acenaphthene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Acenaphthylene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Acetophenone	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Anthracene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Atrazine	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Benzaldehyde	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/9/2012 02:53 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: MW-6-0212
Lab ID: 1202144-01
Collection Date: 2/2/2012 09:05 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Bis(2-ethylhexyl)phthalate	**0.00079**		**0.00020**	**mg/L**	1	2/9/2012 02:53 AM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Caprolactam	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Carbazole	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Chrysene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Dibenzofuran	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Diethylphthalate	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Dimethylphthalate	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Di-n-butylphthalate	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Di-n-octylphthalate	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Fluoranthene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Fluorene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Hexachloroethane	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Isophorone	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Naphthalene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Nitrobenzene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Pentachlorophenol	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Phenanthrene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Phenol	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Pyrene	ND		0.00020	mg/L	1	2/9/2012 02:53 AM
Surr:2,4,6-Tribromophenol	*87.0*		*34-129*	*%REC*	1	2/9/2012 02:53 AM
Surr:2-Fluorobiphenyl	*58.9*		*40-125*	*%REC*	1	2/9/2012 02:53 AM
Surr:2-Fluorophenol	*49.8*		*20-120*	*%REC*	1	2/9/2012 02:53 AM
Surr: 4-Terphenyl-d14	*78.0*		*40-135*	*%REC*	1	2/9/2012 02:53 AM
Surr: Nitrobenzene-d5	*43.0*		*41-120*	*%REC*	1	2/9/2012 02:53 AM
Surr: Phenol-d6	*51.1*		*20-120*	*%REC*	1	2/9/2012 02:53 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/10/2012 05:08 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: MW-6-0212
Lab ID: 1202144-01
Collection Date: 2/2/2012 09:05 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
2-Butanone	ND		0.010	mg/L	1	2/10/2012 05:08 PM
2-Hexanone	ND		0.010	mg/L	1	2/10/2012 05:08 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/10/2012 05:08 PM
Acetone	ND		0.010	mg/L	1	2/10/2012 05:08 PM
Benzene	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
Bromodichloromethane	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
Bromoform	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
Bromomethane	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
Carbon disulfide	ND		0.010	mg/L	1	2/10/2012 05:08 PM
Carbontetrachloride	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
Chlorobenzene	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
Chloroethane	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
Chloroform	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
Chloromethane	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
Dibromochloromethane	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
Ethylbenzene	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
Isopropylbenzene	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
m,p-Xylene	ND		0.010	mg/L	1	2/10/2012 05:08 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
Methylenechloride	ND		0.010	mg/L	1	2/10/2012 05:08 PM
Naphthalene	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
n-Butylbenzene	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
n-Propylbenzene	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
o-Xylene	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
Styrene	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
Tetrachloroethene	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
Toluene	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/10/2012 05:08 PM
Trichloroethene	ND		0.0050	mg/L	1	2/10/2012 05:08 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: MW-6-0212
Lab ID: 1202144-01
Collection Date: 2/2/2012 09:05 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/10/2012 05:08 PM
Xylenes, Total	ND		0.015	mg/L	1	2/10/2012 05:08 PM
Surr: 1,2-Dichloroethane-d4	*102*		*70-125*	*%REC*	1	2/10/2012 05:08 PM
Surr: 4-Bromofluorobenzene	*91.5*		*72-125*	*%REC*	1	2/10/2012 05:08 PM
Surr: Dibromofluoromethane	*102*		*71-125*	*%REC*	1	2/10/2012 05:08 PM
Surr: Toluene-d8	*104*		*75-125*	*%REC*	1	2/10/2012 05:08 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**58.4**		**0.500**	**mg/L**	1	2/8/2012 06:33 PM
Fluoride	**0.313**		**0.100**	**mg/L**	1	2/8/2012 06:33 PM
Sulfate	**88.0**		**0.500**	**mg/L**	1	2/8/2012 06:33 PM
Nitrate/Nitrite (as N)	ND		1.00	mg/L	5	2/8/2012 07:16 PM
Surr: Selenate (surr)	*110*		*85-115*	*%REC*	1	2/8/2012 06:33 PM
Surr: Selenate (surr)	*96.8*		*85-115*	*%REC*	5	2/8/2012 07:16 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**218**		**5.00**	**mg/L**	1	2/8/2012 11:07 AM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/8/2012 11:07 AM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/8/2012 11:07 AM
Alkalinity, Total (As CaCO3)	**218**		**5.00**	**mg/L**	1	2/8/2012 11:07 AM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**671**		**1.00**	**µmhos/cm**	1	2/8/2012 12:30 PM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**6.69**	H	**0.100**	**pH units**	1	2/3/2012 06:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**398**		**10.0**	**mg/L**	1	2/7/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Sample ID: MW-6-0212 (Dissolved)
Collection Date: 2/2/2012 09:05 AM

Work Order: 1202144
Lab ID: 1202144-02
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	ND		0.0100	mg/L	1	2/7/2012 03:53 AM
Arsenic	ND		0.00500	mg/L	1	2/7/2012 03:53 AM
Barium	**0.0827**		**0.00500**	**mg/L**	1	2/7/2012 03:53 AM
Boron	**0.190**		**0.0200**	**mg/L**	1	2/9/2012 02:46 AM
Cadmium	ND		0.00200	mg/L	1	2/7/2012 03:53 AM
Calcium	**70.0**		**0.500**	**mg/L**	1	2/7/2012 03:53 AM
Chromium	ND		0.00500	mg/L	1	2/7/2012 03:53 AM
Cobalt	ND		0.00500	mg/L	1	2/7/2012 03:53 AM
Copper	ND		0.00500	mg/L	1	2/7/2012 03:53 AM
Iron	**0.488**		**0.200**	**mg/L**	1	2/7/2012 03:53 AM
Lead	ND		0.00500	mg/L	1	2/7/2012 03:53 AM
Magnesium	**8.93**		**0.200**	**mg/L**	1	2/7/2012 03:53 AM
Manganese	**1.25**		**0.00500**	**mg/L**	1	2/7/2012 03:53 AM
Molybdenum	ND		0.00500	mg/L	1	2/7/2012 03:53 AM
Nickel	ND		0.00500	mg/L	1	2/7/2012 03:53 AM
Potassium	**1.90**		**0.200**	**mg/L**	1	2/7/2012 03:53 AM
Selenium	ND		0.00500	mg/L	1	2/7/2012 03:53 AM
Silver	ND		0.00500	mg/L	1	2/7/2012 03:53 AM
Sodium	**39.1**		**0.200**	**mg/L**	1	2/7/2012 03:53 AM
Uranium	**0.00599**		**0.00500**	**mg/L**	1	2/7/2012 09:46 PM
Zinc	**0.00858**		**0.00500**	**mg/L**	1	2/7/2012 03:53 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: RW-1-0212
Lab ID: 1202144-03
Collection Date: 2/2/2012 10:00 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/8/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/8/2012 05:35 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/9/2012 03:12 AM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
2-Chlorophenol	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
2-Methylphenol	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
2-Nitroaniline	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
2-Nitrophenol	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
3-Nitroaniline	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
4-Bromophenylphenylether	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
4-Chloroaniline	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
4-Chlorophenylphenylether	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
4-Nitroaniline	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
4-Nitrophenol	ND		0.0010	mg/L	1	2/9/2012 03:12 AM
Acenaphthene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Acenaphthylene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Acetophenone	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Anthracene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Atrazine	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Benzaldehyde	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/9/2012 03:12 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 1202144
Sample ID: RW-1-0212 **Lab ID:** 1202144-03
Collection Date: 2/2/2012 10:00 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Bis(2-ethylhexyl)phthalate	**0.00099**		**0.00020**	**mg/L**	1	2/9/2012 03:12 AM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Caprolactam	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Carbazole	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Chrysene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Dibenzofuran	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Diethylphthalate	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Dimethylphthalate	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Di-n-butylphthalate	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Di-n-octylphthalate	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Fluoranthene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Fluorene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Hexachloroethane	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Isophorone	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Naphthalene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Nitrobenzene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Pentachlorophenol	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Phenanthrene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Phenol	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Pyrene	ND		0.00020	mg/L	1	2/9/2012 03:12 AM
Surr:2,4,6-Tribromophenol	*79.5*		*34-129*	*%REC*	1	2/9/2012 03:12 AM
Surr:2-Fluorobiphenyl	*60.0*		*40-125*	*%REC*	1	2/9/2012 03:12 AM
Surr:2-Fluorophenol	*49.1*		*20-120*	*%REC*	1	2/9/2012 03:12 AM
Surr: 4-Terphenyl-d14	*75.5*		*40-135*	*%REC*	1	2/9/2012 03:12 AM
Surr: Nitrobenzene-d5	*53.3*		*41-120*	*%REC*	1	2/9/2012 03:12 AM
Surr: Phenol-d6	*49.3*		*20-120*	*%REC*	1	2/9/2012 03:12 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/10/2012 08:12 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: RW-1-0212
Lab ID: 1202144-03
Collection Date: 2/2/2012 10:00 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
2-Butanone	ND		0.010	mg/L	1	2/10/2012 08:12 PM
2-Hexanone	ND		0.010	mg/L	1	2/10/2012 08:12 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/10/2012 08:12 PM
Acetone	ND		0.010	mg/L	1	2/10/2012 08:12 PM
Benzene	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
Bromodichloromethane	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
Bromoform	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
Bromomethane	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
Carbon disulfide	ND		0.010	mg/L	1	2/10/2012 08:12 PM
Carbontetrachloride	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
Chlorobenzene	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
Chloroethane	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
Chloroform	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
Chloromethane	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
Dibromochloromethane	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
Ethylbenzene	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
Isopropylbenzene	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
m,p-Xylene	ND		0.010	mg/L	1	2/10/2012 08:12 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
Methylenechloride	ND		0.010	mg/L	1	2/10/2012 08:12 PM
Naphthalene	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
n-Butylbenzene	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
n-Propylbenzene	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
o-Xylene	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
Styrene	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
Tetrachloroethene	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
Toluene	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/10/2012 08:12 PM
Trichloroethene	ND		0.0050	mg/L	1	2/10/2012 08:12 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: RW-1-0212
Lab ID: 1202144-03
Collection Date: 2/2/2012 10:00 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/10/2012 08:12 PM
Xylenes, Total	ND		0.015	mg/L	1	2/10/2012 08:12 PM
Surr: 1,2-Dichloroethane-d4	*101*		*70-125*	*%REC*	1	2/10/2012 08:12 PM
Surr: 4-Bromofluorobenzene	*92.9*		*72-125*	*%REC*	1	2/10/2012 08:12 PM
Surr: Dibromofluoromethane	*102*		*71-125*	*%REC*	1	2/10/2012 08:12 PM
Surr: Toluene-d8	*103*		*75-125*	*%REC*	1	2/10/2012 08:12 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**29.6**		**0.500**	**mg/L**	1	2/8/2012 06:54 PM
Fluoride	**1.11**		**0.100**	**mg/L**	1	2/8/2012 06:54 PM
Sulfate	**79.9**		**0.500**	**mg/L**	1	2/8/2012 06:54 PM
Nitrate/Nitrite (as N)	**1.44**		**1.00**	**mg/L**	5	2/8/2012 07:37 PM
Surr: Selenate (surr)	*105*		*85-115*	*%REC*	1	2/8/2012 06:54 PM
Surr: Selenate (surr)	*97.7*		*85-115*	*%REC*	5	2/8/2012 07:37 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**183**		**5.00**	**mg/L**	1	2/8/2012 11:07 AM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/8/2012 11:07 AM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/8/2012 11:07 AM
Alkalinity, Total (As CaCO3)	**183**		**5.00**	**mg/L**	1	2/8/2012 11:07 AM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**566**		**1.00**	**µmhos/cm**	1	2/8/2012 12:30 PM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**6.93**	H	**0.100**	**pH units**	1	2/3/2012 06:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**384**		**10.0**	**mg/L**	1	2/7/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Sample ID: RW-1-0212 (Dissolved)
Collection Date: 2/2/2012 10:00 AM

Work Order: 1202144
Lab ID: 1202144-04
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	ND		0.0100	mg/L	1	2/7/2012 04:13 AM
Arsenic	**0.0106**		**0.00500**	**mg/L**	1	2/7/2012 04:13 AM
Barium	**0.139**		**0.00500**	**mg/L**	1	2/7/2012 04:13 AM
Boron	**0.165**		**0.0200**	**mg/L**	1	2/9/2012 02:52 AM
Cadmium	ND		0.00200	mg/L	1	2/7/2012 04:13 AM
Calcium	**52.8**		**0.500**	**mg/L**	1	2/7/2012 04:13 AM
Chromium	ND		0.00500	mg/L	1	2/7/2012 04:13 AM
Cobalt	ND		0.00500	mg/L	1	2/7/2012 04:13 AM
Copper	ND		0.00500	mg/L	1	2/7/2012 04:13 AM
Iron	ND		0.200	mg/L	1	2/7/2012 04:13 AM
Lead	ND		0.00500	mg/L	1	2/7/2012 04:13 AM
Magnesium	**6.04**		**0.200**	**mg/L**	1	2/7/2012 04:13 AM
Manganese	**0.00771**		**0.00500**	**mg/L**	1	2/7/2012 04:13 AM
Molybdenum	ND		0.00500	mg/L	1	2/7/2012 04:13 AM
Nickel	ND		0.00500	mg/L	1	2/7/2012 04:13 AM
Potassium	**1.99**		**0.200**	**mg/L**	1	2/7/2012 04:13 AM
Selenium	ND		0.00500	mg/L	1	2/7/2012 04:13 AM
Silver	ND		0.00500	mg/L	1	2/7/2012 04:13 AM
Sodium	**42.6**		**0.200**	**mg/L**	1	2/7/2012 04:13 AM
Uranium	ND		0.00500	mg/L	1	2/7/2012 10:07 PM
Zinc	**0.00526**		**0.00500**	**mg/L**	1	2/7/2012 04:13 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: MW-7-0212
Lab ID: 1202144-05
Collection Date: 2/2/2012 10:45 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/8/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/8/2012 05:37 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/9/2012 03:30 AM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
2-Chlorophenol	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
2-Methylphenol	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
2-Nitroaniline	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
2-Nitrophenol	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
3-Nitroaniline	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
4-Bromophenylphenylether	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
4-Chloroaniline	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
4-Chlorophenylphenylether	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
4-Nitroaniline	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
4-Nitrophenol	ND		0.0010	mg/L	1	2/9/2012 03:30 AM
Acenaphthene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Acenaphthylene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Acetophenone	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Anthracene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Atrazine	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Benzaldehyde	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/9/2012 03:30 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: MW-7-0212
Lab ID: 1202144-05
Collection Date: 2/2/2012 10:45 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Bis(2-ethylhexyl)phthalate	**0.0012**		**0.00020**	**mg/L**	1	2/9/2012 03:30 AM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Caprolactam	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Carbazole	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Chrysene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Dibenzofuran	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Diethylphthalate	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Dimethylphthalate	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Di-n-butylphthalate	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Di-n-octylphthalate	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Fluoranthene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Fluorene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Hexachloroethane	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Isophorone	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Naphthalene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Nitrobenzene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Pentachlorophenol	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Phenanthrene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Phenol	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Pyrene	ND		0.00020	mg/L	1	2/9/2012 03:30 AM
Surr:2,4,6-Tribromophenol	*75.3*		*34-129*	*%REC*	1	2/9/2012 03:30 AM
Surr:2-Fluorobiphenyl	*59.1*		*40-125*	*%REC*	1	2/9/2012 03:30 AM
Surr:2-Fluorophenol	*54.2*		*20-120*	*%REC*	1	2/9/2012 03:30 AM
Surr: 4-Terphenyl-d14	*72.8*		*40-135*	*%REC*	1	2/9/2012 03:30 AM
Surr: Nitrobenzene-d5	*43.5*		*41-120*	*%REC*	1	2/9/2012 03:30 AM
Surr: Phenol-d6	*54.5*		*20-120*	*%REC*	1	2/9/2012 03:30 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/10/2012 07:19 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: MW-7-0212
Lab ID: 1202144-05
Collection Date: 2/2/2012 10:45 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
2-Butanone	ND		0.010	mg/L	1	2/10/2012 07:19 PM
2-Hexanone	ND		0.010	mg/L	1	2/10/2012 07:19 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/10/2012 07:19 PM
Acetone	ND		0.010	mg/L	1	2/10/2012 07:19 PM
Benzene	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
Bromodichloromethane	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
Bromoform	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
Bromomethane	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
Carbon disulfide	ND		0.010	mg/L	1	2/10/2012 07:19 PM
Carbontetrachloride	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
Chlorobenzene	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
Chloroethane	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
Chloroform	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
Chloromethane	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
Dibromochloromethane	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
Ethylbenzene	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
Isopropylbenzene	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
m,p-Xylene	ND		0.010	mg/L	1	2/10/2012 07:19 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
Methylenechloride	ND		0.010	mg/L	1	2/10/2012 07:19 PM
Naphthalene	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
n-Butylbenzene	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
n-Propylbenzene	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
o-Xylene	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
Styrene	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
Tetrachloroethene	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
Toluene	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/10/2012 07:19 PM
Trichloroethene	ND		0.0050	mg/L	1	2/10/2012 07:19 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 1202144
Sample ID: MW-7-0212 **Lab ID:** 1202144-05
Collection Date: 2/2/2012 10:45 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/10/2012 07:19 PM
Xylenes, Total	ND		0.015	mg/L	1	2/10/2012 07:19 PM
Surr: 1,2-Dichloroethane-d4	*100*		*70-125*	*%REC*	1	2/10/2012 07:19 PM
Surr: 4-Bromofluorobenzene	*93.5*		*72-125*	*%REC*	1	2/10/2012 07:19 PM
Surr: Dibromofluoromethane	*98.2*		*71-125*	*%REC*	1	2/10/2012 07:19 PM
Surr: Toluene-d8	*104*		*75-125*	*%REC*	1	2/10/2012 07:19 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**25.5**		**0.500**	**mg/L**	1	2/8/2012 07:15 PM
Fluoride	**0.633**		**0.100**	**mg/L**	1	2/8/2012 07:15 PM
Sulfate	**61.5**		**0.500**	**mg/L**	1	2/8/2012 07:15 PM
Nitrate/Nitrite (as N)	**1.66**		**1.00**	**mg/L**	5	2/8/2012 07:59 PM
Surr: Selenate (surr)	*107*		*85-115*	*%REC*	1	2/8/2012 07:15 PM
Surr: Selenate (surr)	*97.2*		*85-115*	*%REC*	5	2/8/2012 07:59 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**198**		**5.00**	**mg/L**	1	2/8/2012 11:07 AM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/8/2012 11:07 AM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/8/2012 11:07 AM
Alkalinity, Total (As CaCO3)	**198**		**5.00**	**mg/L**	1	2/8/2012 11:07 AM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**551**		**1.00**	**µmhos/cm**	1	2/8/2012 12:30 PM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**6.85**	H	**0.100**	**pH units**	1	2/3/2012 06:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**356**		**10.0**	**mg/L**	1	2/7/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Sample ID: MW-7-0212 (Dissolved)
Collection Date: 2/2/2012 11:35 AM

Work Order: 1202144
Lab ID: 1202144-06
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	ND		0.0100	mg/L	1	2/7/2012 04:20 AM
Arsenic	ND		0.00500	mg/L	1	2/7/2012 04:20 AM
Barium	**0.229**		**0.00500**	**mg/L**	1	2/7/2012 04:20 AM
Boron	**0.166**		**0.0200**	**mg/L**	1	2/9/2012 02:59 AM
Cadmium	ND		0.00200	mg/L	1	2/7/2012 04:20 AM
Calcium	**56.6**		**0.500**	**mg/L**	1	2/7/2012 04:20 AM
Chromium	ND		0.00500	mg/L	1	2/7/2012 04:20 AM
Cobalt	ND		0.00500	mg/L	1	2/7/2012 04:20 AM
Copper	ND		0.00500	mg/L	1	2/7/2012 04:20 AM
Iron	ND		0.200	mg/L	1	2/7/2012 04:20 AM
Lead	ND		0.00500	mg/L	1	2/7/2012 04:20 AM
Magnesium	**6.12**		**0.200**	**mg/L**	1	2/7/2012 04:20 AM
Manganese	**0.550**		**0.00500**	**mg/L**	1	2/7/2012 04:20 AM
Molybdenum	ND		0.00500	mg/L	1	2/7/2012 04:20 AM
Nickel	ND		0.00500	mg/L	1	2/7/2012 04:20 AM
Potassium	**2.20**		**0.200**	**mg/L**	1	2/7/2012 04:20 AM
Selenium	ND		0.00500	mg/L	1	2/7/2012 04:20 AM
Silver	ND		0.00500	mg/L	1	2/7/2012 04:20 AM
Sodium	**34.6**		**0.200**	**mg/L**	1	2/7/2012 04:20 AM
Uranium	ND		0.00500	mg/L	1	2/7/2012 10:14 PM
Zinc	**0.00746**		**0.00500**	**mg/L**	1	2/7/2012 04:20 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: MW-1-0212
Lab ID: 1202144-07
Collection Date: 2/2/2012 11:35 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/8/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/8/2012 05:43 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/9/2012 03:49 AM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
2-Chlorophenol	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
2-Methylphenol	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
2-Nitroaniline	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
2-Nitrophenol	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
3-Nitroaniline	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
4-Bromophenylphenylether	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
4-Chloroaniline	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
4-Chlorophenylphenylether	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
4-Nitroaniline	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
4-Nitrophenol	ND		0.0010	mg/L	1	2/9/2012 03:49 AM
Acenaphthene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Acenaphthylene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Acetophenone	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Anthracene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Atrazine	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Benzaldehyde	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/9/2012 03:49 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: MW-1-0212
Lab ID: 1202144-07
Collection Date: 2/2/2012 11:35 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Bis(2-ethylhexyl)phthalate	**0.00097**		**0.00020**	**mg/L**	1	2/9/2012 03:49 AM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Caprolactam	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Carbazole	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Chrysene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Dibenzofuran	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Diethylphthalate	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Dimethylphthalate	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Di-n-butylphthalate	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Di-n-octylphthalate	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Fluoranthene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Fluorene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Hexachloroethane	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Isophorone	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Naphthalene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Nitrobenzene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Pentachlorophenol	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Phenanthrene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Phenol	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Pyrene	ND		0.00020	mg/L	1	2/9/2012 03:49 AM
Surr:2,4,6-Tribromophenol	*76.4*		*34-129*	*%REC*	1	2/9/2012 03:49 AM
Surr:2-Fluorobiphenyl	*67.2*		*40-125*	*%REC*	1	2/9/2012 03:49 AM
Surr:2-Fluorophenol	*53.5*		*20-120*	*%REC*	1	2/9/2012 03:49 AM
Surr: 4-Terphenyl-d14	*74.4*		*40-135*	*%REC*	1	2/9/2012 03:49 AM
Surr: Nitrobenzene-d5	*44.6*		*41-120*	*%REC*	1	2/9/2012 03:49 AM
Surr: Phenol-d6	*52.2*		*20-120*	*%REC*	1	2/9/2012 03:49 AM
VOLATILES			**SW8260**			Analyst: **AKP**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/11/2012 10:54 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: MW-1-0212
Lab ID: 1202144-07
Collection Date: 2/2/2012 11:35 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
2-Butanone	ND		0.010	mg/L	1	2/11/2012 10:54 AM
2-Hexanone	ND		0.010	mg/L	1	2/11/2012 10:54 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/11/2012 10:54 AM
Acetone	ND		0.010	mg/L	1	2/11/2012 10:54 AM
Benzene	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
Bromodichloromethane	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
Bromoform	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
Bromomethane	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
Carbon disulfide	ND		0.010	mg/L	1	2/11/2012 10:54 AM
Carbontetrachloride	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
Chlorobenzene	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
Chloroethane	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
Chloroform	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
Chloromethane	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
Dibromochloromethane	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
Ethylbenzene	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
Isopropylbenzene	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
m,p-Xylene	ND		0.010	mg/L	1	2/11/2012 10:54 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
Methylenechloride	ND		0.010	mg/L	1	2/11/2012 10:54 AM
Naphthalene	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
n-Butylbenzene	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
n-Propylbenzene	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
o-Xylene	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
Styrene	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
Tetrachloroethene	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
Toluene	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/11/2012 10:54 AM
Trichloroethene	ND		0.0050	mg/L	1	2/11/2012 10:54 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: MW-1-0212
Lab ID: 1202144-07
Collection Date: 2/2/2012 11:35 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/11/2012 10:54 AM
Xylenes, Total	ND		0.015	mg/L	1	2/11/2012 10:54 AM
Surr: 1,2-Dichloroethane-d4	*108*		*70-125*	*%REC*	1	2/11/2012 10:54 AM
Surr: 4-Bromofluorobenzene	*101*		*72-125*	*%REC*	1	2/11/2012 10:54 AM
Surr: Dibromofluoromethane	*103*		*71-125*	*%REC*	1	2/11/2012 10:54 AM
Surr: Toluene-d8	*103*		*75-125*	*%REC*	1	2/11/2012 10:54 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**29.9**		**0.500**	**mg/L**	1	2/8/2012 07:36 PM
Fluoride	**0.773**		**0.100**	**mg/L**	1	2/8/2012 07:36 PM
Sulfate	**65.4**		**0.500**	**mg/L**	1	2/8/2012 07:36 PM
Nitrate/Nitrite (as N)	ND		1.00	mg/L	5	2/8/2012 08:21 PM
Surr: Selenate (surr)	*105*		*85-115*	*%REC*	1	2/8/2012 07:36 PM
Surr: Selenate (surr)	*97.6*		*85-115*	*%REC*	5	2/8/2012 08:21 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**219**		**5.00**	**mg/L**	1	2/8/2012 11:07 AM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/8/2012 11:07 AM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/8/2012 11:07 AM
Alkalinity, Total (As CaCO3)	**219**		**5.00**	**mg/L**	1	2/8/2012 11:07 AM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**593**		**1.00**	**µmhos/cm**	1	2/8/2012 12:30 PM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**6.74**	H	**0.100**	**pH units**	1	2/3/2012 06:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**392**		**10.0**	**mg/L**	1	2/7/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: MW-1-0212 (Dissolved)
Lab ID: 1202144-08
Collection Date: 2/2/2012 11:35 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	ND		0.0100	mg/L	1	2/7/2012 04:27 AM
Arsenic	**0.00782**		**0.00500**	**mg/L**	1	2/7/2012 04:27 AM
Barium	**0.0843**		**0.00500**	**mg/L**	1	2/7/2012 04:27 AM
Boron	**0.164**		**0.0200**	**mg/L**	1	2/9/2012 03:06 AM
Cadmium	ND		0.00200	mg/L	1	2/7/2012 04:27 AM
Calcium	**65.9**		**0.500**	**mg/L**	1	2/7/2012 04:27 AM
Chromium	ND		0.00500	mg/L	1	2/7/2012 04:27 AM
Cobalt	ND		0.00500	mg/L	1	2/7/2012 04:27 AM
Copper	ND		0.00500	mg/L	1	2/7/2012 04:27 AM
Iron	ND		0.200	mg/L	1	2/7/2012 04:27 AM
Lead	ND		0.00500	mg/L	1	2/7/2012 04:27 AM
Magnesium	**7.58**		**0.200**	**mg/L**	1	2/7/2012 04:27 AM
Manganese	**0.780**		**0.00500**	**mg/L**	1	2/7/2012 04:27 AM
Molybdenum	ND		0.00500	mg/L	1	2/7/2012 04:27 AM
Nickel	ND		0.00500	mg/L	1	2/7/2012 04:27 AM
Potassium	**0.858**		**0.200**	**mg/L**	1	2/7/2012 04:27 AM
Selenium	ND		0.00500	mg/L	1	2/7/2012 04:27 AM
Silver	ND		0.00500	mg/L	1	2/7/2012 04:27 AM
Sodium	**31.4**		**0.200**	**mg/L**	1	2/7/2012 04:27 AM
Uranium	ND		0.00500	mg/L	1	2/7/2012 10:20 PM
Zinc	**0.00766**		**0.00500**	**mg/L**	1	2/7/2012 04:27 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: South Well-0212
Lab ID: 1202144-09
Collection Date: 2/2/2012 12:05 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/8/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/8/2012 05:45 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/9/2012 04:58 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
4-Bromophenylphenylether	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
4-Chlorophenylphenylether	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/9/2012 04:58 PM
Acenaphthene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Acetophenone	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Anthracene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Atrazine	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/9/2012 04:58 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: South Well-0212
Lab ID: 1202144-09
Collection Date: 2/2/2012 12:05 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Bis(2-ethylhexyl)phthalate	**0.00044**		**0.00020**	**mg/L**	1	2/9/2012 04:58 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Caprolactam	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Carbazole	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Chrysene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Dibenzofuran	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Diethylphthalate	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Dimethylphthalate	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Di-n-butylphthalate	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Di-n-octylphthalate	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Fluoranthene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Fluorene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Isophorone	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Naphthalene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Phenanthrene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Phenol	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Pyrene	ND		0.00020	mg/L	1	2/9/2012 04:58 PM
Surr:2,4,6-Tribromophenol	*56.7*		*34-129*	*%REC*	1	2/9/2012 04:58 PM
Surr:2-Fluorobiphenyl	*58.9*		*40-125*	*%REC*	1	2/9/2012 04:58 PM
Surr:2-Fluorophenol	*54.6*		*20-120*	*%REC*	1	2/9/2012 04:58 PM
Surr: 4-Terphenyl-d14	*77.7*		*40-135*	*%REC*	1	2/9/2012 04:58 PM
Surr: Nitrobenzene-d5	*62.3*		*41-120*	*%REC*	1	2/9/2012 04:58 PM
Surr: Phenol-d6	*54.8*		*20-120*	*%REC*	1	2/9/2012 04:58 PM
VOLATILES			**SW8260**			Analyst: **AKP**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/11/2012 11:19 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: South Well-0212
Lab ID: 1202144-09
Collection Date: 2/2/2012 12:05 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
2-Butanone	ND		0.010	mg/L	1	2/11/2012 11:19 AM
2-Hexanone	ND		0.010	mg/L	1	2/11/2012 11:19 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/11/2012 11:19 AM
Acetone	ND		0.010	mg/L	1	2/11/2012 11:19 AM
Benzene	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
Bromodichloromethane	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
Bromoform	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
Bromomethane	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
Carbon disulfide	ND		0.010	mg/L	1	2/11/2012 11:19 AM
Carbontetrachloride	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
Chlorobenzene	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
Chloroethane	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
Chloroform	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
Chloromethane	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
Dibromochloromethane	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
Ethylbenzene	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
Isopropylbenzene	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
m,p-Xylene	ND		0.010	mg/L	1	2/11/2012 11:19 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
Methylenechloride	ND		0.010	mg/L	1	2/11/2012 11:19 AM
Naphthalene	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
n-Butylbenzene	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
n-Propylbenzene	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
o-Xylene	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
Styrene	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
Tetrachloroethene	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
Toluene	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/11/2012 11:19 AM
Trichloroethene	ND		0.0050	mg/L	1	2/11/2012 11:19 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: South Well-0212
Lab ID: 1202144-09
Collection Date: 2/2/2012 12:05 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/11/2012 11:19 AM
Xylenes, Total	ND		0.015	mg/L	1	2/11/2012 11:19 AM
Surr: 1,2-Dichloroethane-d4	*108*		*70-125*	*%REC*	1	2/11/2012 11:19 AM
Surr: 4-Bromofluorobenzene	*99.8*		*72-125*	*%REC*	1	2/11/2012 11:19 AM
Surr: Dibromofluoromethane	*102*		*71-125*	*%REC*	1	2/11/2012 11:19 AM
Surr: Toluene-d8	*103*		*75-125*	*%REC*	1	2/11/2012 11:19 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**368**		**5.00**	**mg/L**	10	2/9/2012 12:42 AM
Fluoride	**0.756**		**0.100**	**mg/L**	1	2/8/2012 07:58 PM
Sulfate	**89.0**		**5.00**	**mg/L**	10	2/9/2012 12:42 AM
Nitrate/Nitrite (as N)	**3.02**		**1.00**	**mg/L**	5	2/8/2012 08:42 PM
Surr: Selenate (surr)	*107*		*85-115*	*%REC*	1	2/8/2012 07:58 PM
Surr: Selenate (surr)	*97.3*		*85-115*	*%REC*	5	2/8/2012 08:42 PM
Surr: Selenate (surr)	*102*		*85-115*	*%REC*	10	2/9/2012 12:42 AM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**187**		**5.00**	**mg/L**	1	2/8/2012 11:07 AM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/8/2012 11:07 AM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/8/2012 11:07 AM
Alkalinity, Total (As CaCO3)	**187**		**5.00**	**mg/L**	1	2/8/2012 11:07 AM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**1,600**		**1.00**	**µmhos/cm**	1	2/8/2012 12:30 PM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**7.02**	H	**0.100**	**pH units**	1	2/3/2012 06:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**1,210**		**10.0**	**mg/L**	1	2/7/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Sample ID: South Well-0212 (Dissolved)
Collection Date: 2/2/2012 12:05 PM

Work Order: 1202144
Lab ID: 1202144-10
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	ND		0.0100	mg/L	1	2/7/2012 04:33 AM
Arsenic	ND		0.00500	mg/L	1	2/7/2012 04:33 AM
Barium	**0.117**		**0.00500**	**mg/L**	1	2/7/2012 04:33 AM
Boron	**0.165**		**0.0200**	**mg/L**	1	2/9/2012 03:13 AM
Cadmium	ND		0.00200	mg/L	1	2/7/2012 04:33 AM
Calcium	**129**		**0.500**	**mg/L**	1	2/7/2012 04:33 AM
Chromium	ND		0.00500	mg/L	1	2/7/2012 04:33 AM
Cobalt	ND		0.00500	mg/L	1	2/7/2012 04:33 AM
Copper	ND		0.00500	mg/L	1	2/7/2012 04:33 AM
Iron	ND		0.200	mg/L	1	2/7/2012 04:33 AM
Lead	ND		0.00500	mg/L	1	2/7/2012 04:33 AM
Magnesium	**15.9**		**0.200**	**mg/L**	1	2/7/2012 04:33 AM
Manganese	ND		0.00500	mg/L	1	2/7/2012 04:33 AM
Molybdenum	ND		0.00500	mg/L	1	2/7/2012 04:33 AM
Nickel	ND		0.00500	mg/L	1	2/7/2012 04:33 AM
Potassium	**2.51**		**0.200**	**mg/L**	1	2/7/2012 04:33 AM
Selenium	ND		0.00500	mg/L	1	2/7/2012 04:33 AM
Silver	ND		0.00500	mg/L	1	2/7/2012 04:33 AM
Sodium	**89.4**		**0.200**	**mg/L**	1	2/7/2012 04:33 AM
Uranium	ND		0.00500	mg/L	1	2/7/2012 10:27 PM
Zinc	**0.00777**		**0.00500**	**mg/L**	1	2/7/2012 04:33 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: North Well-0212
Lab ID: 1202144-11
Collection Date: 2/2/2012 12:18 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/8/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/8/2012 05:47 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/9/2012 05:18 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
4-Bromophenylphenylether	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
4-Chlorophenylphenylether	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/9/2012 05:18 PM
Acenaphthene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Acetophenone	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Anthracene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Atrazine	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/9/2012 05:18 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 1202144
Sample ID: North Well-0212 **Lab ID:** 1202144-11
Collection Date: 2/2/2012 12:18 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Bis(2-ethylhexyl)phthalate	**0.00063**		**0.00020**	**mg/L**	1	2/9/2012 05:18 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Caprolactam	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Carbazole	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Chrysene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Dibenzofuran	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Diethylphthalate	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Dimethylphthalate	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Di-n-butylphthalate	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Di-n-octylphthalate	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Fluoranthene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Fluorene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Isophorone	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Naphthalene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Phenanthrene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Phenol	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Pyrene	ND		0.00020	mg/L	1	2/9/2012 05:18 PM
Surr:2,4,6-Tribromophenol	*61.8*		*34-129*	*%REC*	1	2/9/2012 05:18 PM
Surr:2-Fluorobiphenyl	*54.8*		*40-125*	*%REC*	1	2/9/2012 05:18 PM
Surr:2-Fluorophenol	*50.6*		*20-120*	*%REC*	1	2/9/2012 05:18 PM
Surr: 4-Terphenyl-d14	*77.0*		*40-135*	*%REC*	1	2/9/2012 05:18 PM
Surr: Nitrobenzene-d5	*51.8*		*41-120*	*%REC*	1	2/9/2012 05:18 PM
Surr: Phenol-d6	*53.6*		*20-120*	*%REC*	1	2/9/2012 05:18 PM
VOLATILES			**SW8260**			Analyst: **AKP**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/11/2012 11:43 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: North Well-0212
Lab ID: 1202144-11
Collection Date: 2/2/2012 12:18 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
2-Butanone	ND		0.010	mg/L	1	2/11/2012 11:43 AM
2-Hexanone	ND		0.010	mg/L	1	2/11/2012 11:43 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/11/2012 11:43 AM
Acetone	ND		0.010	mg/L	1	2/11/2012 11:43 AM
Benzene	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
Bromodichloromethane	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
Bromoform	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
Bromomethane	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
Carbon disulfide	ND		0.010	mg/L	1	2/11/2012 11:43 AM
Carbontetrachloride	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
Chlorobenzene	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
Chloroethane	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
Chloroform	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
Chloromethane	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
Dibromochloromethane	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
Ethylbenzene	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
Isopropylbenzene	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
m,p-Xylene	ND		0.010	mg/L	1	2/11/2012 11:43 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
Methylenechloride	ND		0.010	mg/L	1	2/11/2012 11:43 AM
Naphthalene	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
n-Butylbenzene	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
n-Propylbenzene	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
o-Xylene	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
Styrene	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
Tetrachloroethene	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
Toluene	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/11/2012 11:43 AM
Trichloroethene	ND		0.0050	mg/L	1	2/11/2012 11:43 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: North Well-0212
Lab ID: 1202144-11
Collection Date: 2/2/2012 12:18 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/11/2012 11:43 AM
Xylenes, Total	ND		0.015	mg/L	1	2/11/2012 11:43 AM
Surr: 1,2-Dichloroethane-d4	*107*		*70-125*	*%REC*	1	2/11/2012 11:43 AM
Surr: 4-Bromofluorobenzene	*99.5*		*72-125*	*%REC*	1	2/11/2012 11:43 AM
Surr: Dibromofluoromethane	*99.7*		*71-125*	*%REC*	1	2/11/2012 11:43 AM
Surr: Toluene-d8	*103*		*75-125*	*%REC*	1	2/11/2012 11:43 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**149**		**5.00**	**mg/L**	10	2/9/2012 01:03 AM
Fluoride	**0.977**		**0.100**	**mg/L**	1	2/8/2012 08:19 PM
Sulfate	**82.1**		**0.500**	**mg/L**	1	2/8/2012 08:19 PM
Nitrate/Nitrite (as N)	**2.54**		**1.00**	**mg/L**	5	2/8/2012 09:04 PM
Surr: Selenate (surr)	*108*		*85-115*	*%REC*	1	2/8/2012 08:19 PM
Surr: Selenate (surr)	*97.4*		*85-115*	*%REC*	5	2/8/2012 09:04 PM
Surr: Selenate (surr)	*101*		*85-115*	*%REC*	10	2/9/2012 01:03 AM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**172**		**5.00**	**mg/L**	1	2/8/2012 11:07 AM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/8/2012 11:07 AM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/8/2012 11:07 AM
Alkalinity, Total (As CaCO3)	**172**		**5.00**	**mg/L**	1	2/8/2012 11:07 AM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**896**		**1.00**	**µmhos/cm**	1	2/8/2012 12:30 PM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**7.23**	H	**0.100**	**pH units**	1	2/3/2012 06:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**656**		**10.0**	**mg/L**	1	2/7/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Sample ID: North Well-0212 (Dissolved)
Collection Date: 2/2/2012 12:18 PM

Work Order: 1202144
Lab ID: 1202144-12
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	**0.0126**		**0.0100**	**mg/L**	1	2/7/2012 04:40 AM
Arsenic	ND		0.00500	mg/L	1	2/7/2012 04:40 AM
Barium	**0.0944**		**0.00500**	**mg/L**	1	2/7/2012 04:40 AM
Boron	**0.132**		**0.0200**	**mg/L**	1	2/9/2012 03:20 AM
Cadmium	ND		0.00200	mg/L	1	2/7/2012 04:40 AM
Calcium	**87.5**		**0.500**	**mg/L**	1	2/7/2012 04:40 AM
Chromium	**0.0145**		**0.00500**	**mg/L**	1	2/7/2012 04:40 AM
Cobalt	ND		0.00500	mg/L	1	2/7/2012 04:40 AM
Copper	ND		0.00500	mg/L	1	2/7/2012 04:40 AM
Iron	ND		0.200	mg/L	1	2/7/2012 04:40 AM
Lead	ND		0.00500	mg/L	1	2/7/2012 04:40 AM
Magnesium	**12.3**		**0.200**	**mg/L**	1	2/7/2012 04:40 AM
Manganese	ND		0.00500	mg/L	1	2/7/2012 04:40 AM
Molybdenum	ND		0.00500	mg/L	1	2/7/2012 04:40 AM
Nickel	ND		0.00500	mg/L	1	2/7/2012 04:40 AM
Potassium	**1.74**		**0.200**	**mg/L**	1	2/7/2012 04:40 AM
Selenium	ND		0.00500	mg/L	1	2/7/2012 04:40 AM
Silver	ND		0.00500	mg/L	1	2/7/2012 04:40 AM
Sodium	**39.4**		**0.200**	**mg/L**	1	2/7/2012 04:40 AM
Uranium	ND		0.00500	mg/L	1	2/7/2012 10:34 PM
Zinc	ND		0.00500	mg/L	1	2/7/2012 04:40 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: East Well-0212
Lab ID: 1202144-13
Collection Date: 2/2/2012 12:40 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/8/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/8/2012 05:49 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/9/2012 05:38 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
4-Bromophenylphenylether	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
4-Chlorophenylphenylether	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/9/2012 05:38 PM
Acenaphthene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Acetophenone	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Anthracene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Atrazine	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/9/2012 05:38 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 1202144
Sample ID: East Well-0212 **Lab ID:** 1202144-13
Collection Date: 2/2/2012 12:40 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Bis(2-ethylhexyl)phthalate	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Caprolactam	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Carbazole	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Chrysene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Dibenzofuran	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Diethylphthalate	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Dimethylphthalate	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Di-n-butylphthalate	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Di-n-octylphthalate	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Fluoranthene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Fluorene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Isophorone	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Naphthalene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Phenanthrene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Phenol	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Pyrene	ND		0.00020	mg/L	1	2/9/2012 05:38 PM
Surr:2,4,6-Tribromophenol	*71.7*		*34-129*	*%REC*	1	2/9/2012 05:38 PM
Surr:2-Fluorobiphenyl	*69.9*		*40-125*	*%REC*	1	2/9/2012 05:38 PM
Surr:2-Fluorophenol	*61.7*		*20-120*	*%REC*	1	2/9/2012 05:38 PM
Surr: 4-Terphenyl-d14	*75.8*		*40-135*	*%REC*	1	2/9/2012 05:38 PM
Surr: Nitrobenzene-d5	*68.5*		*41-120*	*%REC*	1	2/9/2012 05:38 PM
Surr: Phenol-d6	*63.2*		*20-120*	*%REC*	1	2/9/2012 05:38 PM
VOLATILES			**SW8260**			Analyst: **AKP**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/11/2012 12:07 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: East Well-0212
Lab ID: 1202144-13
Collection Date: 2/2/2012 12:40 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
2-Butanone	ND		0.010	mg/L	1	2/11/2012 12:07 PM
2-Hexanone	ND		0.010	mg/L	1	2/11/2012 12:07 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/11/2012 12:07 PM
Acetone	ND		0.010	mg/L	1	2/11/2012 12:07 PM
Benzene	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
Bromodichloromethane	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
Bromoform	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
Bromomethane	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
Carbon disulfide	ND		0.010	mg/L	1	2/11/2012 12:07 PM
Carbontetrachloride	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
Chlorobenzene	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
Chloroethane	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
Chloroform	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
Chloromethane	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
Dibromochloromethane	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
Ethylbenzene	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
Isopropylbenzene	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
m,p-Xylene	ND		0.010	mg/L	1	2/11/2012 12:07 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
Methylenechloride	ND		0.010	mg/L	1	2/11/2012 12:07 PM
Naphthalene	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
n-Butylbenzene	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
n-Propylbenzene	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
o-Xylene	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
Styrene	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
Tetrachloroethene	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
Toluene	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/11/2012 12:07 PM
Trichloroethene	ND		0.0050	mg/L	1	2/11/2012 12:07 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 1202144
Sample ID: East Well-0212 **Lab ID:** 1202144-13
Collection Date: 2/2/2012 12:40 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/11/2012 12:07 PM
Xylenes, Total	ND		0.015	mg/L	1	2/11/2012 12:07 PM
Surr: 1,2-Dichloroethane-d4	*110*		*70-125*	*%REC*	1	2/11/2012 12:07 PM
Surr: 4-Bromofluorobenzene	*99.0*		*72-125*	*%REC*	1	2/11/2012 12:07 PM
Surr: Dibromofluoromethane	*102*		*71-125*	*%REC*	1	2/11/2012 12:07 PM
Surr: Toluene-d8	*102*		*75-125*	*%REC*	1	2/11/2012 12:07 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**150**		**5.00**	**mg/L**	10	2/9/2012 01:24 AM
Fluoride	**0.967**		**0.100**	**mg/L**	1	2/8/2012 08:40 PM
Sulfate	**81.4**		**0.500**	**mg/L**	1	2/8/2012 08:40 PM
Nitrate/Nitrite (as N)	**2.56**		**1.00**	**mg/L**	5	2/8/2012 10:09 PM
Surr: Selenate (surr)	*104*		*85-115*	*%REC*	1	2/8/2012 08:40 PM
Surr: Selenate (surr)	*97.4*		*85-115*	*%REC*	5	2/8/2012 10:09 PM
Surr: Selenate (surr)	*102*		*85-115*	*%REC*	10	2/9/2012 01:24 AM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**172**		**5.00**	**mg/L**	1	2/8/2012 11:07 AM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/8/2012 11:07 AM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/8/2012 11:07 AM
Alkalinity, Total (As CaCO3)	**172**		**5.00**	**mg/L**	1	2/8/2012 11:07 AM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**904**		**1.00**	**µmhos/cm**	1	2/8/2012 12:30 PM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**7.18**	H	**0.100**	**pH units**	1	2/3/2012 06:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**664**		**10.0**	**mg/L**	1	2/7/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Sample ID: East Well-0212 (Dissolved)
Collection Date: 2/2/2012 12:40 PM

Work Order: 1202144
Lab ID: 1202144-14
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	**0.0150**		**0.0100**	**mg/L**	1	2/7/2012 04:47 AM
Arsenic	ND		0.00500	mg/L	1	2/7/2012 04:47 AM
Barium	**0.0993**		**0.00500**	**mg/L**	1	2/7/2012 04:47 AM
Boron	**0.145**		**0.0200**	**mg/L**	1	2/9/2012 03:26 AM
Cadmium	ND		0.00200	mg/L	1	2/7/2012 04:47 AM
Calcium	**93.5**		**0.500**	**mg/L**	1	2/7/2012 04:47 AM
Chromium	**0.0166**		**0.00500**	**mg/L**	1	2/7/2012 04:47 AM
Cobalt	ND		0.00500	mg/L	1	2/7/2012 04:47 AM
Copper	ND		0.00500	mg/L	1	2/7/2012 04:47 AM
Iron	ND		0.200	mg/L	1	2/7/2012 04:47 AM
Lead	**0.00988**		**0.00500**	**mg/L**	1	2/7/2012 04:47 AM
Magnesium	**13.1**		**0.200**	**mg/L**	1	2/7/2012 04:47 AM
Manganese	ND		0.00500	mg/L	1	2/7/2012 04:47 AM
Molybdenum	ND		0.00500	mg/L	1	2/7/2012 04:47 AM
Nickel	ND		0.00500	mg/L	1	2/7/2012 04:47 AM
Potassium	**1.86**		**0.200**	**mg/L**	1	2/7/2012 04:47 AM
Selenium	ND		0.00500	mg/L	1	2/7/2012 04:47 AM
Silver	ND		0.00500	mg/L	1	2/7/2012 04:47 AM
Sodium	**41.6**		**0.200**	**mg/L**	1	2/7/2012 04:47 AM
Uranium	ND		0.00500	mg/L	1	2/7/2012 10:41 PM
Zinc	**0.0937**		**0.00500**	**mg/L**	1	2/7/2012 04:47 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Sample ID: Trip Blank ID 121611-44
Collection Date: 2/2/2012

Work Order: 1202144
Lab ID: 1202144-15
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
2-Butanone	ND		0.010	mg/L	1	2/10/2012 04:15 PM
2-Hexanone	ND		0.010	mg/L	1	2/10/2012 04:15 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/10/2012 04:15 PM
Acetone	ND		0.010	mg/L	1	2/10/2012 04:15 PM
Benzene	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
Bromodichloromethane	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
Bromoform	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
Bromomethane	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
Carbon disulfide	ND		0.010	mg/L	1	2/10/2012 04:15 PM
Carbontetrachloride	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
Chlorobenzene	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
Chloroethane	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
Chloroform	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
Chloromethane	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
Dibromochloromethane	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
Ethylbenzene	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
Isopropylbenzene	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
m,p-Xylene	ND		0.010	mg/L	1	2/10/2012 04:15 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
Methylenechloride	ND		0.010	mg/L	1	2/10/2012 04:15 PM
Naphthalene	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
n-Butylbenzene	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
n-Propylbenzene	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
o-Xylene	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
Styrene	ND		0.0050	mg/L	1	2/10/2012 04:15 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *13-Feb-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202144
Sample ID: Trip Blank ID 121611-44
Lab ID: 1202144-15
Collection Date: 2/2/2012
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
Toluene	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
Trichloroethene	ND		0.0050	mg/L	1	2/10/2012 04:15 PM
Vinyl chloride	ND		0.0020	mg/L	1	2/10/2012 04:15 PM
Xylenes, Total	ND		0.015	mg/L	1	2/10/2012 04:15 PM
Surr: 1,2-Dichloroethane-d4	*99.8*		*70-125*	*%REC*	1	2/10/2012 04:15 PM
Surr: 4-Bromofluorobenzene	*90.6*		*72-125*	*%REC*	1	2/10/2012 04:15 PM
Surr: Dibromofluoromethane	*99.2*		*71-125*	*%REC*	1	2/10/2012 04:15 PM
Surr: Toluene-d8	*105*		*75-125*	*%REC*	1	2/10/2012 04:15 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **58711** Instrument ID: **ICPMS04** Method: **SW6020** **(Dissolve)**

MBLK Sample ID: **MBLKW4-020612-58711** Units: **mg/L** Analysis Date: **2/7/2012 01:30 AM**

Client ID: Run ID: **ICPMS04_120206A** SeqNo: **2678360** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.004352	0.010								J
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Cadmium	ND	0.0020								
Calcium	ND	0.50								
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Copper	ND	0.0050								
Iron	ND	0.20								
Lead	ND	0.0050								
Magnesium	ND	0.20								
Manganese	ND	0.0050								
Molybdenum	ND	0.0050								
Nickel	ND	0.0050								
Potassium	ND	0.20								
Silver	ND	0.0050								
Sodium	ND	0.20								
Zinc	ND	0.0050								

MBLK Sample ID: **MBLKW4-020612-58711** Units: **mg/L** Analysis Date: **2/7/2012 03:17 PM**

Client ID: Run ID: **ICPMS04_120207A** SeqNo: **2679383** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	ND	0.050								
Selenium	ND	0.0050								

MBLK Sample ID: **MBLKW4-020612-58711** Units: **mg/L** Analysis Date: **2/7/2012 03:17 PM**

Client ID: Run ID: **ICPMS04_120207B** SeqNo: **2680985** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Uranium	ND	0.0050								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58711** Instrument ID: **ICPMS04** Method: **SW6020** **(Dissolve)**

LCS Sample ID: **MLCSW4-020612-58711** Units: **mg/L** Analysis Date: **2/7/2012 01:37 AM**
Client ID: Run ID: **ICPMS04_120206A** SeqNo: **2678361** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.08924	0.010	0.1	0	89.2	80-120	0			
Arsenic	0.04675	0.0050	0.05	0	93.5	80-120	0			
Barium	0.04678	0.0050	0.05	0	93.6	80-120	0			
Cadmium	0.0462	0.0020	0.05	0	92.4	80-120	0			
Calcium	4.348	0.50	5	0	87	80-120	0			
Chromium	0.04278	0.0050	0.05	0	85.6	80-120	0			
Cobalt	0.04454	0.0050	0.05	0	89.1	80-120	0			
Copper	0.04393	0.0050	0.05	0	87.9	80-120	0			
Iron	4.413	0.20	5	0	88.3	80-120	0			
Lead	0.04837	0.0050	0.05	0	96.7	80-120	0			
Magnesium	4.279	0.20	5	0	85.6	80-120	0			
Manganese	0.04293	0.0050	0.05	0	85.9	80-120	0			
Molybdenum	0.04391	0.0050	0.05	0	87.8	80-120	0			
Nickel	0.04396	0.0050	0.05	0	87.9	80-120	0			
Potassium	4.572	0.20	5	0	91.4	80-120	0			
Silver	0.04544	0.0050	0.05	0	90.9	80-120	0			
Sodium	4.196	0.20	5	0	83.9	80-120	0			
Zinc	0.04455	0.0050	0.05	0	89.1	80-120	0			

LCS Sample ID: **MLCSW4-020612-58711** Units: **mg/L** Analysis Date: **2/7/2012 03:24 PM**
Client ID: Run ID: **ICPMS04_120207A** SeqNo: **2679396** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.4877	0.050	0.5	0	97.5	80-120	0			
Selenium	0.05147	0.0050	0.05	0	103	80-120	0			

LCS Sample ID: **MLCSW4-020612-58711** Units: **mg/L** Analysis Date: **2/7/2012 03:24 PM**
Client ID: Run ID: **ICPMS04_120207B** SeqNo: **2680986** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Uranium	0.09005	0.0050	0.1	0	90.1	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58711** Instrument ID: **ICPMS04** Method: **SW6020** **(Dissolve)**

MS Sample ID: **1202014-13AMS** Units: **mg/L** Analysis Date: **2/7/2012 02:11 AM**
Client ID: Run ID: **ICPMS04_120206A** SeqNo: **2678366** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1334	0.010	0.1	0.03602	97.4	75-125	0			
Arsenic	0.06934	0.0050	0.05	0.0181	102	75-125	0			
Barium	0.1565	0.0050	0.05	0.09641	120	75-125	0			
Boron	5.267	0.050	0.5	4.674	119	75-125	0			EO
Cadmium	0.0455	0.0020	0.05	0	91	75-125	0			
Calcium	388	0.50	5	343.5	891	75-125	0			SEO
Chromium	0.04232	0.0050	0.05	0	84.6	75-125	0			
Cobalt	0.04344	0.0050	0.05	0.001001	84.9	75-125	0			
Copper	0.04368	0.0050	0.05	0.003864	79.6	75-125	0			
Iron	4.78	0.20	5	0.4368	86.9	75-125	0			
Lead	0.04882	0.0050	0.05	0	97.6	75-125	0			
Magnesium	83.18	0.20	5	71.76	229	75-125	0			SO
Manganese	1.142	0.0050	0.05	0.9944	296	75-125	0			SO
Molybdenum	0.04694	0.0050	0.05	0.005429	83	75-125	0			
Nickel	0.04656	0.0050	0.05	0.006923	79.3	75-125	0			
Potassium	22.04	0.20	5	15.36	134	75-125	0			S
Silver	0.03892	0.0050	0.05	0	77.8	75-125	0			
Sodium	ND	0.20	5	0	0	75-125	0			SX
Zinc	0.05185	0.0050	0.05	0.008372	87	75-125	0			

MS Sample ID: **1202014-13AMS** Units: **mg/L** Analysis Date: **2/7/2012 07:02 PM**
Client ID: Run ID: **ICPMS04_120207A** SeqNo: **2679746** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.05522	0.0050	0.05	-0.000493	111	75-125	0			

MS Sample ID: **1202014-13AMS** Units: **mg/L** Analysis Date: **2/7/2012 07:02 PM**
Client ID: Run ID: **ICPMS04_120207B** SeqNo: **2681086** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Uranium	0.1031	0.0050	0.1	0	103	75-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58711** Instrument ID: **ICPMS04** Method: **SW6020** **(Dissolve)**

MSD Sample ID: **1202014-13AMSD** Units: **mg/L** Analysis Date: **2/7/2012 02:18 AM**

Client ID: Run ID: **ICPMS04_120206A** SeqNo: **2678367** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1445	0.010	0.1	0.03602	109	75-125	0.1334	8.01	25	
Barium	0.159	0.0050	0.05	0.09641	125	75-125	0.1565	1.54	25	S
Cadmium	0.04511	0.0020	0.05	0	90.2	75-125	0.0455	0.854	25	
Calcium	397.4	0.50	5	343.5	1080	75-125	388	2.39	25	SEO
Lead	0.04881	0.0050	0.05	0	97.6	75-125	0.04882	0.0102	25	
Magnesium	84.69	0.20	5	71.76	259	75-125	83.18	1.8	25	SO
Molybdenum	0.04684	0.0050	0.05	0.005429	82.8	75-125	0.04694	0.213	25	
Nickel	0.04657	0.0050	0.05	0.006923	79.3	75-125	0.04656	0.0193	25	
Potassium	22.46	0.20	5	15.36	142	75-125	22.04	1.9	25	S
Silver	0.03902	0.0050	0.05	0	78	75-125	0.03892	0.28	25	
Sodium	ND	0.20	5	0	0	75-125	0	0	25	SX

MSD Sample ID: **1202014-13AMSD** Units: **mg/L** Analysis Date: **2/7/2012 07:16 PM**

Client ID: Run ID: **ICPMS04_120207A** SeqNo: **2679748** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.06894	0.0050	0.05	0.01902	99.8	75-125	0.06928	0.495	25	
Boron	5.051	0.050	0.5	4.681	74.1	75-125	5.389	6.48	25	SEO
Chromium	0.04878	0.0050	0.05	0.000699	96.2	75-125	0.0491	0.654	25	
Cobalt	0.04806	0.0050	0.05	0.00115	93.8	75-125	0.04914	2.23	25	
Copper	0.0496	0.0050	0.05	0.003825	91.6	75-125	0.05	0.791	25	
Iron	5.438	0.20	5	0.5393	98	75-125	5.538	1.82	25	
Manganese	1.322	0.0050	0.05	1.203	238	75-125	1.336	1.08	25	SO
Selenium	0.05123	0.0050	0.05	-0.000493	103	75-125	0.05522	7.49	25	
Zinc	0.06344	0.0050	0.05	0.009859	107	75-125	0.05915	7	25	

MSD Sample ID: **1202014-13AMSD** Units: **mg/L** Analysis Date: **2/7/2012 07:16 PM**

Client ID: Run ID: **ICPMS04_120207B** SeqNo: **2681088** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Uranium	0.1016	0.0050	0.1	0	102	75-125	0.1031	1.47	25	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58711** Instrument ID: **ICPMS04** Method: **SW6020** **(Dissolve)**

DUP Sample ID: **1202014-13ADUP** Units: **mg/L** Analysis Date: **2/7/2012 02:04 AM**
Client ID: Run ID: **ICPMS04_120206A** SeqNo: **2678365** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.04238	0.010	0	0	0	0-0	0.03602	16.2	25	
Arsenic	0.01726	0.0050	0	0	0	0-0	0.0181	4.79	25	
Barium	0.1024	0.0050	0	0	0	0-0	0.09641	5.98	25	
Cadmium	ND	0.0020	0	0	0	0-0	0.000051	0	25	
Chromium	ND	0.0050	0	0	0	0-0	0.000512	0	25	
Cobalt	0.001002	0.0050	0	0	0	0-0	0.001001	0	25	J
Copper	0.003621	0.0050	0	0	0	0-0	0.003864	0	25	J
Iron	0.4528	0.20	0	0	0	0-0	0.4368	3.59	25	
Lead	ND	0.0050	0	0	0	0-0	0.000517	0	25	
Magnesium	74.42	0.20	0	0	0	0-0	71.76	3.64	25	
Manganese	1.036	0.0050	0	0	0	0-0	0.9944	4.13	25	
Molybdenum	0.00557	0.0050	0	0	0	0-0	0.005429	2.56	25	
Nickel	0.00667	0.0050	0	0	0	0-0	0.006923	3.72	25	
Potassium	16.57	0.20	0	0	0	0-0	15.36	7.57	25	
Silver	ND	0.0050	0	0	0	0-0	0.000032	0	25	
Zinc	0.008195	0.0050	0	0	0	0-0	0.008372	2.14	25	

DUP Sample ID: **1202014-13ADUP** Units: **mg/L** Analysis Date: **2/7/2012 06:14 PM**
Client ID: Run ID: **ICPMS04_120207A** SeqNo: **2679639** Prep Date: **2/6/2012** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	3.973	1.0	0	0	0	0-0	4.417	10.6	25	
Calcium	396.6	10	0	0	0	0-0	376.3	5.25	25	
Sodium	1371	4.0	0	0	0	0-0	1345	1.95	25	

DUP Sample ID: **1202014-13ADUP** Units: **mg/L** Analysis Date: **2/7/2012 06:55 PM**
Client ID: Run ID: **ICPMS04_120207A** SeqNo: **2679745** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	ND	0.0050	0	0	0	0-0	-0.000493	0	25	

DUP Sample ID: **1202014-13ADUP** Units: **mg/L** Analysis Date: **2/7/2012 06:55 PM**
Client ID: Run ID: **ICPMS04_120207B** SeqNo: **2681085** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Uranium	ND	0.0050	0	0	0		0.003827	0	25	

The following samples were analyzed in this batch:

1202144-02A	1202144-04A	1202144-06A
1202144-08A	1202144-10A	1202144-12A
1202144-14A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58770** Instrument ID: **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW2-020812-58770** Units: **mg/L** Analysis Date: **2/8/2012 04:43 PM**
Client ID: Run ID: **MERCURY_120208A** SeqNo: **2681232** Prep Date: **2/8/2012** 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: **GLCSW2-020812-58770** Units: **mg/L** Analysis Date: **2/8/2012 04:45 PM**
Client ID: Run ID: **MERCURY_120208A** SeqNo: **2681233** Prep Date: **2/8/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00462	0.00020	0.005	0	92.4	85-115	0			

MS Sample ID: **1202151-06CMS** Units: **mg/L** Analysis Date: **2/8/2012 04:56 PM**
Client ID: Run ID: **MERCURY_120208A** SeqNo: **2681236** Prep Date: **2/8/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00438	0.00020	0.005	-0.000023	88.1	85-115	0			

MSD Sample ID: **1202151-06CMSD** Units: **mg/L** Analysis Date: **2/8/2012 05:01 PM**
Client ID: Run ID: **MERCURY_120208A** SeqNo: **2681237** Prep Date: **2/8/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00437	0.00020	0.005	-0.000023	87.9	85-115	0.00438	0.229	20	

DUP Sample ID: **1202151-06CDUP** Units: **mg/L** Analysis Date: **2/8/2012 04:49 PM**
Client ID: Run ID: **MERCURY_120208A** SeqNo: **2681235** Prep Date: **2/8/2012** 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	-0.000023	0	20	

The following samples were analyzed in this batch:

1202144-01C	1202144-03C	1202144-05C
1202144-07C	1202144-09C	1202144-11C
1202144-13C		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58695** Instrument ID: **SV-4** Method: **SW8270**

MBLK Sample ID: **SBLKW4-120205-58695** Units: **µg/L** Analysis Date: **2/6/2012 03:26 PM**

Client ID: Run ID: **SV-4_120206A** SeqNo: **2679642** Prep Date: **2/5/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	ND	0.20								
2,4,5-Trichlorophenol	ND	0.20								
2,4,6-Trichlorophenol	ND	0.20								
2,4-Dichlorophenol	ND	0.20								
2,4-Dimethylphenol	ND	0.20								
2,4-Dinitrophenol	ND	1.0								
2,4-Dinitrotoluene	ND	0.20								
2,6-Dinitrotoluene	ND	0.20								
2-Chloronaphthalene	ND	0.20								
2-Chlorophenol	ND	0.20								
2-Methylnaphthalene	ND	0.20								
2-Methylphenol	ND	0.20								
2-Nitroaniline	ND	0.20								
2-Nitrophenol	ND	0.20								
3&4-Methylphenol	ND	0.20								
3,3´-Dichlorobenzidine	ND	0.20								
3-Nitroaniline	ND	0.20								
4,6-Dinitro-2-methylphenol	ND	0.20								
4-Bromophenylphenylether	ND	0.20								
4-Chloro-3-methylphenol	ND	0.20								
4-Chloroaniline	ND	0.20								
4-Chlorophenylphenylether	ND	0.20								
4-Nitroaniline	ND	0.20								
4-Nitrophenol	ND	1.0								
Acenaphthene	ND	0.20								
Acenaphthylene	ND	0.20								
Acetophenone	ND	0.20								
Anthracene	ND	0.20								
Atrazine	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzaldehyde	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								
Bis(2-chloroethoxy)methane	ND	0.20								
Bis(2-chloroethyl)ether	ND	0.20								
Bis(2-chloroisopropyl)ether	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.20								
Butylbenzylphthalate	ND	0.20								
Caprolactam	ND	0.20								
Carbazole	ND	0.20								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **58695** Instrument ID: **SV-4** Method: **SW8270**

Chrysene	ND	0.20					
Dibenz(a,h)anthracene	ND	0.20					
Dibenzofuran	ND	0.20					
Diethylphthalate	ND	0.20					
Dimethylphthalate	ND	0.20					
Di-n-butylphthalate	ND	0.20					
Di-n-octylphthalate	ND	0.20					
Fluoranthene	ND	0.20					
Fluorene	ND	0.20					
Hexachlorobenzene	ND	0.20					
Hexachlorobutadiene	ND	0.20					
Hexachlorocyclopentadiene	ND	0.20					
Hexachloroethane	ND	0.20					
Indeno(1,2,3-cd)pyrene	ND	0.20					
Isophorone	ND	0.20					
Naphthalene	ND	0.20					
Nitrobenzene	ND	0.20					
N-Nitrosodi-n-propylamine	ND	0.20					
N-Nitrosodiphenylamine	ND	0.20					
Pentachlorophenol	ND	0.20					
Phenanthrene	ND	0.20					
Phenol	ND	0.20					
Pyrene	ND	0.20					
Surr:2,4,6-Tribromophenol	*3.061*	0.20	*5*	0	*61.2*	*34-129*	0
Surr:2-Fluorobiphenyl	*3.528*	0.20	*5*	0	*70.6*	*40-125*	0
Surr:2-Fluorophenol	*3.263*	0.20	*5*	0	*65.3*	*20-120*	0
Surr: 4-Terphenyl-d14	*3.659*	0.20	*5*	0	*73.2*	*40-135*	0
Surr: Nitrobenzene-d5	*3.595*	0.20	*5*	0	*71.9*	*41-120*	0
Surr: Phenol-d6	*3.409*	0.20	*5*	0	*68.2*	*20-120*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58695** Instrument ID: **SV-4** Method: **SW8270**

LCS Sample ID: **SLCSW4-120205-58695** Units: **µg/L** Analysis Date: **2/6/2012 03:46 PM**

Client ID: Run ID: **SV-4_120206A** SeqNo: **2679643** Prep Date: **2/5/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	3.073	0.20	5	0	61.5	45-125	0			
2,4,5-Trichlorophenol	3.346	0.20	5	0	66.9	46-120	0			
2,4,6-Trichlorophenol	3.607	0.20	5	0	72.1	42-120	0			
2,4-Dichlorophenol	3.742	0.20	5	0	74.8	49-120	0			
2,4-Dimethylphenol	3.708	0.20	5	0	74.2	35-120	0			
2,4-Dinitrophenol	2.74	1.0	5	0	54.8	15-120	0			
2,4-Dinitrotoluene	3.435	0.20	5	0	68.7	50-122	0			
2,6-Dinitrotoluene	3.461	0.20	5	0	69.2	50-120	0			
2-Chloronaphthalene	3.32	0.20	5	0	66.4	50-120	0			
2-Chlorophenol	3.312	0.20	5	0	66.2	40-120	0			
2-Methylnaphthalene	3.326	0.20	5	0	66.5	50-120	0			
2-Methylphenol	3.592	0.20	5	0	71.8	45-120	0			
2-Nitroaniline	3.951	0.20	5	0	79	28-139	0			
2-Nitrophenol	3.854	0.20	5	0	77.1	40-120	0			
3&4-Methylphenol	3.4	0.20	5	0	68	35-120	0			
3,3´-Dichlorobenzidine	3.97	0.20	5	0	79.4	15-120	0			
3-Nitroaniline	3.332	0.20	5	0	66.6	30-120	0			
4,6-Dinitro-2-methylphenol	3.521	0.20	5	0	70.4	25-121	0			
4-Bromophenylphenylether	3.597	0.20	5	0	71.9	45-120	0			
4-Chloro-3-methylphenol	3.778	0.20	5	0	75.6	47-120	0			
4-Chloroaniline	3.569	0.20	5	0	71.4	20-120	0			
4-Chlorophenylphenylether	3.203	0.20	5	0	64.1	50-120	0			
4-Nitroaniline	3.133	0.20	5	0	62.7	30-133	0			
4-Nitrophenol	3.556	1.0	5	0	71.1	30-130	0			
Acenaphthene	3.087	0.20	5	0	61.7	45-120	0			
Acenaphthylene	3.176	0.20	5	0	63.5	47-120	0			
Acetophenone	3.571	0.20	5	0	71.4	40-120	0			
Anthracene	3.624	0.20	5	0	72.5	45-120	0			
Atrazine	3.505	0.20	5	0	70.1	40-130	0			
Benz(a)anthracene	3.941	0.20	5	0	78.8	40-120	0			
Benzaldehyde	1.338	0.20	5	0	26.8	15-120	0			
Benzo(a)pyrene	3.776	0.20	5	0	75.5	45-120	0			
Benzo(b)fluoranthene	4.064	0.20	5	0	81.3	50-120	0			
Benzo(g,h,i)perylene	4.062	0.20	5	0	81.2	42-127	0			
Benzo(k)fluoranthene	3.9	0.20	5	0	78	45-127	0			
Bis(2-chloroethoxy)methane	3.647	0.20	5	0	72.9	45-120	0			
Bis(2-chloroethyl)ether	3.444	0.20	5	0	68.9	37-121	0			
Bis(2-chloroisopropyl)ether	3.134	0.20	5	0	62.7	40-120	0			
Bis(2-ethylhexyl)phthalate	4.055	0.20	5	0	81.1	40-139	0			
Butylbenzylphthalate	4.21	0.20	5	0	84.2	47-123	0			
Caprolactam	3.892	0.20	5	0	77.8	35-134	0			
Carbazole	3.496	0.20	5	0	69.9	42-128	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **58695** Instrument ID: **SV-4** Method: **SW8270**

Chrysene	4.018	0.20	5	0	80.4	43-120	0
Dibenz(a,h)anthracene	4.139	0.20	5	0	82.8	45-125	0
Dibenzofuran	3.356	0.20	5	0	67.1	50-120	0
Diethylphthalate	3.296	0.20	5	0	65.9	41-120	0
Dimethylphthalate	3.402	0.20	5	0	68	40-122	0
Di-n-butylphthalate	3.866	0.20	5	0	77.3	45-123	0
Di-n-octylphthalate	4.055	0.20	5	0	81.1	45-129	0
Fluoranthene	3.61	0.20	5	0	72.2	45-125	0
Fluorene	3.154	0.20	5	0	63.1	49-120	0
Hexachlorobenzene	3.343	0.20	5	0	66.9	48-120	0
Hexachlorobutadiene	3.72	0.20	5	0	74.4	40-120	0
Hexachlorocyclopentadiene	3.015	0.20	5	0	60.3	34-136	0
Hexachloroethane	3.609	0.20	5	0	72.2	40-120	0
Indeno(1,2,3-cd)pyrene	3.97	0.20	5	0	79.4	41-128	0
Isophorone	3.606	0.20	5	0	72.1	40-121	0
Naphthalene	3.488	0.20	5	0	69.8	45-120	0
Nitrobenzene	3.601	0.20	5	0	72	44-120	0
N-Nitrosodi-n-propylamine	3.635	0.20	5	0	72.7	40-120	0
N-Nitrosodiphenylamine	3.779	0.20	5	0	75.6	40-125	0
Pentachlorophenol	2.671	0.20	5	0	53.4	19-121	0
Phenanthrene	3.532	0.20	5	0	70.6	45-121	0
Phenol	3.369	0.20	5	0	67.4	20-124	0
Pyrene	3.738	0.20	5	0	74.8	40-130	0
Surr:2,4,6-Tribromophenol	*3.403*	0.20	*5*	0	*68.1*	*34-129*	0
Surr:2-Fluorobiphenyl	*3.513*	0.20	*5*	0	*70.3*	*40-125*	0
Surr:2-Fluorophenol	*3.577*	0.20	*5*	0	*71.5*	*20-120*	0
Surr: 4-Terphenyl-d14	*4.309*	0.20	*5*	0	*86.2*	*40-135*	0
Surr: Nitrobenzene-d5	*3.867*	0.20	*5*	0	*77.3*	*41-120*	0
Surr: Phenol-d6	*3.514*	0.20	*5*	0	*70.3*	*20-120*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58695** Instrument ID: **SV-4** Method: **SW8270**

LCSD Sample ID: **SLCSDW4-120205-58695** Units: **µg/L** Analysis Date: **2/6/2012 04:05 PM**

Client ID: Run ID: **SV-4_120206A** SeqNo: **2679644** Prep Date: **2/5/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	3.289	0.20	5	0	65.8	45-125	3.073	6.79	20	
2,4,5-Trichlorophenol	3.41	0.20	5	0	68.2	46-120	3.346	1.91	20	
2,4,6-Trichlorophenol	3.728	0.20	5	0	74.6	42-120	3.607	3.28	20	
2,4-Dichlorophenol	3.372	0.20	5	0	67.4	49-120	3.742	10.4	20	
2,4-Dimethylphenol	3.233	0.20	5	0	64.7	35-120	3.708	13.7	20	
2,4-Dinitrophenol	2.345	1.0	5	0	46.9	15-120	2.74	15.5	20	
2,4-Dinitrotoluene	3.738	0.20	5	0	74.8	50-122	3.435	8.45	20	
2,6-Dinitrotoluene	3.438	0.20	5	0	68.8	50-120	3.461	0.674	20	
2-Chloronaphthalene	3.166	0.20	5	0	63.3	50-120	3.32	4.75	20	
2-Chlorophenol	3.14	0.20	5	0	62.8	40-120	3.312	5.33	20	
2-Methylnaphthalene	3.287	0.20	5	0	65.7	50-120	3.326	1.18	20	
2-Methylphenol	3.199	0.20	5	0	64	45-120	3.592	11.6	20	
2-Nitroaniline	4.173	0.20	5	0	83.5	28-139	3.951	5.46	20	
2-Nitrophenol	3.84	0.20	5	0	76.8	40-120	3.854	0.357	20	
3&4-Methylphenol	3.238	0.20	5	0	64.8	35-120	3.4	4.89	20	
3,3´-Dichlorobenzidine	3.312	0.20	5	0	66.2	15-120	3.97	18.1	20	
3-Nitroaniline	3.571	0.20	5	0	71.4	30-120	3.332	6.92	20	
4,6-Dinitro-2-methylphenol	3.356	0.20	5	0	67.1	25-121	3.521	4.8	20	
4-Bromophenylphenylether	3.263	0.20	5	0	65.3	45-120	3.597	9.74	20	
4-Chloro-3-methylphenol	3.303	0.20	5	0	66.1	47-120	3.778	13.4	20	
4-Chloroaniline	3.386	0.20	5	0	67.7	20-120	3.569	5.26	20	
4-Chlorophenylphenylether	3.387	0.20	5	0	67.7	50-120	3.203	5.57	20	
4-Nitroaniline	2.973	0.20	5	0	59.5	30-133	3.133	5.26	20	
4-Nitrophenol	3.918	1.0	5	0	78.4	30-130	3.556	9.7	20	
Acenaphthene	3.306	0.20	5	0	66.1	45-120	3.087	6.85	20	
Acenaphthylene	3.437	0.20	5	0	68.7	47-120	3.176	7.91	20	
Acetophenone	3.41	0.20	5	0	68.2	40-120	3.571	4.62	20	
Anthracene	3.487	0.20	5	0	69.7	45-120	3.624	3.87	20	
Atrazine	3.138	0.20	5	0	62.8	40-130	3.505	11	20	
Benz(a)anthracene	3.355	0.20	5	0	67.1	40-120	3.941	16.1	20	
Benzaldehyde	1.292	0.20	5	0	25.8	15-120	1.338	3.48	20	
Benzo(a)pyrene	3.731	0.20	5	0	74.6	45-120	3.776	1.2	20	
Benzo(b)fluoranthene	3.85	0.20	5	0	77	50-120	4.064	5.41	20	
Benzo(g,h,i)perylene	3.816	0.20	5	0	76.3	42-127	4.062	6.24	20	
Benzo(k)fluoranthene	3.72	0.20	5	0	74.4	45-127	3.9	4.72	20	
Bis(2-chloroethoxy)methane	3.393	0.20	5	0	67.9	45-120	3.647	7.23	20	
Bis(2-chloroethyl)ether	3.126	0.20	5	0	62.5	37-121	3.444	9.71	20	
Bis(2-chloroisopropyl)ether	3.088	0.20	5	0	61.8	40-120	3.134	1.5	20	
Bis(2-ethylhexyl)phthalate	3.422	0.20	5	0	68.4	40-139	4.055	16.9	20	
Butylbenzylphthalate	3.398	0.20	5	0	68	47-123	4.21	21.3	20	R
Caprolactam	3.291	0.20	5	0	65.8	35-134	3.892	16.7	20	
Carbazole	3.391	0.20	5	0	67.8	42-128	3.496	3.04	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **58695** Instrument ID: **SV-4** Method: **SW8270**

Chrysene	3.55	0.20	5	0	71	43-120	4.018	12.4	20
Dibenz(a,h)anthracene	3.901	0.20	5	0	78	45-125	4.139	5.92	20
Dibenzofuran	3.494	0.20	5	0	69.9	50-120	3.356	4.02	20
Diethylphthalate	3.405	0.20	5	0	68.1	41-120	3.296	3.24	20
Dimethylphthalate	3.433	0.20	5	0	68.7	40-122	3.402	0.907	20
Di-n-butylphthalate	3.709	0.20	5	0	74.2	45-123	3.866	4.16	20
Di-n-octylphthalate	3.681	0.20	5	0	73.6	45-129	4.055	9.66	20
Fluoranthene	3.484	0.20	5	0	69.7	45-125	3.61	3.56	20
Fluorene	3.191	0.20	5	0	63.8	49-120	3.154	1.18	20
Hexachlorobenzene	3.258	0.20	5	0	65.2	48-120	3.343	2.59	20
Hexachlorobutadiene	3.468	0.20	5	0	69.4	40-120	3.72	7.01	20
Hexachlorocyclopentadiene	2.928	0.20	5	0	58.6	34-136	3.015	2.92	20
Hexachloroethane	3.448	0.20	5	0	69	40-120	3.609	4.56	20
Indeno(1,2,3-cd)pyrene	4.119	0.20	5	0	82.4	41-128	3.97	3.68	20
Isophorone	3.4	0.20	5	0	68	40-121	3.606	5.88	20
Naphthalene	3.392	0.20	5	0	67.8	45-120	3.488	2.79	20
Nitrobenzene	3.217	0.20	5	0	64.3	44-120	3.601	11.3	20
N-Nitrosodi-n-propylamine	3.286	0.20	5	0	65.7	40-120	3.635	10.1	20
N-Nitrosodiphenylamine	3.628	0.20	5	0	72.6	40-125	3.779	4.08	20
Pentachlorophenol	2.267	0.20	5	0	45.3	19-121	2.671	16.4	20
Phenanthrene	3.409	0.20	5	0	68.2	45-121	3.532	3.53	20
Phenol	3.166	0.20	5	0	63.3	20-124	3.369	6.2	20
Pyrene	3.306	0.20	5	0	66.1	40-130	3.738	12.3	20
Surr:2,4,6-Tribromophenol	*3.684*	0.20	*5*	0	*73.7*	*34-129*	3.403	*7.92*	*0*
Surr:2-Fluorobiphenyl	*3.619*	0.20	*5*	0	*72.4*	*40-125*	3.513	*2.99*	*0*
Surr:2-Fluorophenol	*3.38*	0.20	*5*	0	*67.6*	*20-120*	3.577	*5.64*	*0*
Surr: 4-Terphenyl-d14	*3.659*	0.20	*5*	0	*73.2*	*40-135*	4.309	*16.3*	*0*
Surr: Nitrobenzene-d5	*3.412*	0.20	*5*	0	*68.2*	*41-120*	3.867	*12.5*	*0*
Surr: Phenol-d6	*3.382*	0.20	*5*	0	*67.6*	*20-120*	3.514	*3.84*	*0*

The following samples were analyzed in this batch:

1202144-01E	1202144-03E	1202144-05E
1202144-07E	1202144-09E	1202144-11E
1202144-13E		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123191** Instrument ID: **VOA6** Method: **SW8260**

MBLK Sample ID: **VBLKW-021012-R123191** Units: **µg/L** Analysis Date: **2/10/2012 10:59 AM**

Client ID: Run ID: **VOA6_120210A** SeqNo: **2683887** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
2-Butanone	ND	10								
2-Hexanone	ND	10								
4-Isopropyltoluene	ND	5.0								
4-Methyl-2-pentanone	ND	10								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	10								
Carbontetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								
Ethylbenzene	ND	5.0								
Isopropylbenzene	ND	5.0								
m,p-Xylene	ND	10								
Methyl tert-butyl ether	ND	5.0								
Methylenechloride	ND	10								
Naphthalene	ND	5.0								
n-Butylbenzene	ND	5.0								
n-Propylbenzene	ND	5.0								
o-Xylene	ND	5.0								
sec-Butylbenzene	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
trans-1,2-Dichloroethene	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R123191** Instrument ID: **VOA6** Method: **SW8260**

trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Vinyl chloride	ND	2.0					
Xylenes, Total	ND	15					
Surr: 1,2-Dichloroethane-d4	*50.73*	5.0	*50*	0	*101*	*70-125*	0
Surr: 4-Bromofluorobenzene	*44.82*	5.0	*50*	0	*89.6*	*72-125*	0
Surr: Dibromofluoromethane	*49.72*	5.0	*50*	0	*99.4*	*71-125*	0
Surr: Toluene-d8	*50.06*	5.0	*50*	0	*100*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123191** Instrument ID: **VOA6** Method: **SW8260**

LCS Sample ID: **VLCSW-020912-R123191** Units: **µg/L** Analysis Date: **2/10/2012 10:06 AM**

Client ID: Run ID: **VOA6_120210A** SeqNo: **2683886** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	52.66	5.0	50	0	105	80-120	0			
1,1,2,2-Tetrachloroethane	48.96	5.0	50	0	97.9	72-120	0			
1,1,2-Trichloroethane	50.41	5.0	50	0	101	80-120	0			
1,1-Dichloroethane	48.32	5.0	50	0	96.6	76-120	0			
1,1-Dichloroethene	50.5	5.0	50	0	101	73-124	0			
1,2,4-Trimethylbenzene	51.65	5.0	50	0	103	68-123	0			
1,2-Dibromoethane	47.44	5.0	50	0	94.9	80-120	0			
1,2-Dichloroethane	47.84	5.0	50	0	95.7	78-120	0			
1,2-Dichloropropane	47.06	5.0	50	0	94.1	80-120	0			
1,3,5-Trimethylbenzene	50.81	5.0	50	0	102	80-120	0			
2-Butanone	106.5	10	100	0	107	58-132	0			
2-Hexanone	99.21	10	100	0	99.2	61-130	0			
4-Isopropyltoluene	48.11	5.0	50	0	96.2	79-120	0			
4-Methyl-2-pentanone	103.3	10	100	0	103	65-127	0			
Acetone	99.63	10	100	0	99.6	59-137	0			
Benzene	47.5	5.0	50	0	95	73-121	0			
Bromodichloromethane	48.16	5.0	50	0	96.3	80-120	0			
Bromoform	53.28	5.0	50	0	107	79-120	0			
Bromomethane	46.36	5.0	50	0	92.7	66-137	0			
Carbon disulfide	101.7	10	100	0	102	68-141	0			
Carbontetrachloride	51.21	5.0	50	0	102	75-124	0			
Chlorobenzene	50.08	5.0	50	0	100	80-120	0			
Chloroethane	47.02	5.0	50	0	94	76-121	0			
Chloroform	48.38	5.0	50	0	96.8	80-120	0			
Chloromethane	49.31	5.0	50	0	98.6	67-123	0			
cis-1,2-Dichloroethene	50.91	5.0	50	0	102	78-120	0			
cis-1,3-Dichloropropene	49.3	5.0	50	0	98.6	80-120	0			
Dibromochloromethane	48.8	5.0	50	0	97.6	80-120	0			
Ethylbenzene	52.37	5.0	50	0	105	80-120	0			
Isopropylbenzene	52.57	5.0	50	0	105	80-120	0			
m,p-Xylene	91.57	10	100	0	91.6	78-121	0			
Methyl tert-butyl ether	48.63	5.0	50	0	97.3	73-121	0			
Methylenechloride	49.18	10	50	0	98.4	65-133	0			
Naphthalene	52.27	5.0	50	0	105	65-135	0			
n-Butylbenzene	50.72	5.0	50	0	101	77-120	0			
n-Propylbenzene	51.76	5.0	50	0	104	78-120	0			
o-Xylene	46.23	5.0	50	0	92.5	80-120	0			
sec-Butylbenzene	50.99	5.0	50	0	102	78-120	0			
Styrene	50.43	5.0	50	0	101	80-120	0			
Tetrachloroethene	53.77	5.0	50	0	108	79-120	0			
Toluene	49.63	5.0	50	0	99.3	80-120	0			
trans-1,2-Dichloroethene	50.71	5.0	50	0	101	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R123191** Instrument ID: **VOA6** Method: **SW8260**

trans-1,3-Dichloropropene	47.95	5.0	50	0	95.9	80-120	0
Trichloroethene	51.28	5.0	50	0	103	80-120	0
Vinyl chloride	49.32	2.0	50	0	98.6	70-127	0
Xylenes, Total	137.8	15	150	0	91.9	80-120	0
Surr: 1,2-Dichloroethane-d4	*49.21*	5.0	*50*	0	*98.4*	*70-125*	0
Surr: 4-Bromofluorobenzene	*52.84*	5.0	*50*	0	*106*	*72-125*	0
Surr: Dibromofluoromethane	*49.66*	5.0	*50*	0	*99.3*	*71-125*	0
Surr: Toluene-d8	*49.39*	5.0	*50*	0	*98.8*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123191** Instrument ID: **VOA6** Method: **SW8260**

MS Sample ID: **1202137-21AMS** Units: **µg/L** Analysis Date: **2/10/2012 12:44 PM**

Client ID: Run ID: **VOA6_120210A** SeqNo: **2683890** Prep Date: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	2175	250	2500	0	87	80-120	0			
1,1,2,2-Tetrachloroethane	2442	250	2500	0	97.7	72-120	0			
1,1,2-Trichloroethane	2548	250	2500	0	102	80-120	0			
1,1-Dichloroethane	2229	250	2500	0	89.2	76-120	0			
1,1-Dichloroethene	2084	250	2500	0	83.4	73-124	0			
1,2,4-Trimethylbenzene	2266	250	2500	0	90.6	68-123	0			
1,2-Dibromoethane	2453	250	2500	0	98.1	80-120	0			
1,2-Dichloroethane	2271	250	2500	0	90.9	78-120	0			
1,2-Dichloropropane	2282	250	2500	0	91.3	80-120	0			
1,3,5-Trimethylbenzene	2167	250	2500	0	86.7	80-120	0			
2-Butanone	5405	500	5000	0	108	58-132	0			
2-Hexanone	5469	500	5000	0	109	61-130	0			
4-Isopropyltoluene	1956	250	2500	0	78.2	79-120	0			S
4-Methyl-2-pentanone	5538	500	5000	0	111	65-127	0			
Acetone	6196	500	5000	0	124	59-137	0			
Benzene	2213	250	2500	0	88.5	73-121	0			
Bromodichloromethane	2371	250	2500	0	94.8	80-120	0			
Bromoform	2806	250	2500	0	112	79-120	0			
Bromomethane	2129	250	2500	0	85.2	66-137	0			
Carbon disulfide	4226	500	5000	0	84.5	68-141	0			
Carbontetrachloride	1991	250	2500	0	79.7	75-124	0			
Chlorobenzene	2391	250	2500	0	95.6	80-120	0			
Chloroethane	2218	250	2500	0	88.7	76-121	0			
Chloroform	2384	250	2500	0	95.4	80-120	0			
Chloromethane	2072	250	2500	0	82.9	67-123	0			
cis-1,2-Dichloroethene	4573	250	2500	2122	98	78-120	0			
cis-1,3-Dichloropropene	2396	250	2500	0	95.8	80-120	0			
Dibromochloromethane	2518	250	2500	0	101	80-120	0			
Ethylbenzene	2367	250	2500	0	94.7	80-120	0			
Isopropylbenzene	2312	250	2500	0	92.5	80-120	0			
m,p-Xylene	4304	500	5000	0	86.1	78-121	0			
Methyl tert-butyl ether	2426	250	2500	0	97	73-121	0			
Methylenechloride	2339	500	2500	0	93.6	65-133	0			
Naphthalene	2423	250	2500	0	96.9	65-135	0			
n-Butylbenzene	1984	250	2500	178.4	72.2	77-120	0			S
n-Propylbenzene	2099	250	2500	0	84	78-120	0			
o-Xylene	2182	250	2500	0	87.3	80-120	0			
sec-Butylbenzene	1974	250	2500	0	78.9	78-120	0			
Styrene	2458	250	2500	0	98.3	80-120	0			
Tetrachloroethene	2301	250	2500	0	92	79-120	0			
Toluene	2322	250	2500	0	92.9	80-120	0			
trans-1,2-Dichloroethene	2261	250	2500	0	90.4	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R123191** Instrument ID: **VOA6** Method: **SW8260**

trans-1,3-Dichloropropene	2410	250	2500	0	96.4	80-120	0
Trichloroethene	2425	250	2500	116.5	92.4	80-120	0
Vinyl chloride	2091	100	2500	0	83.6	70-127	0
Xylenes, Total	6486	750	7500	0	86.5	80-120	0
Surr: 1,2-Dichloroethane-d4	*2470*	250	*2500*	0	*98.8*	*70-125*	0
Surr: 4-Bromofluorobenzene	*2633*	250	*2500*	0	*105*	*72-125*	0
Surr: Dibromofluoromethane	*2447*	250	*2500*	0	*97.9*	*71-125*	0
Surr: Toluene-d8	*2482*	250	*2500*	0	*99.3*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123191** Instrument ID: **VOA6** Method: **SW8260**

MSD Sample ID: **1202137-21AMSD** Units: **µg/L** Analysis Date: **2/10/2012 01:10 PM**

Client ID: Run ID: **VOA6_120210A** SeqNo: **2683891** Prep Date: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	2203	250	2500	0	88.1	80-120	2175	1.27	20	
1,1,2,2-Tetrachloroethane	2490	250	2500	0	99.6	72-120	2442	1.94	20	
1,1,2-Trichloroethane	2565	250	2500	0	103	80-120	2548	0.655	20	
1,1-Dichloroethane	2301	250	2500	0	92.1	76-120	2229	3.2	20	
1,1-Dichloroethene	2113	250	2500	0	84.5	73-124	2084	1.39	20	
1,2,4-Trimethylbenzene	2156	250	2500	0	86.2	68-123	2266	4.99	20	
1,2-Dibromoethane	2471	250	2500	0	98.9	80-120	2453	0.756	20	
1,2-Dichloroethane	2413	250	2500	0	96.5	78-120	2271	6.05	20	
1,2-Dichloropropane	2300	250	2500	0	92	80-120	2282	0.763	20	
1,3,5-Trimethylbenzene	2058	250	2500	0	82.3	80-120	2167	5.13	20	
2-Butanone	5418	500	5000	0	108	58-132	5405	0.244	20	
2-Hexanone	5604	500	5000	0	112	61-130	5469	2.43	20	
4-Isopropyltoluene	1897	250	2500	0	75.9	79-120	1956	3.02	20	S
4-Methyl-2-pentanone	5631	500	5000	0	113	65-127	5538	1.66	20	
Acetone	5351	500	5000	0	107	59-137	6196	14.6	20	
Benzene	2218	250	2500	0	88.7	73-121	2213	0.224	20	
Bromodichloromethane	2331	250	2500	0	93.2	80-120	2371	1.71	20	
Bromoform	2764	250	2500	0	111	79-120	2806	1.52	20	
Bromomethane	2207	250	2500	0	88.3	66-137	2129	3.62	20	
Carbon disulfide	4382	500	5000	0	87.6	68-141	4226	3.64	20	
Carbontetrachloride	1959	250	2500	0	78.4	75-124	1991	1.65	20	
Chlorobenzene	2357	250	2500	0	94.3	80-120	2391	1.42	20	
Chloroethane	2183	250	2500	0	87.3	76-121	2218	1.59	20	
Chloroform	2363	250	2500	0	94.5	80-120	2384	0.878	20	
Chloromethane	2213	250	2500	0	88.5	67-123	2072	6.59	20	
cis-1,2-Dichloroethene	4550	250	2500	2122	97.1	78-120	4573	0.509	20	
cis-1,3-Dichloropropene	2357	250	2500	0	94.3	80-120	2396	1.65	20	
Dibromochloromethane	2492	250	2500	0	99.7	80-120	2518	1.04	20	
Ethylbenzene	2265	250	2500	0	90.6	80-120	2367	4.44	20	
Isopropylbenzene	2168	250	2500	0	86.7	80-120	2312	6.41	20	
m,p-Xylene	4129	500	5000	0	82.6	78-121	4304	4.15	20	
Methyl tert-butyl ether	2475	250	2500	0	99	73-121	2426	2.02	20	
Methylenechloride	2376	500	2500	0	95	65-133	2339	1.58	20	
Naphthalene	2551	250	2500	0	102	65-135	2423	5.11	20	
n-Butylbenzene	1905	250	2500	178.4	69.1	77-120	1984	4.04	20	S
n-Propylbenzene	2014	250	2500	0	80.5	78-120	2099	4.18	20	
o-Xylene	2086	250	2500	0	83.4	80-120	2182	4.5	20	
sec-Butylbenzene	1897	250	2500	0	75.9	78-120	1974	3.97	20	S
Styrene	2336	250	2500	0	93.4	80-120	2458	5.11	20	
Tetrachloroethene	2231	250	2500	0	89.2	79-120	2301	3.08	20	
Toluene	2317	250	2500	0	92.7	80-120	2322	0.205	20	
trans-1,2-Dichloroethene	2314	250	2500	0	92.6	78-120	2261	2.32	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123191** Instrument ID: **VOA6** Method: **SW8260**

trans-1,3-Dichloropropene	2399	250	2500	0	95.9	80-120	2410	0.462	20
Trichloroethene	2402	250	2500	116.5	91.4	80-120	2425	0.957	20
Vinyl chloride	2096	100	2500	0	83.8	70-127	2091	0.224	20
Xylenes, Total	6215	750	7500	0	82.9	80-120	6486	4.27	20
Surr: 1,2-Dichloroethane-d4	*2488*	250	*2500*	0	*99.5*	*70-125*	2470	*0.743*	*20*
Surr: 4-Bromofluorobenzene	*2628*	250	*2500*	0	*105*	*72-125*	2633	*0.192*	*20*
Surr: Dibromofluoromethane	*2495*	250	*2500*	0	*99.8*	*71-125*	2447	*1.96*	*20*
Surr: Toluene-d8	*2515*	250	*2500*	0	*101*	*75-125*	2482	*1.34*	*20*

The following samples were analyzed in this batch:

1202144-01A 1202144-03A 1202144-05A
1202144-15A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123221** Instrument ID: **VOA4** Method: **SW8260**

MBLK Sample ID: **VBLKW-120211-R123221** Units: **µg/L** Analysis Date: **2/11/2012 09:18 AM**

Client ID: Run ID: **VOA4_120211A** SeqNo: **2684524** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
2-Butanone	ND	10								
2-Hexanone	ND	10								
4-Isopropyltoluene	ND	5.0								
4-Methyl-2-pentanone	ND	10								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	10								
Carbontetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								
Ethylbenzene	ND	5.0								
Isopropylbenzene	ND	5.0								
m,p-Xylene	ND	10								
Methyl tert-butyl ether	ND	5.0								
Methylenechloride	ND	10								
Naphthalene	ND	5.0								
n-Butylbenzene	ND	5.0								
n-Propylbenzene	ND	5.0								
o-Xylene	ND	5.0								
sec-Butylbenzene	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
trans-1,2-Dichloroethene	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R123221** Instrument ID: **VOA4** Method: **SW8260**

trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Vinyl chloride	ND	2.0					
Xylenes, Total	ND	15					
Surr: 1,2-Dichloroethane-d4	*53.64*	5.0	*50*	0	*107*	*70-125*	0
Surr: 4-Bromofluorobenzene	*50.06*	5.0	*50*	0	*100*	*72-125*	0
Surr: Dibromofluoromethane	*50.55*	5.0	*50*	0	*101*	*71-125*	0
Surr: Toluene-d8	*51.59*	5.0	*50*	0	*103*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123221** Instrument ID: **VOA4** Method: **SW8260**

LCS Sample ID: **VLCSW-120211-R123221** Units: **µg/L** Analysis Date: **2/11/2012 08:29 AM**

Client ID: Run ID: **VOA4_120211A** SeqNo: **2684523** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	55.12	5.0	50	0	110	80-120	0			
1,1,2,2-Tetrachloroethane	44.21	5.0	50	0	88.4	72-120	0			
1,1,2-Trichloroethane	47	5.0	50	0	94	80-120	0			
1,1-Dichloroethane	48.51	5.0	50	0	97	76-120	0			
1,1-Dichloroethene	48.98	5.0	50	0	98	73-124	0			
1,2,4-Trimethylbenzene	51.72	5.0	50	0	103	68-123	0			
1,2-Dibromoethane	49.8	5.0	50	0	99.6	80-120	0			
1,2-Dichloroethane	51.12	5.0	50	0	102	78-120	0			
1,2-Dichloropropane	48.61	5.0	50	0	97.2	80-120	0			
1,3,5-Trimethylbenzene	51	5.0	50	0	102	80-120	0			
2-Butanone	87.8	10	100	0	87.8	58-132	0			
2-Hexanone	84.13	10	100	0	84.1	61-130	0			
4-Isopropyltoluene	53.9	5.0	50	0	108	79-120	0			
4-Methyl-2-pentanone	85.58	10	100	0	85.6	65-127	0			
Acetone	99.49	10	100	0	99.5	59-137	0			
Benzene	50.33	5.0	50	0	101	73-121	0			
Bromodichloromethane	50.63	5.0	50	0	101	80-120	0			
Bromoform	48.5	5.0	50	0	97	79-120	0			
Bromomethane	50.14	5.0	50	0	100	66-137	0			
Carbon disulfide	101.7	10	100	0	102	68-141	0			
Carbontetrachloride	54.88	5.0	50	0	110	75-124	0			
Chlorobenzene	49.44	5.0	50	0	98.9	80-120	0			
Chloroethane	45.48	5.0	50	0	91	76-121	0			
Chloroform	50.67	5.0	50	0	101	80-120	0			
Chloromethane	43.59	5.0	50	0	87.2	67-123	0			
cis-1,2-Dichloroethene	49.68	5.0	50	0	99.4	78-120	0			
cis-1,3-Dichloropropene	54.28	5.0	50	0	109	80-120	0			
Dibromochloromethane	49.85	5.0	50	0	99.7	80-120	0			
Ethylbenzene	52.14	5.0	50	0	104	80-120	0			
Isopropylbenzene	54.19	5.0	50	0	108	80-120	0			
m,p-Xylene	104.6	10	100	0	105	78-121	0			
Methyl tert-butyl ether	48.05	5.0	50	0	96.1	73-121	0			
Methylenechloride	45.55	10	50	0	91.1	65-133	0			
Naphthalene	43.66	5.0	50	0	87.3	65-135	0			
n-Butylbenzene	49.82	5.0	50	0	99.6	77-120	0			
n-Propylbenzene	51.4	5.0	50	0	103	78-120	0			
o-Xylene	51.32	5.0	50	0	103	80-120	0			
sec-Butylbenzene	54.94	5.0	50	0	110	78-120	0			
Styrene	52	5.0	50	0	104	80-120	0			
Tetrachloroethene	51.57	5.0	50	0	103	79-120	0			
Toluene	50.43	5.0	50	0	101	80-120	0			
trans-1,2-Dichloroethene	50.82	5.0	50	0	102	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R123221** Instrument ID: **VOA4** Method: **SW8260**

trans-1,3-Dichloropropene	45.18	5.0	50	0	90.4	80-120	0
Trichloroethene	49.56	5.0	50	0	99.1	80-120	0
Vinyl chloride	49.67	2.0	50	0	99.3	70-127	0
Xylenes, Total	156	15	150	0	104	80-120	0
Surr: 1,2-Dichloroethane-d4	*52.54*	5.0	*50*	0	*105*	*70-125*	0
Surr: 4-Bromofluorobenzene	*53.44*	5.0	*50*	0	*107*	*72-125*	0
Surr: Dibromofluoromethane	*52.18*	5.0	*50*	0	*104*	*71-125*	0
Surr: Toluene-d8	*50.13*	5.0	*50*	0	*100*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123221** Instrument ID: **VOA4** Method: **SW8260**

MS Sample ID: **1202275-07ZMS** Units: **µg/L** Analysis Date: **2/11/2012 04:10 PM**

Client ID: Run ID: **VOA4_120211A** SeqNo: **2684810** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	55.23	5.0	50	0	110	80-120	0			
1,1,2,2-Tetrachloroethane	44.31	5.0	50	0	88.6	72-120	0			
1,1,2-Trichloroethane	46.85	5.0	50	0	93.7	80-120	0			
1,1-Dichloroethane	49.64	5.0	50	0	99.3	76-120	0			
1,1-Dichloroethene	47.9	5.0	50	0	95.8	73-124	0			
1,2,4-Trimethylbenzene	56.21	5.0	50	4.232	104	68-123	0			
1,2-Dibromoethane	50.19	5.0	50	0	100	80-120	0			
1,2-Dichloroethane	53.7	5.0	50	0	107	78-120	0			
1,2-Dichloropropane	48.78	5.0	50	0	97.6	80-120	0			
1,3,5-Trimethylbenzene	51.02	5.0	50	0	102	80-120	0			
2-Butanone	87.69	10	100	0	87.7	58-132	0			
2-Hexanone	95.14	10	100	0	95.1	61-130	0			
4-Isopropyltoluene	54.16	5.0	50	0	108	79-120	0			
4-Methyl-2-pentanone	92.67	10	100	0	92.7	65-127	0			
Acetone	92.25	10	100	0	92.3	59-137	0			
Benzene	77.73	5.0	50	31.02	93.4	73-121	0			
Bromodichloromethane	48.54	5.0	50	0	97.1	80-120	0			
Bromoform	45.33	5.0	50	0	90.7	79-120	0			
Bromomethane	40.8	5.0	50	0	81.6	66-137	0			
Carbon disulfide	104.6	10	100	0	105	68-141	0			
Carbontetrachloride	43.63	5.0	50	0	87.3	75-124	0			
Chlorobenzene	50.71	5.0	50	1.835	97.8	80-120	0			
Chloroethane	47.58	5.0	50	0	95.2	76-121	0			
Chloroform	51.84	5.0	50	0	104	80-120	0			
Chloromethane	40.18	5.0	50	0	80.4	67-123	0			
cis-1,2-Dichloroethene	48.83	5.0	50	0.4376	96.8	78-120	0			
cis-1,3-Dichloropropene	43.88	5.0	50	0	87.8	80-120	0			
Dibromochloromethane	46.58	5.0	50	0	93.2	80-120	0			
Ethylbenzene	53.08	5.0	50	1.692	103	80-120	0			
Isopropylbenzene	156.4	5.0	50	110.4	92.1	80-120	0			
m,p-Xylene	114.8	10	100	9.66	105	78-121	0			
Methyl tert-butyl ether	640.2	5.0	50	623.7	33	73-121	0			SEO
Methylenechloride	46.04	10	50	0	92.1	65-133	0			
Naphthalene	48.38	5.0	50	4.368	88	65-135	0			
n-Butylbenzene	50.59	5.0	50	2.855	95.5	77-120	0			
n-Propylbenzene	66.24	5.0	50	18.83	94.8	78-120	0			
o-Xylene	54.88	5.0	50	3.713	102	80-120	0			
sec-Butylbenzene	57.34	5.0	50	0	115	78-120	0			
Styrene	52.05	5.0	50	0	104	80-120	0			
Tetrachloroethene	51.08	5.0	50	0	102	79-120	0			
Toluene	51.92	5.0	50	3.165	97.5	80-120	0			
trans-1,2-Dichloroethene	54.82	5.0	50	5.888	97.9	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R123221** Instrument ID: **VOA4** Method: **SW8260**

trans-1,3-Dichloropropene	37.37	5.0	50	0	74.7	80-120	0	S
Trichloroethene	49.21	5.0	50	0	98.4	80-120	0	
Vinyl chloride	47.66	2.0	50	0	95.3	70-127	0	
Xylenes, Total	169.7	15	150	13.37	104	80-120	0	
Surr: 1,2-Dichloroethane-d4	*54.87*	5.0	*50*	0	*110*	*70-125*	0	
Surr: 4-Bromofluorobenzene	*56.74*	5.0	*50*	0	*113*	*72-125*	0	
Surr: Dibromofluoromethane	*51.95*	5.0	*50*	0	*104*	*71-125*	0	
Surr: Toluene-d8	*49.18*	5.0	*50*	0	*98.4*	*75-125*	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123221** Instrument ID: **VOA4** Method: **SW8260**

MSD Sample ID: **1202275-07ZMSD** Units: **µg/L** Analysis Date: **2/11/2012 04:34 PM**

Client ID: Run ID: **VOA4_120211A** SeqNo: **2684811** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	54.34	5.0	50	0	109	80-120	55.23	1.62	20	
1,1,2,2-Tetrachloroethane	46.03	5.0	50	0	92.1	72-120	44.31	3.79	20	
1,1,2-Trichloroethane	48.11	5.0	50	0	96.2	80-120	46.85	2.66	20	
1,1-Dichloroethane	48.37	5.0	50	0	96.7	76-120	49.64	2.6	20	
1,1-Dichloroethene	46.23	5.0	50	0	92.5	73-124	47.9	3.56	20	
1,2,4-Trimethylbenzene	53.99	5.0	50	4.232	99.5	68-123	56.21	4.03	20	
1,2-Dibromoethane	52.59	5.0	50	0	105	80-120	50.19	4.66	20	
1,2-Dichloroethane	54.24	5.0	50	0	108	78-120	53.7	1.01	20	
1,2-Dichloropropane	47.76	5.0	50	0	95.5	80-120	48.78	2.11	20	
1,3,5-Trimethylbenzene	49.38	5.0	50	0	98.8	80-120	51.02	3.25	20	
2-Butanone	98.69	10	100	0	98.7	58-132	87.69	11.8	20	
2-Hexanone	108.5	10	100	0	108	61-130	95.14	13.1	20	
4-Isopropyltoluene	50.93	5.0	50	0	102	79-120	54.16	6.14	20	
4-Methyl-2-pentanone	104.7	10	100	0	105	65-127	92.67	12.2	20	
Acetone	105.5	10	100	0	105	59-137	92.25	13.4	20	
Benzene	75.82	5.0	50	31.02	89.6	73-121	77.73	2.49	20	
Bromodichloromethane	48.17	5.0	50	0	96.3	80-120	48.54	0.771	20	
Bromoform	48.76	5.0	50	0	97.5	79-120	45.33	7.3	20	
Bromomethane	41.3	5.0	50	0	82.6	66-137	40.8	1.22	20	
Carbon disulfide	100.6	10	100	0	101	68-141	104.6	3.87	20	
Carbontetrachloride	45.11	5.0	50	0	90.2	75-124	43.63	3.33	20	
Chlorobenzene	49.51	5.0	50	1.835	95.3	80-120	50.71	2.4	20	
Chloroethane	47.52	5.0	50	0	95	76-121	47.58	0.133	20	
Chloroform	50.73	5.0	50	0	101	80-120	51.84	2.16	20	
Chloromethane	39.91	5.0	50	0	79.8	67-123	40.18	0.683	20	
cis-1,2-Dichloroethene	48.72	5.0	50	0.4376	96.6	78-120	48.83	0.228	20	
cis-1,3-Dichloropropene	46.37	5.0	50	0	92.7	80-120	43.88	5.52	20	
Dibromochloromethane	47.91	5.0	50	0	95.8	80-120	46.58	2.8	20	
Ethylbenzene	52.28	5.0	50	1.692	101	80-120	53.08	1.51	20	
Isopropylbenzene	151.8	5.0	50	110.4	82.9	80-120	156.4	3	20	
m,p-Xylene	111	10	100	9.66	101	78-121	114.8	3.35	20	
Methyl tert-butyl ether	660	5.0	50	623.7	72.7	73-121	640.2	3.05	20	SEO
Methylenechloride	44.53	10	50	0	89.1	65-133	46.04	3.34	20	
Naphthalene	51.26	5.0	50	4.368	93.8	65-135	48.38	5.76	20	
n-Butylbenzene	48.47	5.0	50	2.855	91.2	77-120	50.59	4.29	20	
n-Propylbenzene	63.94	5.0	50	18.83	90.2	78-120	66.24	3.53	20	
o-Xylene	53.52	5.0	50	3.713	99.6	80-120	54.88	2.51	20	
sec-Butylbenzene	55.05	5.0	50	0	110	78-120	57.34	4.08	20	
Styrene	50.53	5.0	50	0	101	80-120	52.05	2.97	20	
Tetrachloroethene	50.37	5.0	50	0	101	79-120	51.08	1.4	20	
Toluene	51.06	5.0	50	3.165	95.8	80-120	51.92	1.66	20	
trans-1,2-Dichloroethene	53.2	5.0	50	5.888	94.6	78-120	54.82	2.99	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123221** Instrument ID: **VOA4** Method: **SW8260**

trans-1,3-Dichloropropene	39.94	5.0	50	0	79.9	80-120	37.37	6.65	20	S
Trichloroethene	47.62	5.0	50	0	95.2	80-120	49.21	3.28	20	
Vinyl chloride	45.85	2.0	50	0	91.7	70-127	47.66	3.88	20	
Xylenes, Total	164.6	15	150	13.37	101	80-120	169.7	3.08	20	
Surr: 1,2-Dichloroethane-d4	*56.15*	5.0	*50*	0	*112*	*70-125*	54.87	*2.32*	*20*	
Surr: 4-Bromofluorobenzene	*56.62*	5.0	*50*	0	*113*	*72-125*	56.74	*0.213*	*20*	
Surr: Dibromofluoromethane	*53.22*	5.0	*50*	0	*106*	*71-125*	51.95	*2.41*	*20*	
Surr: Toluene-d8	*49.28*	5.0	*50*	0	*98.6*	*75-125*	49.18	*0.208*	*20*	

The following samples were analyzed in this batch:

1202144-07A 1202144-09A 1202144-11A
1202144-13A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R122884** Instrument ID: **WetChem** Method: **SM4500H+ B**

LCS Sample ID: **WLCSW1-020312-R122884** Units: **pH units** Analysis Date: **2/3/2012 06:00 PM**

Client ID: Run ID: **WETCHEM_120203I** SeqNo: **2676945** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6	0.10	6	0	100	90-110	0			

DUP Sample ID: **1202144-01DDUP** Units: **pH units** Analysis Date: **2/3/2012 06:00 PM**

Client ID: **MW-6-0212** Run ID: **WETCHEM_120203I** SeqNo: **2676953** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.7	0.10	0	0	0	0-0	6.69	0.149	20	H

The following samples were analyzed in this batch:

1202144-01D	1202144-03D	1202144-05D
1202144-07D	1202144-09D	1202144-11D
1202144-13D		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123048** Instrument ID: **WetChem** Method: **SM2320B**

MBLK Sample ID: **WBLKW1-020812-R123048** Units: **mg/L** Analysis Date: **2/8/2012 11:07 AM**

Client ID: Run ID: **WETCHEM_120208A** SeqNo: **2680645** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.0								
Alkalinity, Carbonate (As CaCO3)	ND	5.0								
Alkalinity, Hydroxide (As CaCO3)	ND	5.0								
Alkalinity, Total (As CaCO3)	ND	5.0								

LCS Sample ID: **WLCSW1-020812-R123048** Units: **mg/L** Analysis Date: **2/8/2012 11:07 AM**

Client ID: Run ID: **WETCHEM_120208A** SeqNo: **2680646** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1037	5.0	1000	0	104	80-120	0			

DUP Sample ID: **1202121-36DDUP** Units: **mg/L** Analysis Date: **2/8/2012 11:07 AM**

Client ID: Run ID: **WETCHEM_120208A** SeqNo: **2680661** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	258.6	5.0	0	0	0	0-0	259	0.155	20	
Alkalinity, Carbonate (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	258.6	5.0	0	0	0	0-0	259	0.155	20	

The following samples were analyzed in this batch:

1202144-01D	1202144-03D	1202144-05D
1202144-07D	1202144-09D	1202144-11D
1202144-13D		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123067** Instrument ID: **ICS3000** Method: **E300**

MBLK Sample ID: **WBLKS1-020812-R123067** Units: **mg/L** Analysis Date: **2/8/2012 11:41 AM**

Client ID: Run ID: **ICS3000_120208A** SeqNo: **2680947** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.344	0.50								J
Fluoride	ND	0.10								
Sulfate	ND	0.50								
Surr: Selenate (surr)	*4.816*	0.10	*5*	0	*96.3*	*85-115*	0			

LCS Sample ID: **WLCSS1-020812-R123067** Units: **mg/L** Analysis Date: **2/8/2012 12:02 PM**

Client ID: Run ID: **ICS3000_120208A** SeqNo: **2680951** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.94	0.50	20	0	110	90-110	0			
Fluoride	4.333	0.10	4	0	108	90-110	0			
Sulfate	19.93	0.50	20	0	99.6	90-110	0			
Surr: Selenate (surr)	*5.148*	0.10	*5*	0	*103*	*85-115*	0			

LCSD Sample ID: **WLCSDS1-020812-R123067** Units: **mg/L** Analysis Date: **2/8/2012 12:23 PM**

Client ID: Run ID: **ICS3000_120208A** SeqNo: **2680954** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.8	0.50	20	0	109	90-110	21.94	0.668	20	
Fluoride	4.343	0.10	4	0	109	90-110	4.333	0.231	20	
Sulfate	20.2	0.50	20	0	101	90-110	19.93	1.32	20	
Surr: Selenate (surr)	*5.188*	0.10	*5*	0	*104*	*85-115*	5.148	*0.774*	*20*	

MS Sample ID: **1202144-13DMS** Units: **mg/L** Analysis Date: **2/8/2012 09:01 PM**

Client ID: **East Well-0212** Run ID: **ICS3000_120208A** SeqNo: **2681867** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	165.7	0.50	20	149.5	80.7	80-120	0			EO
Fluoride	5.396	0.10	4	0.648	119	80-120	0			
Sulfate	101.7	0.50	20	67.27	172	80-120	0			SE
Surr: Selenate (surr)	*5.306*	0.10	*5*	0	*106*	*85-115*	0			

MSD Sample ID: **1202144-13DMSD** Units: **mg/L** Analysis Date: **2/8/2012 09:22 PM**

Client ID: **East Well-0212** Run ID: **ICS3000_120208A** SeqNo: **2681868** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	166.4	0.50	20	149.5	84.4	80-120	165.7	0.451	20	EO
Fluoride	5.439	0.10	4	0.648	120	80-120	5.396	0.794	20	
Sulfate	102.6	0.50	20	67.27	176	80-120	101.7	0.853	20	SE
Surr: Selenate (surr)	*5.338*	0.10	*5*	0	*107*	*85-115*	5.306	*0.601*	*20*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123067** Instrument ID: **ICS3000** Method: **E300**

The following samples were analyzed in this batch:

1202144-01D	1202144-03D	1202144-05D
1202144-07D	1202144-09D	1202144-11D
1202144-13D		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123080** Instrument ID: **WetChem** Method: **M2510 B**

MBLK Sample ID: **WBLKW1-020812-R123080** Units: **µmhos/cm** Analysis Date: **2/8/2012 12:30 PM**

Client ID: Run ID: **WETCHEM_120208F** SeqNo: **2681402** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	ND	1.0								

LCS Sample ID: **WLCSW2-020812-R123080** Units: **µmhos/cm** Analysis Date: **2/8/2012 12:30 PM**

Client ID: Run ID: **WETCHEM_120208F** SeqNo: **2681302** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	1494	1.0	1413	0	106	80-120	0			

DUP Sample ID: **1202138-02FDUP** Units: **µmhos/cm** Analysis Date: **2/8/2012 12:30 PM**

Client ID: Run ID: **WETCHEM_120208F** SeqNo: **2681311** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	377	1.0	0	0	0		373	1.07	20	

The following samples were analyzed in this batch:

1202144-01D	1202144-03D	1202144-05D
1202144-07D	1202144-09D	1202144-11D
1202144-13D		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123090** Instrument ID: **Balance1** Method: **M2540C**

MBLK Sample ID: **WBLKW1-R123090** Units: **mg/L** Analysis Date: **2/7/2012 05:00 PM**

Client ID: Run ID: **BALANCE1_120207C** SeqNo: **2681641** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filte	ND	10								

LCS Sample ID: **WLCSW1-R123090** Units: **mg/L** Analysis Date: **2/7/2012 05:00 PM**

Client ID: Run ID: **BALANCE1_120207C** SeqNo: **2681642** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filte	982	10	1000	0	98.2	85-115	0			

DUP Sample ID: **1202144-01DDUP** Units: **mg/L** Analysis Date: **2/7/2012 05:00 PM**

Client ID: **MW-6-0212** Run ID: **BALANCE1_120207C** SeqNo: **2681631** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filte	438	10	0	0	0	0-0	398	9.57	20	

The following samples were analyzed in this batch:

1202144-01D	1202144-03D	1202144-05D
1202144-07D	1202144-09D	1202144-11D
1202144-13D		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202144
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123104** Instrument ID: **ICS3K2** Method: **E300**

MBLK Sample ID: **WBLKW2-020812-R123104** Units: **mg/L** Analysis Date: **2/8/2012 06:11 PM**
Client ID: Run ID: **ICS3K2_120208B** SeqNo: **2681960** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	ND	0.20								
Surr: Selenate (surr)	*4.783*	0.10	*5*	0	*95.7*	*85-115*	0			

LCS Sample ID: **WLCSW2-020812-R123104** Units: **mg/L** Analysis Date: **2/8/2012 06:32 PM**
Client ID: Run ID: **ICS3K2_120208B** SeqNo: **2681962** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	8.014	0.20	8	0	100	90-110	0			
Surr: Selenate (surr)	*4.759*	0.10	*5*	0	*95.2*	*85-115*	0			

LCSD Sample ID: **WLCSDW2-020812-R123104** Units: **mg/L** Analysis Date: **2/8/2012 06:54 PM**
Client ID: Run ID: **ICS3K2_120208B** SeqNo: **2681964** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	7.976	0.20	8	0	99.7	90-110	8.014	0.475	20	
Surr: Selenate (surr)	*4.761*	0.10	*5*	0	*95.2*	*85-115*	4.759	*0.042*	*20*	

The following samples were analyzed in this batch:

1202144-01B	1202144-03B	1202144-05B
1202144-07B	1202144-09B	1202144-11B
1202144-13B		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 13-Feb-12

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
WorkOrder: **1202144**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µmhos/cm	
mg/L	Milligrams per Liter
pH units	

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **03-Feb-12 09:25**

Work Order: **1202144** Received by: **RNG**

Checklist completed by: Raymond N Gamboa (eSignature) 03-Feb-12 (Date) Reviewed by: Chris Bryson (eSignature) 03-Feb-12 (Date)

Matrices: 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):	1.8c, 1.3.c, 2.0c	002	
Cooler(s)/Kit(s):	3638, 3756, 4029		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes: Lid was rec. off the 1L plastic bottle for Wet Chem analysis for sample "South Well." Bottle rec. empty. Logged in the 1L amber bottle to replace it. Anion bottle (for Nitrate (as N) received preserved. Had to change analyte to Nitrate/Nitrite (as N).

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

ALS Environmental

Chain of Custody Form

Page 1 of 2

COC ID: 46579

1202144

NAVAJO REFINING: Navajo Refining Company

Project: Navajo Lea Refinery Semi-Annual

ALS Project Manager:

Customer Information		Project Information	
Purchase Order	106881	Project Name	Navajo Lea Refinery Semi-Annual
Work Order		Project Number	
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company
Send Report To	Aaron Strange	Invoice Attn	Carrie Hernandez
Address	P.O. Box 159	Address	PO Box 159
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211
Phone	(505) 748-3311	Phone	(575) 748-6733
Fax	(505) 746-5421	Fax	(575) 746-5421
e-Mail Address	aaron.strange@hollycorp.com	e-Mail Address	carrie.hernandez@hollycorp.com

A	VOC (8260) Select
B	LL SVOC (8270) TCL
C	Total Metals (6020/7000) Hg
D	Dissolved Metals (6020/7000) Select
E	Anions (300) Cl,F,SO4
F	Alkalinity
G	pH
H	Specific Conductivity
I	TDS
J	NITRATE as N

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-6-0212	02/02/12	0905	H2O	2,3,8	6		X	X	X	X	X	X	X	X	X	
2	RW-1-0212	02/02/12	1000	H2O	2,3,8	6											
3	MW-7-0212	02/02/12	1045	H2O	2,3,8	6											
4	MW-1-0212	02/02/12	1135	H2O	2,3,8	6											
5	SOUTH WELL-0212	02/02/12	1205	H2O	2,3,8	6											
6	NORTH WELL-0212	02/02/12	1218	H2O	2,3,8	6											
7	EAST WELL-0212	02/02/12	1240	H2O	2,3,8	6		X	X	X	X	X	X	X	X	X	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: SOZ Jerry SOZ Jerry

Shipment Method: FED X

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

Results Due Date:

Relinquished by: SOZ Jerry Date: 02/02/12 Time: 1400

Received by:

Relinquished by: Date: Time:

Received by (Laboratory): 2/3/12 09:15

Logged by (Laboratory): Date: Time:

Checked by (Laboratory):

Notes: 10 Day TAT. Cc Dave Boyer on Final Report. dboyer@SESI-nm.com

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)

☑ Level II Std QC ☐ TRRP CheckList

☐ Level III Std QC/Raw Data ☐ TRRP Level IV

☐ Level IV SW846/CLP

☐ Other / EDD

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 Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All in...

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Chain of Custody Form

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Page 2 of 2

COC ID: 46578

☐ Cincinnati, OH +1 513 733 5336 ☐ Holland, MI +1 513 733 5336 ☐ Salt Lake City, UT +1 801 266 7700
☐ Everett, WA +1 425 356 2600 ☐ Houston, TX +1 281 530 5656 ☐ Spring City, PA +1 610 948 4903
☐ Fort Collins, CO +1 970 490 1511 ☐ Middletown, PA +1 717 944 5541 ☐ York, PA +1 717 505 5280

ALS Project Manager: ALS Work Order #: 1202194

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	106881	Project Name	Navajo Lea Refinery Semi-Annual	A	VOC (8260) Select
Work Order		Project Number		B	LL SVOC (8270) TCL
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (6020/7000) Hg
Send Report To	Aaron Strange	Invoice Attn	Carrie Hernandez	D	Dissolved Metals (6020/7000) Select
Address	P.O. Box 159	Address	PO Box 159	E	Anions (300) Cl,F,SO4
				F	Alkalinity
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	pH
Phone	(505) 748-3311	Phone	(575) 748-6733	H	Specific Conductivity
Fax	(505) 746-5421	Fax	(575) 746-5421	I	TDS
e-Mail Address	aaron.strange@hollycorp.com	e-Mail Address	carrie.hernandez@hollycorp.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-6-0212	02/02/12	0905	H2O	1,8		X										
2	RAW-1-0212	02/02/12	1000														
3	MW-7-0212	02/02/12	0045														
4	MW-1-0212	02/02/12	1135														
5	SOUTH WELL-0212	02/02/12	1205														
6	NORTH WELL-0212	02/02/12	1218														
7	EAST WELL-0212	02/02/12	1240														
8	TRIP BLANK ID-012612-44	02/02/12	1400	H2O	1,8		X										
9																	
10																	

Sampler(s) Please Print & Sign: Soto, Jerry Soto Jerry

Shipment Method: FED X

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

Results Due Date:

Relinquished by: Soto Jerry Soto Jerry Date: 02/02/12 Time: 1400 Received by:

Relinquished by: Date: Time: Received by (Laboratory): 2/3/12 09:25

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

Notes: 10 Day TAT. Cc Dave Boyer on Final Report. dboyer@SESI-nm.com

Cooler ID	Cooler Temp.

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

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 Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental 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.

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Work Order 1202141

MPS# 0681 7955 4319 4414 PRIORITY OVERNIGHT

43 SGRA

77099
TX-US
IAH

783514 03Feb 00:09 AF IH 5080/9F59 A24

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

CUSTODY SEAL
Date: 02/02/12 Time: 1400
Name:
Company:
Seal Broken By:
Date:

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

CUSTODY SEAL
Date: 02/02/12 Time: 1400
Name:
Company:
Seal Broken By:
Date:

03-Apr-2012

Aaron Strange
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: Navajo Lea Refinery Semi-Annual Work Order: **1202121**

Dear Aaron,

ALS Environmental received 37 samples on 02-Feb-2012 09:20 AM for the analyses presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

The total number of pages in this revised report is 154.

Regards,

Chris Bryson

Electronically approved by: Yvan K. Ty

Chris Bryson
Project Manager

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 03-Apr-12

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: **1202121**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1202121-01	MW-9-0112	Water		1/31/2012 08:30	2/2/2012 09:20	☐
1202121-02	MW-9-0112 (Dissolved)	Water		1/31/2012 08:30	2/2/2012 09:20	☐
1202121-03	MW-10-0112	Water		1/31/2012 09:30	2/2/2012 09:20	☐
1202121-04	MW-10-0112 (Dissolved)	Water		1/31/2012 09:30	2/2/2012 09:20	☐
1202121-05	MW-18-0112	Water		1/31/2012 10:25	2/2/2012 09:20	☐
1202121-06	MW-18-0112 (Dissolved)	Water		1/31/2012 10:25	2/2/2012 09:20	☐
1202121-07	MW-19-0112	Water		1/31/2012 11:25	2/2/2012 09:20	☐
1202121-08	MW-19-0112 (Dissolved)	Water		1/31/2012 11:25	2/2/2012 09:20	☐
1202121-09	MW-20-0112	Water		1/31/2012 12:40	2/2/2012 09:20	☐
1202121-10	MW-20-0112 (Dissolved)	Water		1/31/2012 12:40	2/2/2012 09:20	☐
1202121-11	MW-14-0112	Water		1/31/2012 13:21	2/2/2012 09:20	☐
1202121-12	MW-14-0112 (Dissolved)	Water		1/31/2012 13:21	2/2/2012 09:20	☐
1202121-13	MW-5-0112	Water		1/31/2012 14:20	2/2/2012 09:20	☐
1202121-14	MW-5-0112 (Dissolved)	Water		1/31/2012 14:20	2/2/2012 09:20	☐
1202121-15	MW-21-0112	Water		1/31/2012 15:30	2/2/2012 09:20	☐
1202121-16	MW-21-0112 (Dissolved)	Water		1/31/2012 15:30	2/2/2012 09:20	☐
1202121-17	MW-22-0112	Water		1/31/2012 16:15	2/2/2012 09:20	☐
1202121-18	MW-22-0112 (Dissolved)	Water		1/31/2012 16:15	2/2/2012 09:20	☐
1202121-19	Duplicate-1-0112	Water		1/31/2012	2/2/2012 09:20	☐
1202121-20	Duplicate-1-0112 (Dissolved)	Water		1/31/2012	2/2/2012 09:20	☐
1202121-21	Trip Blank 012612-46	Water		2/1/2012	2/2/2012 09:20	☐
1202121-22	MW-24-0212	Water		2/1/2012 08:50	2/2/2012 09:20	☐
1202121-23	MW-24-0212 (Dissolved)	Water		2/1/2012 08:50	2/2/2012 09:20	☐
1202121-24	MW-23-0212	Water		2/1/2012 09:35	2/2/2012 09:20	☐
1202121-25	MW-23-0212 (Dissolved)	Water		2/1/2012 09:35	2/2/2012 09:20	☐
1202121-26	MW-25-0212	Water		2/1/2012 10:47	2/2/2012 09:20	☐
1202121-27	MW-25-0212 (Dissolved)	Water		2/1/2012 10:47	2/2/2012 09:20	☐
1202121-28	MW-26-0212	Water		2/1/2012 11:25	2/2/2012 09:20	☐
1202121-29	MW-26-0212 (Dissolved)	Water		2/1/2012 11:25	2/2/2012 09:20	☐
1202121-30	MW-11-0212	Water		2/1/2012 12:10	2/2/2012 09:20	☐
1202121-31	MW-11-0212 (Dissolved)	Water		2/1/2012 12:10	2/2/2012 09:20	☐
1202121-32	MW-8-0212	Water		2/1/2012 13:00	2/2/2012 09:20	☐
1202121-33	MW-8-0212 (Dissolved)	Water		2/1/2012 13:00	2/2/2012 09:20	☐
1202121-34	MW-13-0212	Water		2/1/2012 14:00	2/2/2012 09:20	☐
1202121-35	MW-13-0212 (Dissolved)	Water		2/1/2012 14:00	2/2/2012 09:20	☐
1202121-36	MW-27-0212	Water		2/1/2012 14:45	2/2/2012 09:20	☐
1202121-37	MW-27-0212 (Dissolved)	Water		2/1/2012 14:45	2/2/2012 09:20	☐

Client:	Navajo Refining Company
Project:	Navajo Lea Refinery Semi-Annual
Work Order:	1202121

Case Narrative

As the pH analyses were performed in the laboratory, the results are H-flagged as appropriate.

Sample was received outside of holding time for pH.

Total Dissolved Solids, Sample MW-24-0212 : Analytical results are flagged with an H qualifier for Total Dissolved Solids due to analysis outside of hold time per client request.

Batch 58710, Metals, Sample MW-23-0212 (Dissolved) : MS/MSD recoveries were above the control limits for Calcium due to high concentration to the background sample. Results are flagged with an O. The associated LCS recoveries and MS/MSD RPD were within the control limits.

Batch 58710, Metals, Sample MW-23-0212 (Dissolved) : MSD recoveries were above the control limits for Magnesium and Sodium. Results are flagged with an O. The associated LCS recoveries and MS/MSD RPD were within the control limits.

Batch 58710, Metals, Sample MW-23-0212 (Dissolved) : Duplicate RPD was above the control limits for Aluminum.

Batch 58694, Low-Level Semivolatile Organics, Insufficient sample to perform MS/MSD.

Batch R123168, Volatile Organics, Sample 1202137-19 : MSD is for an unrelated sample.

Batch R123176, Volatile Organics, Sample 1202113-10 : MS/MSD is for an unrelated sample.

Batch R123021, Anions, Sample MW-27-0212 : MSD recovery was below the control limits for Chloride due to high concentration to the background sample. Results are flagged with an O. The associated LCS recoveries and MS/MSD RPD were within the control limits.

Batch R123021, Anions, Sample MW-27-0212 : MS/MSD recoveries were above the control limits for Fluoride. The associated LCS recoveries and MS/MSD RPD were within the control limits.

Batch R123021, Anions, Sample MW-27-0212 : MS/MSD recoveries were above the control limits for Sodium due to high concentration to the background sample. The associated LCS recoveries and MS/MSD RPD were within the control limits.

Batch R123067, Anions, Sample 1202144-13 : MS/MSD is for an unrelated sample.

Low-Level Semivolatile Organics : All Internal Standard recoveries were below the control limits for Samples MW-11-0212 and MW-13-0212. Reanalysis confirms matrix interference.

Client requested that only Nitrate (as N) be analyzed. However, upon arrival at ALS Laboratory, the sample containers (for Nitrate as N) were preserved with H2SO4. This analysis requires that the sample(s) be non-preserved. Due to all the samples being preserved, the requested analysis (for Nitrate as N) had to be changed to Anions (300) Nitrate/Nitrite (as N).

Per Client request, Total Dissolved Solids analysis was re-analyzed for Sample MW-24-0212. Re-analysis confirms revised result.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-9-0112
Lab ID: 1202121-01
Collection Date: 1/31/2012 08:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/7/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/7/2012 06:43 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/6/2012 06:42 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/6/2012 06:42 PM
Acenaphthene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Acetophenone	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Anthracene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Atrazine	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/6/2012 06:42 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-9-0112
Lab ID: 1202121-01
Collection Date: 1/31/2012 08:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Bis(2-ethylhexyl)phthalate	**0.00079**		**0.00020**	**mg/L**	1	2/6/2012 06:42 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Caprolactam	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Carbazole	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Chrysene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Dibenzofuran	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Diethyl phthalate	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Fluoranthene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Fluorene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Isophorone	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Naphthalene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Phenanthrene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Phenol	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Pyrene	ND		0.00020	mg/L	1	2/6/2012 06:42 PM
Surr: 2,4,6-Tribromophenol	*46.7*		*34-129*	*%REC*	1	2/6/2012 06:42 PM
Surr: 2-Fluorobiphenyl	*46.1*		*40-125*	*%REC*	1	2/6/2012 06:42 PM
Surr: 2-Fluorophenol	*43.2*		*20-120*	*%REC*	1	2/6/2012 06:42 PM
Surr: 4-Terphenyl-d14	*51.9*		*40-135*	*%REC*	1	2/6/2012 06:42 PM
Surr: Nitrobenzene-d5	*48.8*		*41-120*	*%REC*	1	2/6/2012 06:42 PM
Surr: Phenol-d6	*45.3*		*20-120*	*%REC*	1	2/6/2012 06:42 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 07:19 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-9-0112
Lab ID: 1202121-01
Collection Date: 1/31/2012 08:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
2-Butanone	ND		0.010	mg/L	1	2/9/2012 07:19 PM
2-Hexanone	ND		0.010	mg/L	1	2/9/2012 07:19 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/9/2012 07:19 PM
Acetone	ND		0.010	mg/L	1	2/9/2012 07:19 PM
Benzene	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
Bromodichloromethane	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
Bromoform	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
Bromomethane	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
Carbon disulfide	ND		0.010	mg/L	1	2/9/2012 07:19 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
Chlorobenzene	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
Chloroethane	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
Chloroform	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
Chloromethane	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
Dibromochloromethane	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
Ethylbenzene	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
Isopropylbenzene	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
m,p-Xylene	ND		0.010	mg/L	1	2/9/2012 07:19 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
Methylene chloride	ND		0.010	mg/L	1	2/9/2012 07:19 PM
Naphthalene	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
n-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
n-Propylbenzene	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
o-Xylene	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
Styrene	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
Tetrachloroethene	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
Toluene	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 07:19 PM
Trichloroethene	ND		0.0050	mg/L	1	2/9/2012 07:19 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-9-0112
Lab ID: 1202121-01
Collection Date: 1/31/2012 08:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/9/2012 07:19 PM
Xylenes, Total	ND		0.015	mg/L	1	2/9/2012 07:19 PM
Surr: 1,2-Dichloroethane-d4	*101*		*70-125*	*%REC*	1	2/9/2012 07:19 PM
Surr: 4-Bromofluorobenzene	*96.3*		*72-125*	*%REC*	1	2/9/2012 07:19 PM
Surr: Dibromofluoromethane	*99.9*		*71-125*	*%REC*	1	2/9/2012 07:19 PM
Surr: Toluene-d8	*97.9*		*75-125*	*%REC*	1	2/9/2012 07:19 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**31.5**		**0.500**	**mg/L**	1	2/6/2012 07:44 PM
Fluoride	**2.22**		**0.100**	**mg/L**	1	2/6/2012 07:44 PM
Sulfate	**80.5**		**0.500**	**mg/L**	1	2/6/2012 07:44 PM
Nitrate/Nitrite (as N)	**1.43**		**0.500**	**mg/L**	5	2/6/2012 06:40 PM
Surr: Selenate (surr)	*99.0*		*85-115*	*%REC*	5	2/6/2012 06:40 PM
Surr: Selenate (surr)	*105*		*85-115*	*%REC*	1	2/6/2012 07:44 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**231**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Total (As CaCO3)	**231**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**799**		**1.00**	**µmhos/cm**	1	2/8/2012 10:00 AM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**7.58**	H	**0.100**	**pH units**	1	2/3/2012 02:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**484**		**10.0**	**mg/L**	1	2/3/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-9-0112 (Dissolved)
Lab ID: 1202121-02
Collection Date: 1/31/2012 08:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	ND		0.0100	mg/L	1	2/7/2012 11:15 PM
Arsenic	**0.0341**		**0.00500**	**mg/L**	1	2/7/2012 11:15 PM
Barium	**0.0653**		**0.00500**	**mg/L**	1	2/7/2012 11:15 PM
Boron	**0.108**		**0.0200**	**mg/L**	1	2/9/2012 12:12 PM
Cadmium	ND		0.00200	mg/L	1	2/7/2012 11:15 PM
Calcium	**15.9**		**0.500**	**mg/L**	1	2/7/2012 11:15 PM
Chromium	ND		0.00500	mg/L	1	2/7/2012 11:15 PM
Cobalt	ND		0.00500	mg/L	1	2/7/2012 11:15 PM
Copper	ND		0.00500	mg/L	1	2/7/2012 11:15 PM
Iron	ND		0.200	mg/L	1	2/7/2012 11:15 PM
Lead	ND		0.00500	mg/L	1	2/7/2012 11:15 PM
Magnesium	**1.53**		**0.200**	**mg/L**	1	2/7/2012 11:15 PM
Manganese	ND		0.00500	mg/L	1	2/7/2012 11:15 PM
Molybdenum	ND		0.00500	mg/L	1	2/7/2012 11:15 PM
Nickel	ND		0.00500	mg/L	1	2/7/2012 11:15 PM
Potassium	**2.14**		**0.200**	**mg/L**	1	2/7/2012 11:15 PM
Selenium	ND		0.00500	mg/L	1	2/7/2012 11:15 PM
Silver	ND		0.00500	mg/L	1	2/7/2012 11:15 PM
Sodium	**126**		**0.200**	**mg/L**	1	2/7/2012 11:15 PM
Uranium	ND		0.00500	mg/L	1	2/8/2012 10:00 PM
Zinc	**0.00529**		**0.00500**	**mg/L**	1	2/7/2012 11:15 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-10-0112
Lab ID: 1202121-03
Collection Date: 1/31/2012 09:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/7/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/7/2012 06:52 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/6/2012 07:03 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/6/2012 07:03 PM
Acenaphthene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Acetophenone	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Anthracene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Atrazine	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/6/2012 07:03 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-10-0112
Lab ID: 1202121-03
Collection Date: 1/31/2012 09:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Bis(2-ethylhexyl)phthalate	**0.00033**		**0.00020**	**mg/L**	1	2/6/2012 07:03 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Caprolactam	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Carbazole	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Chrysene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Dibenzofuran	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Diethyl phthalate	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Fluoranthene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Fluorene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Isophorone	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Naphthalene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Phenanthrene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Phenol	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Pyrene	ND		0.00020	mg/L	1	2/6/2012 07:03 PM
Surr: 2,4,6-Tribromophenol	*59.6*		*34-129*	*%REC*	1	2/6/2012 07:03 PM
Surr: 2-Fluorobiphenyl	*65.1*		*40-125*	*%REC*	1	2/6/2012 07:03 PM
Surr: 2-Fluorophenol	*54.8*		*20-120*	*%REC*	1	2/6/2012 07:03 PM
Surr: 4-Terphenyl-d14	*82.7*		*40-135*	*%REC*	1	2/6/2012 07:03 PM
Surr: Nitrobenzene-d5	*64.0*		*41-120*	*%REC*	1	2/6/2012 07:03 PM
Surr: Phenol-d6	*58.9*		*20-120*	*%REC*	1	2/6/2012 07:03 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 07:45 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-10-0112
Lab ID: 1202121-03
Collection Date: 1/31/2012 09:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
2-Butanone	ND		0.010	mg/L	1	2/9/2012 07:45 PM
2-Hexanone	ND		0.010	mg/L	1	2/9/2012 07:45 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/9/2012 07:45 PM
Acetone	ND		0.010	mg/L	1	2/9/2012 07:45 PM
Benzene	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
Bromodichloromethane	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
Bromoform	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
Bromomethane	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
Carbon disulfide	ND		0.010	mg/L	1	2/9/2012 07:45 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
Chlorobenzene	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
Chloroethane	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
Chloroform	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
Chloromethane	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
Dibromochloromethane	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
Ethylbenzene	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
Isopropylbenzene	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
m,p-Xylene	ND		0.010	mg/L	1	2/9/2012 07:45 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
Methylene chloride	ND		0.010	mg/L	1	2/9/2012 07:45 PM
Naphthalene	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
n-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
n-Propylbenzene	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
o-Xylene	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
Styrene	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
Tetrachloroethene	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
Toluene	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 07:45 PM
Trichloroethene	ND		0.0050	mg/L	1	2/9/2012 07:45 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-10-0112
Lab ID: 1202121-03
Collection Date: 1/31/2012 09:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/9/2012 07:45 PM
Xylenes, Total	ND		0.015	mg/L	1	2/9/2012 07:45 PM
Surr: 1,2-Dichloroethane-d4	*99.0*		*70-125*	*%REC*	1	2/9/2012 07:45 PM
Surr: 4-Bromofluorobenzene	*98.4*		*72-125*	*%REC*	1	2/9/2012 07:45 PM
Surr: Dibromofluoromethane	*94.6*		*71-125*	*%REC*	1	2/9/2012 07:45 PM
Surr: Toluene-d8	*98.4*		*75-125*	*%REC*	1	2/9/2012 07:45 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**42.9**		**0.500**	**mg/L**	1	2/6/2012 08:05 PM
Fluoride	**1.00**		**0.100**	**mg/L**	1	2/6/2012 08:05 PM
Sulfate	**87.4**		**0.500**	**mg/L**	1	2/6/2012 08:05 PM
Nitrate/Nitrite (as N)	**1.85**		**0.500**	**mg/L**	5	2/6/2012 07:02 PM
Surr: Selenate (surr)	*99.3*		*85-115*	*%REC*	5	2/6/2012 07:02 PM
Surr: Selenate (surr)	*106*		*85-115*	*%REC*	1	2/6/2012 08:05 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**182**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Total (As CaCO3)	**182**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**714**		**1.00**	**µmhos/cm**	1	2/8/2012 10:00 AM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**7.08**	H	**0.100**	**pH units**	1	2/3/2012 02:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**444**		**10.0**	**mg/L**	1	2/3/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-10-0112 (Dissolved)
Lab ID: 1202121-04
Collection Date: 1/31/2012 09:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	ND		0.0100	mg/L	1	2/7/2012 11:22 PM
Arsenic	ND		0.00500	mg/L	1	2/7/2012 11:22 PM
Barium	**0.0865**		**0.00500**	**mg/L**	1	2/7/2012 11:22 PM
Boron	**0.109**		**0.0200**	**mg/L**	1	2/9/2012 12:19 PM
Cadmium	ND		0.00200	mg/L	1	2/7/2012 11:22 PM
Calcium	**77.9**		**0.500**	**mg/L**	1	2/7/2012 11:22 PM
Chromium	ND		0.00500	mg/L	1	2/7/2012 11:22 PM
Cobalt	ND		0.00500	mg/L	1	2/7/2012 11:22 PM
Copper	ND		0.00500	mg/L	1	2/7/2012 11:22 PM
Iron	ND		0.200	mg/L	1	2/7/2012 11:22 PM
Lead	ND		0.00500	mg/L	1	2/7/2012 11:22 PM
Magnesium	**9.04**		**0.200**	**mg/L**	1	2/7/2012 11:22 PM
Manganese	ND		0.00500	mg/L	1	2/7/2012 11:22 PM
Molybdenum	ND		0.00500	mg/L	1	2/7/2012 11:22 PM
Nickel	ND		0.00500	mg/L	1	2/7/2012 11:22 PM
Potassium	**1.85**		**0.200**	**mg/L**	1	2/7/2012 11:22 PM
Selenium	ND		0.00500	mg/L	1	2/7/2012 11:22 PM
Silver	ND		0.00500	mg/L	1	2/7/2012 11:22 PM
Sodium	**33.3**		**0.200**	**mg/L**	1	2/7/2012 11:22 PM
Uranium	ND		0.00500	mg/L	1	2/8/2012 10:06 PM
Zinc	**0.0252**		**0.00500**	**mg/L**	1	2/7/2012 11:22 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-18-0112
Lab ID: 1202121-05
Collection Date: 1/31/2012 10:25 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/7/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/7/2012 06:54 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/7/2012 06:05 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/7/2012 06:05 PM
Acenaphthene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Acetophenone	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Anthracene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Atrazine	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/7/2012 06:05 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-18-0112
Lab ID: 1202121-05
Collection Date: 1/31/2012 10:25 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Bis(2-ethylhexyl)phthalate	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Caprolactam	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Carbazole	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Chrysene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Dibenzofuran	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Diethyl phthalate	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Fluoranthene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Fluorene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Isophorone	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Naphthalene	**0.00021**		**0.00020**	**mg/L**	1	2/7/2012 06:05 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Phenanthrene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Phenol	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Pyrene	ND		0.00020	mg/L	1	2/7/2012 06:05 PM
Surr: 2,4,6-Tribromophenol	*65.3*		*34-129*	*%REC*	1	2/7/2012 06:05 PM
Surr: 2-Fluorobiphenyl	*72.6*		*40-125*	*%REC*	1	2/7/2012 06:05 PM
Surr: 2-Fluorophenol	*41.0*		*20-120*	*%REC*	1	2/7/2012 06:05 PM
Surr: 4-Terphenyl-d14	*78.8*		*40-135*	*%REC*	1	2/7/2012 06:05 PM
Surr: Nitrobenzene-d5	*73.0*		*41-120*	*%REC*	1	2/7/2012 06:05 PM
Surr: Phenol-d6	*58.2*		*20-120*	*%REC*	1	2/7/2012 06:05 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 08:11 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-18-0112
Lab ID: 1202121-05
Collection Date: 1/31/2012 10:25 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
2-Butanone	ND		0.010	mg/L	1	2/9/2012 08:11 PM
2-Hexanone	ND		0.010	mg/L	1	2/9/2012 08:11 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/9/2012 08:11 PM
Acetone	ND		0.010	mg/L	1	2/9/2012 08:11 PM
Benzene	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
Bromodichloromethane	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
Bromoform	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
Bromomethane	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
Carbon disulfide	ND		0.010	mg/L	1	2/9/2012 08:11 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
Chlorobenzene	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
Chloroethane	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
Chloroform	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
Chloromethane	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
Dibromochloromethane	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
Ethylbenzene	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
Isopropylbenzene	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
m,p-Xylene	ND		0.010	mg/L	1	2/9/2012 08:11 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
Methylene chloride	ND		0.010	mg/L	1	2/9/2012 08:11 PM
Naphthalene	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
n-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
n-Propylbenzene	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
o-Xylene	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
Styrene	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
Tetrachloroethene	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
Toluene	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 08:11 PM
Trichloroethene	ND		0.0050	mg/L	1	2/9/2012 08:11 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-18-0112
Lab ID: 1202121-05
Collection Date: 1/31/2012 10:25 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/9/2012 08:11 PM
Xylenes, Total	ND		0.015	mg/L	1	2/9/2012 08:11 PM
Surr: 1,2-Dichloroethane-d4	*107*		*70-125*	*%REC*	1	2/9/2012 08:11 PM
Surr: 4-Bromofluorobenzene	*101*		*72-125*	*%REC*	1	2/9/2012 08:11 PM
Surr: Dibromofluoromethane	*104*		*71-125*	*%REC*	1	2/9/2012 08:11 PM
Surr: Toluene-d8	*101*		*75-125*	*%REC*	1	2/9/2012 08:11 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**106**		**5.00**	**mg/L**	10	2/7/2012 12:14 PM
Fluoride	**0.722**		**0.100**	**mg/L**	1	2/6/2012 08:26 PM
Sulfate	**94.3**		**5.00**	**mg/L**	10	2/7/2012 12:14 PM
Nitrate/Nitrite (as N)	**3.89**		**0.500**	**mg/L**	5	2/6/2012 07:23 PM
Surr: Selenate (surr)	*105*		*85-115*	*%REC*	1	2/6/2012 08:26 PM
Surr: Selenate (surr)	*98.4*		*85-115*	*%REC*	5	2/6/2012 07:23 PM
Surr: Selenate (surr)	*102*		*85-115*	*%REC*	10	2/7/2012 12:14 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**223**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Total (As CaCO3)	**223**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**1,040**		**1.00**	**µmhos/cm**	1	2/8/2012 10:00 AM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**6.94**	H	**0.100**	**pH units**	1	2/3/2012 02:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**584**		**10.0**	**mg/L**	1	2/3/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-18-0112 (Dissolved)
Lab ID: 1202121-06
Collection Date: 1/31/2012 10:25 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	**0.0113**		**0.0100**	**mg/L**	1	2/7/2012 11:29 PM
Arsenic	ND		0.00500	mg/L	1	2/7/2012 11:29 PM
Barium	**0.0645**		**0.00500**	**mg/L**	1	2/7/2012 11:29 PM
Boron	**0.133**		**0.0200**	**mg/L**	1	2/9/2012 12:26 PM
Cadmium	ND		0.00200	mg/L	1	2/7/2012 11:29 PM
Calcium	**113**		**0.500**	**mg/L**	1	2/7/2012 11:29 PM
Chromium	ND		0.00500	mg/L	1	2/7/2012 11:29 PM
Cobalt	ND		0.00500	mg/L	1	2/7/2012 11:29 PM
Copper	ND		0.00500	mg/L	1	2/7/2012 11:29 PM
Iron	ND		0.200	mg/L	1	2/7/2012 11:29 PM
Lead	ND		0.00500	mg/L	1	2/7/2012 11:29 PM
Magnesium	**11.3**		**0.200**	**mg/L**	1	2/7/2012 11:29 PM
Manganese	ND		0.00500	mg/L	1	2/7/2012 11:29 PM
Molybdenum	ND		0.00500	mg/L	1	2/7/2012 11:29 PM
Nickel	ND		0.00500	mg/L	1	2/7/2012 11:29 PM
Potassium	**1.86**		**0.200**	**mg/L**	1	2/7/2012 11:29 PM
Selenium	ND		0.00500	mg/L	1	2/7/2012 11:29 PM
Silver	ND		0.00500	mg/L	1	2/7/2012 11:29 PM
Sodium	**51.8**		**0.200**	**mg/L**	1	2/7/2012 11:29 PM
Uranium	ND		0.00500	mg/L	1	2/8/2012 10:13 PM
Zinc	**0.0191**		**0.00500**	**mg/L**	1	2/7/2012 11:29 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-19-0112
Lab ID: 1202121-07
Collection Date: 1/31/2012 11:25 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/7/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/7/2012 06:56 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/6/2012 07:42 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/6/2012 07:42 PM
Acenaphthene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Acetophenone	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Anthracene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Atrazine	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/6/2012 07:42 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-19-0112
Lab ID: 1202121-07
Collection Date: 1/31/2012 11:25 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Bis(2-ethylhexyl)phthalate	**0.00023**		**0.00020**	**mg/L**	1	2/6/2012 07:42 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Caprolactam	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Carbazole	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Chrysene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Dibenzofuran	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Diethyl phthalate	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Fluoranthene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Fluorene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Isophorone	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Naphthalene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Phenanthrene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Phenol	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Pyrene	ND		0.00020	mg/L	1	2/6/2012 07:42 PM
Surr: 2,4,6-Tribromophenol	*66.6*		*34-129*	*%REC*	1	2/6/2012 07:42 PM
Surr: 2-Fluorobiphenyl	*69.2*		*40-125*	*%REC*	1	2/6/2012 07:42 PM
Surr: 2-Fluorophenol	*63.1*		*20-120*	*%REC*	1	2/6/2012 07:42 PM
Surr: 4-Terphenyl-d14	*78.4*		*40-135*	*%REC*	1	2/6/2012 07:42 PM
Surr: Nitrobenzene-d5	*69.7*		*41-120*	*%REC*	1	2/6/2012 07:42 PM
Surr: Phenol-d6	*64.0*		*20-120*	*%REC*	1	2/6/2012 07:42 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 08:36 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-19-0112
Lab ID: 1202121-07
Collection Date: 1/31/2012 11:25 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
2-Butanone	ND		0.010	mg/L	1	2/9/2012 08:36 PM
2-Hexanone	ND		0.010	mg/L	1	2/9/2012 08:36 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/9/2012 08:36 PM
Acetone	ND		0.010	mg/L	1	2/9/2012 08:36 PM
Benzene	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
Bromodichloromethane	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
Bromoform	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
Bromomethane	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
Carbon disulfide	ND		0.010	mg/L	1	2/9/2012 08:36 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
Chlorobenzene	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
Chloroethane	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
Chloroform	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
Chloromethane	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
Dibromochloromethane	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
Ethylbenzene	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
Isopropylbenzene	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
m,p-Xylene	ND		0.010	mg/L	1	2/9/2012 08:36 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
Methylene chloride	ND		0.010	mg/L	1	2/9/2012 08:36 PM
Naphthalene	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
n-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
n-Propylbenzene	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
o-Xylene	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
Styrene	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
Tetrachloroethene	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
Toluene	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 08:36 PM
Trichloroethene	ND		0.0050	mg/L	1	2/9/2012 08:36 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-19-0112
Lab ID: 1202121-07
Collection Date: 1/31/2012 11:25 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/9/2012 08:36 PM
Xylenes, Total	ND		0.015	mg/L	1	2/9/2012 08:36 PM
Surr: 1,2-Dichloroethane-d4	*102*		*70-125*	*%REC*	1	2/9/2012 08:36 PM
Surr: 4-Bromofluorobenzene	*102*		*72-125*	*%REC*	1	2/9/2012 08:36 PM
Surr: Dibromofluoromethane	*103*		*71-125*	*%REC*	1	2/9/2012 08:36 PM
Surr: Toluene-d8	*103*		*75-125*	*%REC*	1	2/9/2012 08:36 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**610**		**5.00**	**mg/L**	10	2/7/2012 12:35 PM
Fluoride	**0.568**		**0.100**	**mg/L**	1	2/6/2012 08:47 PM
Sulfate	**121**		**5.00**	**mg/L**	10	2/7/2012 12:35 PM
Nitrate/Nitrite (as N)	**4.12**		**0.500**	**mg/L**	5	2/6/2012 07:45 PM
Surr: Selenate (surr)	*99.3*		*85-115*	*%REC*	5	2/6/2012 07:45 PM
Surr: Selenate (surr)	*107*		*85-115*	*%REC*	1	2/6/2012 08:47 PM
Surr: Selenate (surr)	*101*		*85-115*	*%REC*	10	2/7/2012 12:35 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**257**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Total (As CaCO3)	**257**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**2,770**		**1.00**	**µmhos/cm**	1	2/8/2012 10:00 AM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**6.78**	H	**0.100**	**pH units**	1	2/3/2012 02:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**1,770**		**10.0**	**mg/L**	1	2/3/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-19-0112 (Dissolved)
Lab ID: 1202121-08
Collection Date: 1/31/2012 11:25 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	ND		0.0100	mg/L	1	2/7/2012 11:35 PM
Arsenic	ND		0.00500	mg/L	1	2/7/2012 11:35 PM
Barium	**0.0688**		**0.00500**	**mg/L**	1	2/7/2012 11:35 PM
Boron	**0.350**		**0.0200**	**mg/L**	1	2/9/2012 12:33 PM
Cadmium	ND		0.00200	mg/L	1	2/7/2012 11:35 PM
Calcium	**193**		**5.00**	**mg/L**	10	2/8/2012 10:27 PM
Chromium	ND		0.00500	mg/L	1	2/7/2012 11:35 PM
Cobalt	ND		0.00500	mg/L	1	2/7/2012 11:35 PM
Copper	ND		0.00500	mg/L	1	2/7/2012 11:35 PM
Iron	ND		0.200	mg/L	1	2/7/2012 11:35 PM
Lead	ND		0.00500	mg/L	1	2/7/2012 11:35 PM
Magnesium	**19.5**		**0.200**	**mg/L**	1	2/7/2012 11:35 PM
Manganese	**0.00553**		**0.00500**	**mg/L**	1	2/7/2012 11:35 PM
Molybdenum	ND		0.00500	mg/L	1	2/7/2012 11:35 PM
Nickel	**0.00525**		**0.00500**	**mg/L**	1	2/7/2012 11:35 PM
Potassium	**4.22**		**0.200**	**mg/L**	1	2/7/2012 11:35 PM
Selenium	ND		0.00500	mg/L	1	2/7/2012 11:35 PM
Silver	ND		0.00500	mg/L	1	2/7/2012 11:35 PM
Sodium	**210**		**2.00**	**mg/L**	10	2/8/2012 10:27 PM
Uranium	ND		0.00500	mg/L	1	2/8/2012 10:20 PM
Zinc	**0.0345**		**0.00500**	**mg/L**	1	2/7/2012 11:35 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-20-0112
Lab ID: 1202121-09
Collection Date: 1/31/2012 12:40 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/7/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/7/2012 06:58 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/6/2012 08:01 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/6/2012 08:01 PM
Acenaphthene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Acetophenone	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Anthracene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Atrazine	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/6/2012 08:01 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-20-0112
Lab ID: 1202121-09
Collection Date: 1/31/2012 12:40 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Bis(2-ethylhexyl)phthalate	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Caprolactam	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Carbazole	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Chrysene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Dibenzofuran	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Diethyl phthalate	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Fluoranthene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Fluorene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Isophorone	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Naphthalene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Phenanthrene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Phenol	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Pyrene	ND		0.00020	mg/L	1	2/6/2012 08:01 PM
Surr: 2,4,6-Tribromophenol	*75.5*		*34-129*	*%REC*	1	2/6/2012 08:01 PM
Surr: 2-Fluorobiphenyl	*73.5*		*40-125*	*%REC*	1	2/6/2012 08:01 PM
Surr: 2-Fluorophenol	*61.2*		*20-120*	*%REC*	1	2/6/2012 08:01 PM
Surr: 4-Terphenyl-d14	*74.6*		*40-135*	*%REC*	1	2/6/2012 08:01 PM
Surr: Nitrobenzene-d5	*73.4*		*41-120*	*%REC*	1	2/6/2012 08:01 PM
Surr: Phenol-d6	*65.3*		*20-120*	*%REC*	1	2/6/2012 08:01 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 09:01 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-20-0112
Lab ID: 1202121-09
Collection Date: 1/31/2012 12:40 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
2-Butanone	ND		0.010	mg/L	1	2/9/2012 09:01 PM
2-Hexanone	ND		0.010	mg/L	1	2/9/2012 09:01 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/9/2012 09:01 PM
Acetone	ND		0.010	mg/L	1	2/9/2012 09:01 PM
Benzene	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
Bromodichloromethane	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
Bromoform	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
Bromomethane	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
Carbon disulfide	ND		0.010	mg/L	1	2/9/2012 09:01 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
Chlorobenzene	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
Chloroethane	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
Chloroform	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
Chloromethane	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
Dibromochloromethane	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
Ethylbenzene	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
Isopropylbenzene	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
m,p-Xylene	ND		0.010	mg/L	1	2/9/2012 09:01 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
Methylene chloride	ND		0.010	mg/L	1	2/9/2012 09:01 PM
Naphthalene	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
n-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
n-Propylbenzene	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
o-Xylene	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
Styrene	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
Tetrachloroethene	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
Toluene	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 09:01 PM
Trichloroethene	ND		0.0050	mg/L	1	2/9/2012 09:01 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-20-0112
Lab ID: 1202121-09
Collection Date: 1/31/2012 12:40 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/9/2012 09:01 PM
Xylenes, Total	ND		0.015	mg/L	1	2/9/2012 09:01 PM
Surr: 1,2-Dichloroethane-d4	*104*		*70-125*	*%REC*	1	2/9/2012 09:01 PM
Surr: 4-Bromofluorobenzene	*103*		*72-125*	*%REC*	1	2/9/2012 09:01 PM
Surr: Dibromofluoromethane	*99.9*		*71-125*	*%REC*	1	2/9/2012 09:01 PM
Surr: Toluene-d8	*100*		*75-125*	*%REC*	1	2/9/2012 09:01 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**174**		**5.00**	**mg/L**	10	2/7/2012 12:56 PM
Fluoride	**0.641**		**0.100**	**mg/L**	1	2/6/2012 09:08 PM
Sulfate	**61.4**		**0.500**	**mg/L**	1	2/6/2012 09:08 PM
Nitrate/Nitrite (as N)	**2.51**		**0.500**	**mg/L**	5	2/6/2012 08:07 PM
Surr: Selenate (surr)	*103*		*85-115*	*%REC*	1	2/6/2012 09:08 PM
Surr: Selenate (surr)	*100*		*85-115*	*%REC*	5	2/6/2012 08:07 PM
Surr: Selenate (surr)	*99.1*		*85-115*	*%REC*	10	2/7/2012 12:56 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**193**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Total (As CaCO3)	**193**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**1,120**		**1.00**	**µmhos/cm**	1	2/8/2012 10:00 AM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**7.00**	H	**0.100**	**pH units**	1	2/3/2012 02:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**726**		**10.0**	**mg/L**	1	2/3/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-20-0112 (Dissolved)
Lab ID: 1202121-10
Collection Date: 1/31/2012 12:40 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	ND		0.0100	mg/L	1	2/7/2012 11:42 PM
Arsenic	ND		0.00500	mg/L	1	2/7/2012 11:42 PM
Barium	**0.114**		**0.00500**	**mg/L**	1	2/7/2012 11:42 PM
Boron	**0.149**		**0.0200**	**mg/L**	1	2/9/2012 12:55 PM
Cadmium	ND		0.00200	mg/L	1	2/7/2012 11:42 PM
Calcium	**131**		**0.500**	**mg/L**	1	2/7/2012 11:42 PM
Chromium	ND		0.00500	mg/L	1	2/7/2012 11:42 PM
Cobalt	ND		0.00500	mg/L	1	2/7/2012 11:42 PM
Copper	ND		0.00500	mg/L	1	2/7/2012 11:42 PM
Iron	ND		0.200	mg/L	1	2/7/2012 11:42 PM
Lead	ND		0.00500	mg/L	1	2/7/2012 11:42 PM
Magnesium	**14.8**		**0.200**	**mg/L**	1	2/7/2012 11:42 PM
Manganese	ND		0.00500	mg/L	1	2/7/2012 11:42 PM
Molybdenum	ND		0.00500	mg/L	1	2/7/2012 11:42 PM
Nickel	ND		0.00500	mg/L	1	2/7/2012 11:42 PM
Potassium	**1.76**		**0.200**	**mg/L**	1	2/7/2012 11:42 PM
Selenium	ND		0.00500	mg/L	1	2/7/2012 11:42 PM
Silver	ND		0.00500	mg/L	1	2/7/2012 11:42 PM
Sodium	**34.1**		**0.200**	**mg/L**	1	2/7/2012 11:42 PM
Uranium	ND		0.00500	mg/L	1	2/8/2012 10:34 PM
Zinc	**0.0171**		**0.00500**	**mg/L**	1	2/7/2012 11:42 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-14-0112
Lab ID: 1202121-11
Collection Date: 1/31/2012 01:21 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/7/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/7/2012 07:14 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/6/2012 08:21 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/6/2012 08:21 PM
Acenaphthene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Acetophenone	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Anthracene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Atrazine	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/6/2012 08:21 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-14-0112
Lab ID: 1202121-11
Collection Date: 1/31/2012 01:21 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Bis(2-ethylhexyl)phthalate	**0.017**		**0.00080**	**mg/L**	4	2/7/2012 09:41 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Caprolactam	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Carbazole	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Chrysene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Dibenzofuran	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Diethyl phthalate	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Fluoranthene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Fluorene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Isophorone	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Naphthalene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Phenanthrene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Phenol	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Pyrene	ND		0.00020	mg/L	1	2/6/2012 08:21 PM
Surr: 2,4,6-Tribromophenol	*66.3*		*34-129*	*%REC*	1	2/6/2012 08:21 PM
Surr: 2,4,6-Tribromophenol	*48.9*		*34-129*	*%REC*	4	2/7/2012 09:41 PM
Surr: 2-Fluorobiphenyl	*70.8*		*40-125*	*%REC*	4	2/7/2012 09:41 PM
Surr: 2-Fluorobiphenyl	*63.1*		*40-125*	*%REC*	1	2/6/2012 08:21 PM
Surr: 2-Fluorophenol	*57.7*		*20-120*	*%REC*	1	2/6/2012 08:21 PM
Surr: 2-Fluorophenol	*56.2*		*20-120*	*%REC*	4	2/7/2012 09:41 PM
Surr: 4-Terphenyl-d14	*72.0*		*40-135*	*%REC*	1	2/6/2012 08:21 PM
Surr: 4-Terphenyl-d14	*80.8*		*40-135*	*%REC*	4	2/7/2012 09:41 PM
Surr: Nitrobenzene-d5	*66.6*		*41-120*	*%REC*	1	2/6/2012 08:21 PM
Surr: Nitrobenzene-d5	*66.8*		*41-120*	*%REC*	4	2/7/2012 09:41 PM
Surr: Phenol-d6	*59.3*		*20-120*	*%REC*	1	2/6/2012 08:21 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-14-0112
Lab ID: 1202121-11
Collection Date: 1/31/2012 01:21 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Phenol-d6	*46.5*		*20-120*	*%REC*	4	2/7/2012 09:41 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
2-Butanone	ND		0.010	mg/L	1	2/9/2012 09:26 PM
2-Hexanone	ND		0.010	mg/L	1	2/9/2012 09:26 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/9/2012 09:26 PM
Acetone	ND		0.010	mg/L	1	2/9/2012 09:26 PM
Benzene	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
Bromodichloromethane	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
Bromoform	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
Bromomethane	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
Carbon disulfide	ND		0.010	mg/L	1	2/9/2012 09:26 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
Chlorobenzene	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
Chloroethane	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
Chloroform	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
Chloromethane	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
Dibromochloromethane	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
Ethylbenzene	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
Isopropylbenzene	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
m,p-Xylene	ND		0.010	mg/L	1	2/9/2012 09:26 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
Methylene chloride	ND		0.010	mg/L	1	2/9/2012 09:26 PM
Naphthalene	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
n-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
n-Propylbenzene	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
o-Xylene	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 09:26 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-14-0112
Lab ID: 1202121-11
Collection Date: 1/31/2012 01:21 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Styrene	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
Tetrachloroethene	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
Toluene	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
Trichloroethene	ND		0.0050	mg/L	1	2/9/2012 09:26 PM
Vinyl chloride	ND		0.0020	mg/L	1	2/9/2012 09:26 PM
Xylenes, Total	ND		0.015	mg/L	1	2/9/2012 09:26 PM
Surr: 1,2-Dichloroethane-d4	*110*		*70-125*	*%REC*	1	2/9/2012 09:26 PM
Surr: 4-Bromofluorobenzene	*99.5*		*72-125*	*%REC*	1	2/9/2012 09:26 PM
Surr: Dibromofluoromethane	*107*		*71-125*	*%REC*	1	2/9/2012 09:26 PM
Surr: Toluene-d8	*103*		*75-125*	*%REC*	1	2/9/2012 09:26 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**59.7**		**0.500**	**mg/L**	1	2/6/2012 09:29 PM
Fluoride	**0.984**		**0.100**	**mg/L**	1	2/6/2012 09:29 PM
Sulfate	**58.3**		**0.500**	**mg/L**	1	2/6/2012 09:29 PM
Nitrate/Nitrite (as N)	**1.58**		**0.500**	**mg/L**	5	2/6/2012 08:28 PM
Surr: Selenate (surr)	*99.7*		*85-115*	*%REC*	5	2/6/2012 08:28 PM
Surr: Selenate (surr)	*103*		*85-115*	*%REC*	1	2/6/2012 09:29 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**212**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Total (As CaCO3)	**212**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**760**		**1.00**	**µmhos/cm**	1	2/8/2012 10:00 AM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**7.19**	H	**0.100**	**pH units**	1	2/3/2012 02:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**444**		**10.0**	**mg/L**	1	2/3/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-14-0112 (Dissolved)
Lab ID: 1202121-12
Collection Date: 1/31/2012 01:21 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	ND		0.0100	mg/L	1	2/7/2012 11:49 PM
Arsenic	ND		0.00500	mg/L	1	2/7/2012 11:49 PM
Barium	**0.0802**		**0.00500**	**mg/L**	1	2/7/2012 11:49 PM
Boron	**0.129**		**0.0200**	**mg/L**	1	2/9/2012 01:04 PM
Cadmium	ND		0.00200	mg/L	1	2/7/2012 11:49 PM
Calcium	**92.6**		**0.500**	**mg/L**	1	2/7/2012 11:49 PM
Chromium	ND		0.00500	mg/L	1	2/7/2012 11:49 PM
Cobalt	ND		0.00500	mg/L	1	2/7/2012 11:49 PM
Copper	ND		0.00500	mg/L	1	2/7/2012 11:49 PM
Iron	ND		0.200	mg/L	1	2/7/2012 11:49 PM
Lead	ND		0.00500	mg/L	1	2/7/2012 11:49 PM
Magnesium	**10.7**		**0.200**	**mg/L**	1	2/7/2012 11:49 PM
Manganese	**0.0276**		**0.00500**	**mg/L**	1	2/7/2012 11:49 PM
Molybdenum	**0.00608**		**0.00500**	**mg/L**	1	2/7/2012 11:49 PM
Nickel	**0.0186**		**0.00500**	**mg/L**	1	2/7/2012 11:49 PM
Potassium	**2.84**		**0.200**	**mg/L**	1	2/7/2012 11:49 PM
Selenium	ND		0.00500	mg/L	1	2/7/2012 11:49 PM
Silver	ND		0.00500	mg/L	1	2/7/2012 11:49 PM
Sodium	**27.0**		**0.200**	**mg/L**	1	2/7/2012 11:49 PM
Uranium	ND		0.00500	mg/L	1	2/8/2012 10:40 PM
Zinc	**0.0287**		**0.00500**	**mg/L**	1	2/7/2012 11:49 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-5-0112
Lab ID: 1202121-13
Collection Date: 1/31/2012 02:20 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/7/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/7/2012 07:16 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/7/2012 08:02 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/7/2012 08:02 PM
Acenaphthene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Acetophenone	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Anthracene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Atrazine	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/7/2012 08:02 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-5-0112
Lab ID: 1202121-13
Collection Date: 1/31/2012 02:20 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Bis(2-ethylhexyl)phthalate	**0.0075**		**0.00020**	**mg/L**	1	2/7/2012 08:02 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Caprolactam	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Carbazole	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Chrysene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Dibenzofuran	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Diethyl phthalate	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Fluoranthene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Fluorene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Isophorone	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Naphthalene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Phenanthrene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Phenol	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Pyrene	ND		0.00020	mg/L	1	2/7/2012 08:02 PM
Surr: 2,4,6-Tribromophenol	*66.0*		*34-129*	*%REC*	1	2/7/2012 08:02 PM
Surr: 2-Fluorobiphenyl	*77.9*		*40-125*	*%REC*	1	2/7/2012 08:02 PM
Surr: 2-Fluorophenol	*65.1*		*20-120*	*%REC*	1	2/7/2012 08:02 PM
Surr: 4-Terphenyl-d14	*82.3*		*40-135*	*%REC*	1	2/7/2012 08:02 PM
Surr: Nitrobenzene-d5	*68.7*		*41-120*	*%REC*	1	2/7/2012 08:02 PM
Surr: Phenol-d6	*63.1*		*20-120*	*%REC*	1	2/7/2012 08:02 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 08:52 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-5-0112
Lab ID: 1202121-13
Collection Date: 1/31/2012 02:20 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
2-Butanone	ND		0.010	mg/L	1	2/9/2012 08:52 PM
2-Hexanone	ND		0.010	mg/L	1	2/9/2012 08:52 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/9/2012 08:52 PM
Acetone	ND		0.010	mg/L	1	2/9/2012 08:52 PM
Benzene	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
Bromodichloromethane	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
Bromoform	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
Bromomethane	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
Carbon disulfide	ND		0.010	mg/L	1	2/9/2012 08:52 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
Chlorobenzene	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
Chloroethane	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
Chloroform	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
Chloromethane	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
Dibromochloromethane	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
Ethylbenzene	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
Isopropylbenzene	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
m,p-Xylene	ND		0.010	mg/L	1	2/9/2012 08:52 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
Methylene chloride	ND		0.010	mg/L	1	2/9/2012 08:52 PM
Naphthalene	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
n-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
n-Propylbenzene	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
o-Xylene	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
Styrene	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
Tetrachloroethene	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
Toluene	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 08:52 PM
Trichloroethene	ND		0.0050	mg/L	1	2/9/2012 08:52 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-5-0112
Lab ID: 1202121-13
Collection Date: 1/31/2012 02:20 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/9/2012 08:52 PM
Xylenes, Total	ND		0.015	mg/L	1	2/9/2012 08:52 PM
Surr: 1,2-Dichloroethane-d4	*104*		*70-125*	*%REC*	1	2/9/2012 08:52 PM
Surr: 4-Bromofluorobenzene	*91.6*		*72-125*	*%REC*	1	2/9/2012 08:52 PM
Surr: Dibromofluoromethane	*99.3*		*71-125*	*%REC*	1	2/9/2012 08:52 PM
Surr: Toluene-d8	*104*		*75-125*	*%REC*	1	2/9/2012 08:52 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**26.9**		**0.500**	**mg/L**	1	2/6/2012 09:51 PM
Fluoride	**1.04**		**0.100**	**mg/L**	1	2/6/2012 09:51 PM
Sulfate	**61.2**		**0.500**	**mg/L**	1	2/6/2012 09:51 PM
Nitrate/Nitrite (as N)	**2.49**		**0.500**	**mg/L**	5	2/6/2012 08:50 PM
Surr: Selenate (surr)	*103*		*85-115*	*%REC*	1	2/6/2012 09:51 PM
Surr: Selenate (surr)	*100*		*85-115*	*%REC*	5	2/6/2012 08:50 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**294**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Total (As CaCO3)	**294**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**815**		**1.00**	**µmhos/cm**	1	2/8/2012 10:00 AM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**7.02**	H	**0.100**	**pH units**	1	2/3/2012 02:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**504**		**10.0**	**mg/L**	1	2/3/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-5-0112 (Dissolved)
Lab ID: 1202121-14
Collection Date: 1/31/2012 02:20 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	ND		0.0100	mg/L	1	2/7/2012 11:56 PM
Arsenic	ND		0.00500	mg/L	1	2/7/2012 11:56 PM
Barium	**0.0972**		**0.00500**	**mg/L**	1	2/7/2012 11:56 PM
Boron	**0.0557**		**0.0200**	**mg/L**	1	2/9/2012 01:11 PM
Cadmium	ND		0.00200	mg/L	1	2/7/2012 11:56 PM
Calcium	**90.9**		**0.500**	**mg/L**	1	2/7/2012 11:56 PM
Chromium	ND		0.00500	mg/L	1	2/7/2012 11:56 PM
Cobalt	ND		0.00500	mg/L	1	2/7/2012 11:56 PM
Copper	ND		0.00500	mg/L	1	2/7/2012 11:56 PM
Iron	ND		0.200	mg/L	1	2/7/2012 11:56 PM
Lead	ND		0.00500	mg/L	1	2/7/2012 11:56 PM
Magnesium	**11.4**		**0.200**	**mg/L**	1	2/7/2012 11:56 PM
Manganese	ND		0.00500	mg/L	1	2/7/2012 11:56 PM
Molybdenum	ND		0.00500	mg/L	1	2/7/2012 11:56 PM
Nickel	ND		0.00500	mg/L	1	2/7/2012 11:56 PM
Potassium	**1.96**		**0.200**	**mg/L**	1	2/7/2012 11:56 PM
Selenium	ND		0.00500	mg/L	1	2/7/2012 11:56 PM
Silver	ND		0.00500	mg/L	1	2/7/2012 11:56 PM
Sodium	**43.6**		**0.200**	**mg/L**	1	2/7/2012 11:56 PM
Uranium	ND		0.00500	mg/L	1	2/8/2012 10:47 PM
Zinc	**0.00948**		**0.00500**	**mg/L**	1	2/7/2012 11:56 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-21-0112
Lab ID: 1202121-15
Collection Date: 1/31/2012 03:30 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/7/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/7/2012 07:18 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/7/2012 08:22 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
2,6-Dinitrotoluene	**0.00087**		**0.00020**	**mg/L**	1	2/7/2012 08:22 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/7/2012 08:22 PM
Acenaphthene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Acetophenone	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Anthracene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Atrazine	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/7/2012 08:22 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-21-0112
Lab ID: 1202121-15
Collection Date: 1/31/2012 03:30 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Bis(2-ethylhexyl)phthalate	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Caprolactam	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Carbazole	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Chrysene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Dibenzofuran	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Diethyl phthalate	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Fluoranthene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Fluorene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Isophorone	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Naphthalene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Phenanthrene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Phenol	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Pyrene	ND		0.00020	mg/L	1	2/7/2012 08:22 PM
Surr: 2,4,6-Tribromophenol	*63.8*		*34-129*	*%REC*	1	2/7/2012 08:22 PM
Surr: 2-Fluorobiphenyl	*70.4*		*40-125*	*%REC*	1	2/7/2012 08:22 PM
Surr: 2-Fluorophenol	*68.5*		*20-120*	*%REC*	1	2/7/2012 08:22 PM
Surr: 4-Terphenyl-d14	*79.6*		*40-135*	*%REC*	1	2/7/2012 08:22 PM
Surr: Nitrobenzene-d5	*72.9*		*41-120*	*%REC*	1	2/7/2012 08:22 PM
Surr: Phenol-d6	*63.0*		*20-120*	*%REC*	1	2/7/2012 08:22 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 09:44 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-21-0112
Lab ID: 1202121-15
Collection Date: 1/31/2012 03:30 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
2-Butanone	ND		0.010	mg/L	1	2/9/2012 09:44 PM
2-Hexanone	ND		0.010	mg/L	1	2/9/2012 09:44 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/9/2012 09:44 PM
Acetone	ND		0.010	mg/L	1	2/9/2012 09:44 PM
Benzene	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
Bromodichloromethane	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
Bromoform	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
Bromomethane	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
Carbon disulfide	ND		0.010	mg/L	1	2/9/2012 09:44 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
Chlorobenzene	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
Chloroethane	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
Chloroform	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
Chloromethane	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
Dibromochloromethane	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
Ethylbenzene	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
Isopropylbenzene	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
m,p-Xylene	ND		0.010	mg/L	1	2/9/2012 09:44 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
Methylene chloride	ND		0.010	mg/L	1	2/9/2012 09:44 PM
Naphthalene	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
n-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
n-Propylbenzene	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
o-Xylene	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
Styrene	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
Tetrachloroethene	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
Toluene	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 09:44 PM
Trichloroethene	ND		0.0050	mg/L	1	2/9/2012 09:44 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-21-0112
Lab ID: 1202121-15
Collection Date: 1/31/2012 03:30 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/9/2012 09:44 PM
Xylenes, Total	ND		0.015	mg/L	1	2/9/2012 09:44 PM
Surr: 1,2-Dichloroethane-d4	*101*		*70-125*	*%REC*	1	2/9/2012 09:44 PM
Surr: 4-Bromofluorobenzene	*92.5*		*72-125*	*%REC*	1	2/9/2012 09:44 PM
Surr: Dibromofluoromethane	*99.7*		*71-125*	*%REC*	1	2/9/2012 09:44 PM
Surr: Toluene-d8	*103*		*75-125*	*%REC*	1	2/9/2012 09:44 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**200**		**5.00**	**mg/L**	10	2/7/2012 01:18 PM
Fluoride	**0.229**		**0.100**	**mg/L**	1	2/6/2012 10:54 PM
Sulfate	**64.7**		**0.500**	**mg/L**	1	2/6/2012 10:54 PM
Nitrate/Nitrite (as N)	**2.84**		**0.500**	**mg/L**	5	2/6/2012 09:55 PM
Surr: Selenate (surr)	*105*		*85-115*	*%REC*	1	2/6/2012 10:54 PM
Surr: Selenate (surr)	*99.9*		*85-115*	*%REC*	5	2/6/2012 09:55 PM
Surr: Selenate (surr)	*99.9*		*85-115*	*%REC*	10	2/7/2012 01:18 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**505**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Total (As CaCO3)	**505**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**1,720**		**1.00**	**µmhos/cm**	1	2/8/2012 10:00 AM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**6.46**	H	**0.100**	**pH units**	1	2/3/2012 02:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**1,040**		**10.0**	**mg/L**	1	2/3/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-21-0112 (Dissolved)
Lab ID: 1202121-16
Collection Date: 1/31/2012 03:30 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	ND		0.0100	mg/L	1	2/8/2012 12:03 AM
Arsenic	ND		0.00500	mg/L	1	2/8/2012 12:03 AM
Barium	**0.245**		**0.00500**	**mg/L**	1	2/8/2012 12:03 AM
Boron	**0.216**		**0.0200**	**mg/L**	1	2/9/2012 01:18 PM
Cadmium	ND		0.00200	mg/L	1	2/8/2012 12:03 AM
Calcium	**214**		**5.00**	**mg/L**	10	2/8/2012 11:01 PM
Chromium	ND		0.00500	mg/L	1	2/8/2012 12:03 AM
Cobalt	ND		0.00500	mg/L	1	2/8/2012 12:03 AM
Copper	ND		0.00500	mg/L	1	2/8/2012 12:03 AM
Iron	ND		0.200	mg/L	1	2/8/2012 12:03 AM
Lead	ND		0.00500	mg/L	1	2/8/2012 12:03 AM
Magnesium	**22.7**		**0.200**	**mg/L**	1	2/8/2012 12:03 AM
Manganese	**0.0375**		**0.00500**	**mg/L**	1	2/8/2012 12:03 AM
Molybdenum	ND		0.00500	mg/L	1	2/8/2012 12:03 AM
Nickel	**0.00746**		**0.00500**	**mg/L**	1	2/8/2012 12:03 AM
Potassium	**2.72**		**0.200**	**mg/L**	1	2/8/2012 12:03 AM
Selenium	ND		0.00500	mg/L	1	2/8/2012 12:03 AM
Silver	ND		0.00500	mg/L	1	2/8/2012 12:03 AM
Sodium	**56.3**		**0.200**	**mg/L**	1	2/8/2012 12:03 AM
Uranium	**0.00704**		**0.00500**	**mg/L**	1	2/8/2012 10:54 PM
Zinc	**0.0170**		**0.00500**	**mg/L**	1	2/8/2012 12:03 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-22-0112
Lab ID: 1202121-17
Collection Date: 1/31/2012 04:15 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/7/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/7/2012 07:20 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/6/2012 09:20 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/6/2012 09:20 PM
Acenaphthene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Acetophenone	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Anthracene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Atrazine	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/6/2012 09:20 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-22-0112
Lab ID: 1202121-17
Collection Date: 1/31/2012 04:15 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Bis(2-ethylhexyl)phthalate	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Caprolactam	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Carbazole	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Chrysene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Dibenzofuran	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Diethyl phthalate	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Fluoranthene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Fluorene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Isophorone	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Naphthalene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Phenanthrene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Phenol	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Pyrene	ND		0.00020	mg/L	1	2/6/2012 09:20 PM
Surr: 2,4,6-Tribromophenol	*74.6*		*34-129*	*%REC*	1	2/6/2012 09:20 PM
Surr: 2-Fluorobiphenyl	*74.4*		*40-125*	*%REC*	1	2/6/2012 09:20 PM
Surr: 2-Fluorophenol	*61.3*		*20-120*	*%REC*	1	2/6/2012 09:20 PM
Surr: 4-Terphenyl-d14	*81.4*		*40-135*	*%REC*	1	2/6/2012 09:20 PM
Surr: Nitrobenzene-d5	*71.7*		*41-120*	*%REC*	1	2/6/2012 09:20 PM
Surr: Phenol-d6	*64.6*		*20-120*	*%REC*	1	2/6/2012 09:20 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 10:37 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-22-0112
Lab ID: 1202121-17
Collection Date: 1/31/2012 04:15 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
2-Butanone	ND		0.010	mg/L	1	2/9/2012 10:37 PM
2-Hexanone	ND		0.010	mg/L	1	2/9/2012 10:37 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/9/2012 10:37 PM
Acetone	ND		0.010	mg/L	1	2/9/2012 10:37 PM
Benzene	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
Bromodichloromethane	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
Bromoform	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
Bromomethane	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
Carbon disulfide	ND		0.010	mg/L	1	2/9/2012 10:37 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
Chlorobenzene	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
Chloroethane	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
Chloroform	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
Chloromethane	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
Dibromochloromethane	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
Ethylbenzene	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
Isopropylbenzene	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
m,p-Xylene	ND		0.010	mg/L	1	2/9/2012 10:37 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
Methylene chloride	ND		0.010	mg/L	1	2/9/2012 10:37 PM
Naphthalene	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
n-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
n-Propylbenzene	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
o-Xylene	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
Styrene	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
Tetrachloroethene	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
Toluene	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 10:37 PM
Trichloroethene	ND		0.0050	mg/L	1	2/9/2012 10:37 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-22-0112
Lab ID: 1202121-17
Collection Date: 1/31/2012 04:15 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/9/2012 10:37 PM
Xylenes, Total	ND		0.015	mg/L	1	2/9/2012 10:37 PM
Surr: 1,2-Dichloroethane-d4	*103*		*70-125*	*%REC*	1	2/9/2012 10:37 PM
Surr: 4-Bromofluorobenzene	*90.7*		*72-125*	*%REC*	1	2/9/2012 10:37 PM
Surr: Dibromofluoromethane	*97.2*		*71-125*	*%REC*	1	2/9/2012 10:37 PM
Surr: Toluene-d8	*105*		*75-125*	*%REC*	1	2/9/2012 10:37 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**141**		**5.00**	**mg/L**	10	2/7/2012 01:39 PM
Fluoride	**0.570**		**0.100**	**mg/L**	1	2/6/2012 11:15 PM
Sulfate	**74.3**		**0.500**	**mg/L**	1	2/6/2012 11:15 PM
Nitrate/Nitrite (as N)	**2.26**		**0.500**	**mg/L**	5	2/6/2012 10:17 PM
Surr: Selenate (surr)	*105*		*85-115*	*%REC*	1	2/6/2012 11:15 PM
Surr: Selenate (surr)	*100*		*85-115*	*%REC*	5	2/6/2012 10:17 PM
Surr: Selenate (surr)	*99.7*		*85-115*	*%REC*	10	2/7/2012 01:39 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**345**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Total (As CaCO3)	**345**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**1,300**		**1.00**	**µmhos/cm**	1	2/8/2012 10:00 AM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**6.62**	H	**0.100**	**pH units**	1	2/3/2012 02:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**766**		**10.0**	**mg/L**	1	2/3/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-22-0112 (Dissolved)
Lab ID: 1202121-18
Collection Date: 1/31/2012 04:15 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	ND		0.0100	mg/L	1	2/9/2012 12:04 PM
Arsenic	ND		0.00500	mg/L	1	2/8/2012 12:23 AM
Barium	**0.151**		**0.00500**	**mg/L**	1	2/8/2012 12:23 AM
Boron	**0.141**		**0.0200**	**mg/L**	1	2/9/2012 12:04 PM
Cadmium	ND		0.00200	mg/L	1	2/8/2012 12:23 AM
Calcium	**151**		**0.500**	**mg/L**	1	2/8/2012 12:23 AM
Chromium	ND		0.00500	mg/L	1	2/8/2012 12:23 AM
Cobalt	ND		0.00500	mg/L	1	2/8/2012 12:23 AM
Copper	ND		0.00500	mg/L	1	2/8/2012 12:23 AM
Iron	ND		0.200	mg/L	1	2/8/2012 12:23 AM
Lead	ND		0.00500	mg/L	1	2/8/2012 12:23 AM
Magnesium	**17.3**		**0.200**	**mg/L**	1	2/8/2012 11:21 PM
Manganese	**0.0103**		**0.00500**	**mg/L**	1	2/8/2012 12:23 AM
Molybdenum	ND		0.00500	mg/L	1	2/8/2012 12:23 AM
Nickel	**0.00762**		**0.00500**	**mg/L**	1	2/8/2012 12:23 AM
Potassium	**2.35**		**0.200**	**mg/L**	1	2/8/2012 11:21 PM
Selenium	ND		0.00500	mg/L	1	2/8/2012 12:23 AM
Silver	ND		0.00500	mg/L	1	2/8/2012 12:23 AM
Sodium	**42.1**		**0.200**	**mg/L**	1	2/9/2012 12:04 PM
Uranium	**0.00501**		**0.00500**	**mg/L**	1	2/8/2012 11:21 PM
Zinc	**0.0183**		**0.00500**	**mg/L**	1	2/8/2012 12:23 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: Duplicate-1-0112
Lab ID: 1202121-19
Collection Date: 1/31/2012
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/7/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/7/2012 07:22 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/6/2012 09:39 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/6/2012 09:39 PM
Acenaphthene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Acetophenone	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Anthracene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Atrazine	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/6/2012 09:39 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: Duplicate-1-0112
Lab ID: 1202121-19
Collection Date: 1/31/2012
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Bis(2-ethylhexyl)phthalate	**0.0025**		**0.00020**	**mg/L**	1	2/6/2012 09:39 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Caprolactam	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Carbazole	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Chrysene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Dibenzofuran	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Diethyl phthalate	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Fluoranthene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Fluorene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Isophorone	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Naphthalene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Phenanthrene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Phenol	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Pyrene	ND		0.00020	mg/L	1	2/6/2012 09:39 PM
Surr: 2,4,6-Tribromophenol	*66.2*		*34-129*	*%REC*	1	2/6/2012 09:39 PM
Surr: 2-Fluorobiphenyl	*69.8*		*40-125*	*%REC*	1	2/6/2012 09:39 PM
Surr: 2-Fluorophenol	*66.0*		*20-120*	*%REC*	1	2/6/2012 09:39 PM
Surr: 4-Terphenyl-d14	*80.6*		*40-135*	*%REC*	1	2/6/2012 09:39 PM
Surr: Nitrobenzene-d5	*75.1*		*41-120*	*%REC*	1	2/6/2012 09:39 PM
Surr: Phenol-d6	*68.7*		*20-120*	*%REC*	1	2/6/2012 09:39 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 11:30 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: Duplicate-1-0112
Lab ID: 1202121-19
Collection Date: 1/31/2012
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
2-Butanone	ND		0.010	mg/L	1	2/9/2012 11:30 PM
2-Hexanone	ND		0.010	mg/L	1	2/9/2012 11:30 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/9/2012 11:30 PM
Acetone	ND		0.010	mg/L	1	2/9/2012 11:30 PM
Benzene	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
Bromodichloromethane	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
Bromoform	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
Bromomethane	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
Carbon disulfide	ND		0.010	mg/L	1	2/9/2012 11:30 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
Chlorobenzene	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
Chloroethane	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
Chloroform	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
Chloromethane	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
Dibromochloromethane	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
Ethylbenzene	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
Isopropylbenzene	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
m,p-Xylene	ND		0.010	mg/L	1	2/9/2012 11:30 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
Methylene chloride	ND		0.010	mg/L	1	2/9/2012 11:30 PM
Naphthalene	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
n-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
n-Propylbenzene	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
o-Xylene	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
Styrene	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
Tetrachloroethene	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
Toluene	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 11:30 PM
Trichloroethene	ND		0.0050	mg/L	1	2/9/2012 11:30 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: Duplicate-1-0112
Lab ID: 1202121-19
Collection Date: 1/31/2012
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/9/2012 11:30 PM
Xylenes, Total	ND		0.015	mg/L	1	2/9/2012 11:30 PM
Surr: 1,2-Dichloroethane-d4	*99.1*		*70-125*	*%REC*	1	2/9/2012 11:30 PM
Surr: 4-Bromofluorobenzene	*93.8*		*72-125*	*%REC*	1	2/9/2012 11:30 PM
Surr: Dibromofluoromethane	*99.0*		*71-125*	*%REC*	1	2/9/2012 11:30 PM
Surr: Toluene-d8	*105*		*75-125*	*%REC*	1	2/9/2012 11:30 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**27.1**		**0.500**	**mg/L**	1	2/6/2012 11:36 PM
Fluoride	**1.05**		**0.100**	**mg/L**	1	2/6/2012 11:36 PM
Sulfate	**62.0**		**0.500**	**mg/L**	1	2/6/2012 11:36 PM
Nitrate/Nitrite (as N)	**2.54**		**0.500**	**mg/L**	5	2/6/2012 10:39 PM
Surr: Selenate (surr)	*101*		*85-115*	*%REC*	5	2/6/2012 10:39 PM
Surr: Selenate (surr)	*104*		*85-115*	*%REC*	1	2/6/2012 11:36 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**291**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Total (As CaCO3)	**291**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**813**		**1.00**	**µmhos/cm**	1	2/8/2012 10:00 AM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**6.92**	H	**0.100**	**pH units**	1	2/3/2012 02:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**436**		**10.0**	**mg/L**	1	2/3/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: Duplicate-1-0112 (Dissolved)
Lab ID: 1202121-20
Collection Date: 1/31/2012
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	ND		0.0100	mg/L	1	2/9/2012 01:40 PM
Arsenic	ND		0.00500	mg/L	1	2/8/2012 12:30 AM
Barium	**0.0947**		**0.00500**	**mg/L**	1	2/8/2012 12:30 AM
Boron	**0.0728**		**0.0200**	**mg/L**	1	2/9/2012 01:40 PM
Cadmium	ND		0.00200	mg/L	1	2/8/2012 12:30 AM
Calcium	**88.2**		**0.500**	**mg/L**	1	2/8/2012 12:30 AM
Chromium	ND		0.00500	mg/L	1	2/8/2012 12:30 AM
Cobalt	ND		0.00500	mg/L	1	2/8/2012 12:30 AM
Copper	ND		0.00500	mg/L	1	2/8/2012 12:30 AM
Iron	ND		0.200	mg/L	1	2/8/2012 12:30 AM
Lead	ND		0.00500	mg/L	1	2/8/2012 12:30 AM
Magnesium	**9.94**		**0.200**	**mg/L**	1	2/8/2012 11:28 PM
Manganese	ND		0.00500	mg/L	1	2/8/2012 12:30 AM
Molybdenum	ND		0.00500	mg/L	1	2/8/2012 12:30 AM
Nickel	ND		0.00500	mg/L	1	2/8/2012 12:30 AM
Potassium	**1.74**		**0.200**	**mg/L**	1	2/8/2012 11:28 PM
Selenium	ND		0.00500	mg/L	1	2/8/2012 12:30 AM
Silver	ND		0.00500	mg/L	1	2/8/2012 12:30 AM
Sodium	**37.0**		**0.200**	**mg/L**	1	2/9/2012 01:40 PM
Uranium	ND		0.00500	mg/L	1	2/8/2012 11:28 PM
Zinc	**0.0119**		**0.00500**	**mg/L**	1	2/8/2012 12:30 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: Trip Blank 012612-46
Lab ID: 1202121-21
Collection Date: 2/1/2012
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
2-Butanone	ND		0.010	mg/L	1	2/9/2012 06:54 PM
2-Hexanone	ND		0.010	mg/L	1	2/9/2012 06:54 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/9/2012 06:54 PM
Acetone	ND		0.010	mg/L	1	2/9/2012 06:54 PM
Benzene	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
Bromodichloromethane	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
Bromoform	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
Bromomethane	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
Carbon disulfide	ND		0.010	mg/L	1	2/9/2012 06:54 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
Chlorobenzene	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
Chloroethane	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
Chloroform	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
Chloromethane	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
Dibromochloromethane	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
Ethylbenzene	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
Isopropylbenzene	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
m,p-Xylene	ND		0.010	mg/L	1	2/9/2012 06:54 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
Methylene chloride	ND		0.010	mg/L	1	2/9/2012 06:54 PM
Naphthalene	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
n-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
n-Propylbenzene	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
o-Xylene	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
Styrene	ND		0.0050	mg/L	1	2/9/2012 06:54 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: Trip Blank 012612-46
Lab ID: 1202121-21
Collection Date: 2/1/2012
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
Toluene	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
Trichloroethene	ND		0.0050	mg/L	1	2/9/2012 06:54 PM
Vinyl chloride	ND		0.0020	mg/L	1	2/9/2012 06:54 PM
Xylenes, Total	ND		0.015	mg/L	1	2/9/2012 06:54 PM
Surr: 1,2-Dichloroethane-d4	*106*		*70-125*	*%REC*	1	2/9/2012 06:54 PM
Surr: 4-Bromofluorobenzene	*106*		*72-125*	*%REC*	1	2/9/2012 06:54 PM
Surr: Dibromofluoromethane	*101*		*71-125*	*%REC*	1	2/9/2012 06:54 PM
Surr: Toluene-d8	*102*		*75-125*	*%REC*	1	2/9/2012 06:54 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-24-0212
Lab ID: 1202121-22
Collection Date: 2/1/2012 08:50 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/7/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/7/2012 07:24 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/7/2012 08:42 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/7/2012 08:42 PM
Acenaphthene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Acetophenone	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Anthracene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Atrazine	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/7/2012 08:42 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-24-0212
Lab ID: 1202121-22
Collection Date: 2/1/2012 08:50 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Bis(2-ethylhexyl)phthalate	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Caprolactam	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Carbazole	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Chrysene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Dibenzofuran	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Diethyl phthalate	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Fluoranthene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Fluorene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Isophorone	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Naphthalene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Phenanthrene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Phenol	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Pyrene	ND		0.00020	mg/L	1	2/7/2012 08:42 PM
Surr: 2,4,6-Tribromophenol	*57.2*		*34-129*	*%REC*	1	2/7/2012 08:42 PM
Surr: 2-Fluorobiphenyl	*66.3*		*40-125*	*%REC*	1	2/7/2012 08:42 PM
Surr: 2-Fluorophenol	*60.6*		*20-120*	*%REC*	1	2/7/2012 08:42 PM
Surr: 4-Terphenyl-d14	*71.7*		*40-135*	*%REC*	1	2/7/2012 08:42 PM
Surr: Nitrobenzene-d5	*69.9*		*41-120*	*%REC*	1	2/7/2012 08:42 PM
Surr: Phenol-d6	*63.3*		*20-120*	*%REC*	1	2/7/2012 08:42 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/10/2012 12:22 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-24-0212
Lab ID: 1202121-22
Collection Date: 2/1/2012 08:50 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
2-Butanone	ND		0.010	mg/L	1	2/10/2012 12:22 AM
2-Hexanone	ND		0.010	mg/L	1	2/10/2012 12:22 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/10/2012 12:22 AM
Acetone	ND		0.010	mg/L	1	2/10/2012 12:22 AM
Benzene	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
Bromodichloromethane	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
Bromoform	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
Bromomethane	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
Carbon disulfide	ND		0.010	mg/L	1	2/10/2012 12:22 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
Chlorobenzene	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
Chloroethane	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
Chloroform	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
Chloromethane	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
Dibromochloromethane	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
Ethylbenzene	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
Isopropylbenzene	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
m,p-Xylene	ND		0.010	mg/L	1	2/10/2012 12:22 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
Methylene chloride	ND		0.010	mg/L	1	2/10/2012 12:22 AM
Naphthalene	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
n-Butylbenzene	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
n-Propylbenzene	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
o-Xylene	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
Styrene	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
Tetrachloroethene	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
Toluene	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/10/2012 12:22 AM
Trichloroethene	ND		0.0050	mg/L	1	2/10/2012 12:22 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-24-0212
Lab ID: 1202121-22
Collection Date: 2/1/2012 08:50 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/10/2012 12:22 AM
Xylenes, Total	ND		0.015	mg/L	1	2/10/2012 12:22 AM
Surr: 1,2-Dichloroethane-d4	*104*		*70-125*	*%REC*	1	2/10/2012 12:22 AM
Surr: 4-Bromofluorobenzene	*91.2*		*72-125*	*%REC*	1	2/10/2012 12:22 AM
Surr: Dibromofluoromethane	*99.2*		*71-125*	*%REC*	1	2/10/2012 12:22 AM
Surr: Toluene-d8	*103*		*75-125*	*%REC*	1	2/10/2012 12:22 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**50.6**		**0.500**	**mg/L**	1	2/6/2012 11:57 PM
Fluoride	**2.42**		**0.100**	**mg/L**	1	2/6/2012 11:57 PM
Sulfate	**62.3**		**0.500**	**mg/L**	1	2/6/2012 11:57 PM
Nitrate/Nitrite (as N)	**2.32**		**0.500**	**mg/L**	5	2/6/2012 11:00 PM
Surr: Selenate (surr)	*107*		*85-115*	*%REC*	1	2/6/2012 11:57 PM
Surr: Selenate (surr)	*100*		*85-115*	*%REC*	5	2/6/2012 11:00 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**227**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Total (As CaCO3)	**227**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**660**		**1.00**	**µmhos/cm**	1	2/8/2012 10:00 AM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**7.16**	H	**0.100**	**pH units**	1	2/3/2012 02:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**418**	HHH	**10.0**	**mg/L**	1	3/5/2012 05:30 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-24-0212 (Dissolved)
Lab ID: 1202121-23
Collection Date: 2/1/2012 08:50 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	ND		0.0100	mg/L	1	2/9/2012 01:49 PM
Arsenic	ND		0.00500	mg/L	1	2/8/2012 12:37 AM
Barium	**0.0946**		**0.00500**	**mg/L**	1	2/8/2012 12:37 AM
Boron	**0.127**		**0.0200**	**mg/L**	1	2/9/2012 01:49 PM
Cadmium	ND		0.00200	mg/L	1	2/8/2012 12:37 AM
Calcium	**86.4**		**0.500**	**mg/L**	1	2/8/2012 12:37 AM
Chromium	ND		0.00500	mg/L	1	2/8/2012 12:37 AM
Cobalt	ND		0.00500	mg/L	1	2/8/2012 12:37 AM
Copper	ND		0.00500	mg/L	1	2/8/2012 12:37 AM
Iron	ND		0.200	mg/L	1	2/8/2012 12:37 AM
Lead	ND		0.00500	mg/L	1	2/8/2012 12:37 AM
Magnesium	**10.2**		**0.200**	**mg/L**	1	2/8/2012 11:35 PM
Manganese	**0.00760**		**0.00500**	**mg/L**	1	2/8/2012 12:37 AM
Molybdenum	ND		0.00500	mg/L	1	2/8/2012 12:37 AM
Nickel	**0.00725**		**0.00500**	**mg/L**	1	2/8/2012 12:37 AM
Potassium	**1.92**		**0.200**	**mg/L**	1	2/8/2012 11:35 PM
Selenium	ND		0.00500	mg/L	1	2/8/2012 12:37 AM
Silver	ND		0.00500	mg/L	1	2/8/2012 12:37 AM
Sodium	**36.7**		**0.200**	**mg/L**	1	2/9/2012 01:49 PM
Uranium	ND		0.00500	mg/L	1	2/8/2012 11:35 PM
Zinc	**0.0101**		**0.00500**	**mg/L**	1	2/8/2012 12:37 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-23-0212
Lab ID: 1202121-24
Collection Date: 2/1/2012 09:35 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/7/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/7/2012 07:26 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/7/2012 06:24 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/7/2012 06:24 PM
Acenaphthene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Acetophenone	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Anthracene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Atrazine	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/7/2012 06:24 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-23-0212
Lab ID: 1202121-24
Collection Date: 2/1/2012 09:35 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Bis(2-ethylhexyl)phthalate	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Caprolactam	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Carbazole	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Chrysene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Dibenzofuran	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Diethyl phthalate	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Fluoranthene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Fluorene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Isophorone	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Naphthalene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Phenanthrene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Phenol	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Pyrene	ND		0.00020	mg/L	1	2/7/2012 06:24 PM
Surr: 2,4,6-Tribromophenol	*59.2*		*34-129*	*%REC*	1	2/7/2012 06:24 PM
Surr: 2-Fluorobiphenyl	*71.1*		*40-125*	*%REC*	1	2/7/2012 06:24 PM
Surr: 2-Fluorophenol	*66.0*		*20-120*	*%REC*	1	2/7/2012 06:24 PM
Surr: 4-Terphenyl-d14	*80.4*		*40-135*	*%REC*	1	2/7/2012 06:24 PM
Surr: Nitrobenzene-d5	*72.6*		*41-120*	*%REC*	1	2/7/2012 06:24 PM
Surr: Phenol-d6	*56.0*		*20-120*	*%REC*	1	2/7/2012 06:24 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/10/2012 01:15 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-23-0212
Lab ID: 1202121-24
Collection Date: 2/1/2012 09:35 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
2-Butanone	ND		0.010	mg/L	1	2/10/2012 01:15 AM
2-Hexanone	ND		0.010	mg/L	1	2/10/2012 01:15 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/10/2012 01:15 AM
Acetone	ND		0.010	mg/L	1	2/10/2012 01:15 AM
Benzene	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
Bromodichloromethane	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
Bromoform	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
Bromomethane	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
Carbon disulfide	ND		0.010	mg/L	1	2/10/2012 01:15 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
Chlorobenzene	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
Chloroethane	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
Chloroform	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
Chloromethane	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
Dibromochloromethane	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
Ethylbenzene	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
Isopropylbenzene	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
m,p-Xylene	ND		0.010	mg/L	1	2/10/2012 01:15 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
Methylene chloride	ND		0.010	mg/L	1	2/10/2012 01:15 AM
Naphthalene	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
n-Butylbenzene	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
n-Propylbenzene	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
o-Xylene	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
Styrene	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
Tetrachloroethene	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
Toluene	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/10/2012 01:15 AM
Trichloroethene	ND		0.0050	mg/L	1	2/10/2012 01:15 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-23-0212
Lab ID: 1202121-24
Collection Date: 2/1/2012 09:35 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/10/2012 01:15 AM
Xylenes, Total	ND		0.015	mg/L	1	2/10/2012 01:15 AM
Surr: 1,2-Dichloroethane-d4	*99.8*		*70-125*	*%REC*	1	2/10/2012 01:15 AM
Surr: 4-Bromofluorobenzene	*92.9*		*72-125*	*%REC*	1	2/10/2012 01:15 AM
Surr: Dibromofluoromethane	*97.9*		*71-125*	*%REC*	1	2/10/2012 01:15 AM
Surr: Toluene-d8	*104*		*75-125*	*%REC*	1	2/10/2012 01:15 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**887**		**5.00**	**mg/L**	10	2/7/2012 02:00 PM
Fluoride	**0.697**		**0.100**	**mg/L**	1	2/7/2012 12:18 AM
Sulfate	**85.4**		**5.00**	**mg/L**	10	2/7/2012 02:00 PM
Nitrate/Nitrite (as N)	**4.07**		**0.500**	**mg/L**	5	2/6/2012 11:22 PM
Surr: Selenate (surr)	*106*		*85-115*	*%REC*	1	2/7/2012 12:18 AM
Surr: Selenate (surr)	*99.6*		*85-115*	*%REC*	5	2/6/2012 11:22 PM
Surr: Selenate (surr)	*98.9*		*85-115*	*%REC*	10	2/7/2012 02:00 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**217**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Total (As CaCO3)	**217**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**3,450**		**1.00**	**µmhos/cm**	1	2/8/2012 10:00 AM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**6.79**	H	**0.100**	**pH units**	1	2/3/2012 02:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**2,720**		**10.0**	**mg/L**	1	2/3/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-23-0212 (Dissolved)
Lab ID: 1202121-25
Collection Date: 2/1/2012 09:35 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	**0.0108**		**0.0100**	**mg/L**	1	2/10/2012 09:11 AM
Arsenic	ND		0.00500	mg/L	1	2/8/2012 12:44 AM
Barium	**0.268**		**0.00500**	**mg/L**	1	2/8/2012 12:44 AM
Boron	**0.159**		**0.0200**	**mg/L**	1	2/10/2012 09:11 AM
Cadmium	ND		0.00200	mg/L	1	2/8/2012 12:44 AM
Calcium	**379**		**5.00**	**mg/L**	10	2/8/2012 08:51 PM
Chromium	ND		0.00500	mg/L	1	2/8/2012 12:44 AM
Cobalt	ND		0.00500	mg/L	1	2/8/2012 12:44 AM
Copper	ND		0.00500	mg/L	1	2/8/2012 12:44 AM
Iron	ND		0.200	mg/L	1	2/8/2012 12:44 AM
Lead	ND		0.00500	mg/L	1	2/8/2012 12:44 AM
Magnesium	**44.1**		**0.200**	**mg/L**	1	2/10/2012 01:47 PM
Manganese	**0.00658**		**0.00500**	**mg/L**	1	2/8/2012 12:44 AM
Molybdenum	ND		0.00500	mg/L	1	2/8/2012 12:44 AM
Nickel	**0.00714**		**0.00500**	**mg/L**	1	2/8/2012 12:44 AM
Potassium	**5.34**		**0.200**	**mg/L**	1	2/8/2012 08:10 PM
Selenium	ND		0.00500	mg/L	1	2/8/2012 12:44 AM
Silver	ND		0.00500	mg/L	1	2/8/2012 12:44 AM
Sodium	**106**		**0.200**	**mg/L**	1	2/10/2012 01:47 PM
Uranium	ND		0.00500	mg/L	1	2/8/2012 08:10 PM
Zinc	**0.0207**		**0.00500**	**mg/L**	1	2/8/2012 12:44 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-25-0212
Lab ID: 1202121-26
Collection Date: 2/1/2012 10:47 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/7/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/7/2012 07:28 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	**0.00030**		**0.00020**	**mg/L**	1	2/7/2012 06:44 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/7/2012 06:44 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/7/2012 06:44 PM
Acenaphthene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Acetophenone	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Anthracene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Atrazine	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/7/2012 06:44 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-25-0212
Lab ID: 1202121-26
Collection Date: 2/1/2012 10:47 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Bis(2-ethylhexyl)phthalate	**0.00037**		**0.00020**	**mg/L**	1	2/7/2012 06:44 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Caprolactam	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Carbazole	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Chrysene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Dibenzofuran	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Diethyl phthalate	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Fluoranthene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Fluorene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Isophorone	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Naphthalene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Phenanthrene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Phenol	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Pyrene	ND		0.00020	mg/L	1	2/7/2012 06:44 PM
Surr: 2,4,6-Tribromophenol	*73.8*		*34-129*	*%REC*	1	2/7/2012 06:44 PM
Surr: 2-Fluorobiphenyl	*62.0*		*40-125*	*%REC*	1	2/7/2012 06:44 PM
Surr: 2-Fluorophenol	*52.2*		*20-120*	*%REC*	1	2/7/2012 06:44 PM
Surr: 4-Terphenyl-d14	*73.9*		*40-135*	*%REC*	1	2/7/2012 06:44 PM
Surr: Nitrobenzene-d5	*66.7*		*41-120*	*%REC*	1	2/7/2012 06:44 PM
Surr: Phenol-d6	*56.1*		*20-120*	*%REC*	1	2/7/2012 06:44 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/10/2012 02:07 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-25-0212
Lab ID: 1202121-26
Collection Date: 2/1/2012 10:47 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
2-Butanone	ND		0.010	mg/L	1	2/10/2012 02:07 AM
2-Hexanone	ND		0.010	mg/L	1	2/10/2012 02:07 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/10/2012 02:07 AM
Acetone	ND		0.010	mg/L	1	2/10/2012 02:07 AM
Benzene	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
Bromodichloromethane	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
Bromoform	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
Bromomethane	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
Carbon disulfide	ND		0.010	mg/L	1	2/10/2012 02:07 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
Chlorobenzene	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
Chloroethane	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
Chloroform	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
Chloromethane	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
Dibromochloromethane	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
Ethylbenzene	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
Isopropylbenzene	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
m,p-Xylene	ND		0.010	mg/L	1	2/10/2012 02:07 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
Methylene chloride	ND		0.010	mg/L	1	2/10/2012 02:07 AM
Naphthalene	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
n-Butylbenzene	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
n-Propylbenzene	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
o-Xylene	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
Styrene	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
Tetrachloroethene	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
Toluene	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/10/2012 02:07 AM
Trichloroethene	ND		0.0050	mg/L	1	2/10/2012 02:07 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-25-0212
Lab ID: 1202121-26
Collection Date: 2/1/2012 10:47 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/10/2012 02:07 AM
Xylenes, Total	ND		0.015	mg/L	1	2/10/2012 02:07 AM
Surr: 1,2-Dichloroethane-d4	*102*		*70-125*	*%REC*	1	2/10/2012 02:07 AM
Surr: 4-Bromofluorobenzene	*93.9*		*72-125*	*%REC*	1	2/10/2012 02:07 AM
Surr: Dibromofluoromethane	*99.9*		*71-125*	*%REC*	1	2/10/2012 02:07 AM
Surr: Toluene-d8	*104*		*75-125*	*%REC*	1	2/10/2012 02:07 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**175**		**5.00**	**mg/L**	10	2/7/2012 02:21 PM
Fluoride	**0.813**		**0.100**	**mg/L**	1	2/7/2012 12:39 AM
Sulfate	**84.4**		**0.500**	**mg/L**	1	2/7/2012 12:39 AM
Nitrate/Nitrite (as N)	**4.56**		**0.500**	**mg/L**	5	2/6/2012 11:44 PM
Surr: Selenate (surr)	*106*		*85-115*	*%REC*	1	2/7/2012 12:39 AM
Surr: Selenate (surr)	*100*		*85-115*	*%REC*	5	2/6/2012 11:44 PM
Surr: Selenate (surr)	*98.6*		*85-115*	*%REC*	10	2/7/2012 02:21 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**358**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Total (As CaCO3)	**358**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**1,480**		**1.00**	**µmhos/cm**	1	2/8/2012 10:00 AM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**6.90**	H	**0.100**	**pH units**	1	2/3/2012 02:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**820**		**10.0**	**mg/L**	1	2/3/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-25-0212 (Dissolved)
Lab ID: 1202121-27
Collection Date: 2/1/2012 10:47 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	ND		0.0100	mg/L	1	2/9/2012 01:56 PM
Arsenic	ND		0.00500	mg/L	1	2/8/2012 01:24 AM
Barium	**0.228**		**0.00500**	**mg/L**	1	2/8/2012 01:24 AM
Boron	**0.175**		**0.0200**	**mg/L**	1	2/9/2012 01:56 PM
Cadmium	ND		0.00200	mg/L	1	2/8/2012 01:24 AM
Calcium	**154**		**0.500**	**mg/L**	1	2/8/2012 01:24 AM
Chromium	**0.00744**		**0.00500**	**mg/L**	1	2/8/2012 01:24 AM
Cobalt	ND		0.00500	mg/L	1	2/8/2012 01:24 AM
Copper	ND		0.00500	mg/L	1	2/8/2012 01:24 AM
Iron	ND		0.200	mg/L	1	2/8/2012 01:24 AM
Lead	ND		0.00500	mg/L	1	2/8/2012 01:24 AM
Magnesium	**18.1**		**0.200**	**mg/L**	1	2/8/2012 11:42 PM
Manganese	**0.00804**		**0.00500**	**mg/L**	1	2/8/2012 01:24 AM
Molybdenum	ND		0.00500	mg/L	1	2/8/2012 01:24 AM
Nickel	**0.00708**		**0.00500**	**mg/L**	1	2/8/2012 01:24 AM
Potassium	**3.69**		**0.200**	**mg/L**	1	2/8/2012 11:42 PM
Selenium	ND		0.00500	mg/L	1	2/8/2012 01:24 AM
Silver	ND		0.00500	mg/L	1	2/8/2012 01:24 AM
Sodium	**79.8**		**0.200**	**mg/L**	1	2/9/2012 01:56 PM
Uranium	**0.00602**		**0.00500**	**mg/L**	1	2/8/2012 11:42 PM
Zinc	**0.00582**		**0.00500**	**mg/L**	1	2/8/2012 01:24 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-26-0212
Lab ID: 1202121-28
Collection Date: 2/1/2012 11:25 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/7/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/7/2012 07:30 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/6/2012 10:58 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/6/2012 10:58 PM
Acenaphthene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Acetophenone	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Anthracene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Atrazine	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/6/2012 10:58 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-26-0212
Lab ID: 1202121-28
Collection Date: 2/1/2012 11:25 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Bis(2-ethylhexyl)phthalate	**0.00073**		**0.00020**	**mg/L**	1	2/6/2012 10:58 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Caprolactam	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Carbazole	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Chrysene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Dibenzofuran	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Diethyl phthalate	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Fluoranthene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Fluorene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Isophorone	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Naphthalene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Phenanthrene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Phenol	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Pyrene	ND		0.00020	mg/L	1	2/6/2012 10:58 PM
Surr: 2,4,6-Tribromophenol	*75.9*		*34-129*	*%REC*	1	2/6/2012 10:58 PM
Surr: 2-Fluorobiphenyl	*73.7*		*40-125*	*%REC*	1	2/6/2012 10:58 PM
Surr: 2-Fluorophenol	*61.1*		*20-120*	*%REC*	1	2/6/2012 10:58 PM
Surr: 4-Terphenyl-d14	*75.9*		*40-135*	*%REC*	1	2/6/2012 10:58 PM
Surr: Nitrobenzene-d5	*70.9*		*41-120*	*%REC*	1	2/6/2012 10:58 PM
Surr: Phenol-d6	*66.1*		*20-120*	*%REC*	1	2/6/2012 10:58 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/10/2012 03:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-26-0212
Lab ID: 1202121-28
Collection Date: 2/1/2012 11:25 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
2-Butanone	ND		0.010	mg/L	1	2/10/2012 03:00 AM
2-Hexanone	ND		0.010	mg/L	1	2/10/2012 03:00 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/10/2012 03:00 AM
Acetone	ND		0.010	mg/L	1	2/10/2012 03:00 AM
Benzene	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
Bromodichloromethane	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
Bromoform	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
Bromomethane	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
Carbon disulfide	ND		0.010	mg/L	1	2/10/2012 03:00 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
Chlorobenzene	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
Chloroethane	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
Chloroform	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
Chloromethane	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
Dibromochloromethane	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
Ethylbenzene	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
Isopropylbenzene	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
m,p-Xylene	ND		0.010	mg/L	1	2/10/2012 03:00 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
Methylene chloride	ND		0.010	mg/L	1	2/10/2012 03:00 AM
Naphthalene	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
n-Butylbenzene	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
n-Propylbenzene	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
o-Xylene	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
Styrene	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
Tetrachloroethene	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
Toluene	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/10/2012 03:00 AM
Trichloroethene	ND		0.0050	mg/L	1	2/10/2012 03:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-26-0212
Lab ID: 1202121-28
Collection Date: 2/1/2012 11:25 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/10/2012 03:00 AM
Xylenes, Total	ND		0.015	mg/L	1	2/10/2012 03:00 AM
Surr: 1,2-Dichloroethane-d4	*97.9*		*70-125*	*%REC*	1	2/10/2012 03:00 AM
Surr: 4-Bromofluorobenzene	*92.0*		*72-125*	*%REC*	1	2/10/2012 03:00 AM
Surr: Dibromofluoromethane	*98.6*		*71-125*	*%REC*	1	2/10/2012 03:00 AM
Surr: Toluene-d8	*103*		*75-125*	*%REC*	1	2/10/2012 03:00 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**196**		**5.00**	**mg/L**	10	2/8/2012 02:44 PM
Fluoride	**0.568**		**0.100**	**mg/L**	1	2/7/2012 01:00 AM
Sulfate	**131**		**5.00**	**mg/L**	10	2/8/2012 02:44 PM
Nitrate/Nitrite (as N)	**3.68**		**0.500**	**mg/L**	5	2/7/2012 12:06 AM
Surr: Selenate (surr)	*105*		*85-115*	*%REC*	1	2/7/2012 01:00 AM
Surr: Selenate (surr)	*100*		*85-115*	*%REC*	5	2/7/2012 12:06 AM
Surr: Selenate (surr)	*103*		*85-115*	*%REC*	10	2/8/2012 02:44 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**296**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Total (As CaCO3)	**296**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**1,540**		**1.00**	**µmhos/cm**	1	2/8/2012 10:00 AM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**6.88**	H	**0.100**	**pH units**	1	2/3/2012 02:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**952**		**10.0**	**mg/L**	1	2/3/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-26-0212 (Dissolved)
Lab ID: 1202121-29
Collection Date: 2/1/2012 11:25 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	ND		0.0100	mg/L	1	2/9/2012 02:03 PM
Arsenic	ND		0.00500	mg/L	1	2/8/2012 03:28 AM
Barium	**0.0854**		**0.00500**	**mg/L**	1	2/8/2012 03:28 AM
Boron	**0.163**		**0.0200**	**mg/L**	1	2/9/2012 02:03 PM
Cadmium	ND		0.00200	mg/L	1	2/8/2012 03:28 AM
Calcium	**170**		**0.500**	**mg/L**	1	2/8/2012 03:28 AM
Chromium	ND		0.00500	mg/L	1	2/8/2012 03:28 AM
Cobalt	ND		0.00500	mg/L	1	2/8/2012 03:28 AM
Copper	ND		0.00500	mg/L	1	2/8/2012 03:28 AM
Iron	ND		0.200	mg/L	1	2/8/2012 03:28 AM
Lead	ND		0.00500	mg/L	1	2/8/2012 03:28 AM
Magnesium	**20.8**		**0.200**	**mg/L**	1	2/8/2012 11:48 PM
Manganese	**0.0122**		**0.00500**	**mg/L**	1	2/8/2012 03:28 AM
Molybdenum	ND		0.00500	mg/L	1	2/8/2012 03:28 AM
Nickel	**0.0133**		**0.00500**	**mg/L**	1	2/8/2012 03:28 AM
Potassium	**2.50**		**0.200**	**mg/L**	1	2/8/2012 11:48 PM
Selenium	ND		0.00500	mg/L	1	2/8/2012 03:28 AM
Silver	ND		0.00500	mg/L	1	2/8/2012 03:28 AM
Sodium	**55.8**		**0.200**	**mg/L**	1	2/9/2012 02:03 PM
Uranium	ND		0.00500	mg/L	1	2/8/2012 11:48 PM
Zinc	**0.00949**		**0.00500**	**mg/L**	1	2/8/2012 03:28 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-11-0212
Lab ID: 1202121-30
Collection Date: 2/1/2012 12:10 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/7/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/7/2012 07:32 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	**0.0055**		**0.00020**	**mg/L**	1	2/7/2012 07:03 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
2,4-Dimethylphenol	**0.00094**		**0.00020**	**mg/L**	1	2/7/2012 07:03 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/7/2012 07:03 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
2-Methylnaphthalene	**0.0045**		**0.00020**	**mg/L**	1	2/7/2012 07:03 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/7/2012 07:03 PM
Acenaphthene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Acetophenone	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Anthracene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Atrazine	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/7/2012 07:03 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-11-0212
Lab ID: 1202121-30
Collection Date: 2/1/2012 12:10 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Bis(2-ethylhexyl)phthalate	**0.0017**		**0.00020**	**mg/L**	1	2/7/2012 07:03 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Caprolactam	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Carbazole	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Chrysene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Dibenzofuran	**0.00090**		**0.00020**	**mg/L**	1	2/7/2012 07:03 PM
Diethyl phthalate	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Fluoranthene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Fluorene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Isophorone	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Naphthalene	**0.039**		**0.0010**	**mg/L**	5	2/7/2012 10:00 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Phenanthrene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Phenol	**0.0035**		**0.00020**	**mg/L**	1	2/7/2012 07:03 PM
Pyrene	ND		0.00020	mg/L	1	2/7/2012 07:03 PM
Surr: 2,4,6-Tribromophenol	*55.3*		*34-129*	*%REC*	1	2/7/2012 07:03 PM
Surr: 2,4,6-Tribromophenol	*52.7*		*34-129*	*%REC*	5	2/7/2012 10:00 PM
Surr: 2-Fluorobiphenyl	*62.1*		*40-125*	*%REC*	5	2/7/2012 10:00 PM
Surr: 2-Fluorobiphenyl	*54.2*		*40-125*	*%REC*	1	2/7/2012 07:03 PM
Surr: 2-Fluorophenol	*76.1*		*20-120*	*%REC*	1	2/7/2012 07:03 PM
Surr: 2-Fluorophenol	*75.2*		*20-120*	*%REC*	5	2/7/2012 10:00 PM
Surr: 4-Terphenyl-d14	*75.7*		*40-135*	*%REC*	5	2/7/2012 10:00 PM
Surr: 4-Terphenyl-d14	*78.0*		*40-135*	*%REC*	1	2/7/2012 07:03 PM
Surr: Nitrobenzene-d5	*67.4*		*41-120*	*%REC*	1	2/7/2012 07:03 PM
Surr: Nitrobenzene-d5	*76.1*		*41-120*	*%REC*	5	2/7/2012 10:00 PM
Surr: Phenol-d6	*93.1*		*20-120*	*%REC*	5	2/7/2012 10:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-11-0212
Lab ID: 1202121-30
Collection Date: 2/1/2012 12:10 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Phenol-d6	*73.6*		*20-120*	*%REC*	1	2/7/2012 07:03 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
1,2,4-Trimethylbenzene	**0.012**		**0.0050**	**mg/L**	1	2/9/2012 09:52 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
1,3,5-Trimethylbenzene	**0.010**		**0.0050**	**mg/L**	1	2/9/2012 09:52 PM
2-Butanone	ND		0.010	mg/L	1	2/9/2012 09:52 PM
2-Hexanone	ND		0.010	mg/L	1	2/9/2012 09:52 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/9/2012 09:52 PM
Acetone	ND		0.010	mg/L	1	2/9/2012 09:52 PM
Benzene	**7.8**		**0.50**	**mg/L**	100	2/10/2012 03:22 PM
Bromodichloromethane	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
Bromoform	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
Bromomethane	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
Carbon disulfide	ND		0.010	mg/L	1	2/9/2012 09:52 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
Chlorobenzene	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
Chloroethane	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
Chloroform	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
Chloromethane	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
Dibromochloromethane	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
Ethylbenzene	**0.051**		**0.0050**	**mg/L**	1	2/9/2012 09:52 PM
Isopropylbenzene	**0.099**		**0.0050**	**mg/L**	1	2/9/2012 09:52 PM
m,p-Xylene	**0.063**		**0.010**	**mg/L**	1	2/9/2012 09:52 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
Methylene chloride	ND		0.010	mg/L	1	2/9/2012 09:52 PM
Naphthalene	**0.096**		**0.0050**	**mg/L**	1	2/9/2012 09:52 PM
n-Butylbenzene	**0.018**		**0.0050**	**mg/L**	1	2/9/2012 09:52 PM
n-Propylbenzene	**0.046**		**0.0050**	**mg/L**	1	2/9/2012 09:52 PM
o-Xylene	**0.13**		**0.0050**	**mg/L**	1	2/9/2012 09:52 PM
sec-Butylbenzene	**0.021**		**0.0050**	**mg/L**	1	2/9/2012 09:52 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-11-0212
Lab ID: 1202121-30
Collection Date: 2/1/2012 12:10 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Styrene	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
Tetrachloroethene	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
Toluene	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
Trichloroethene	ND		0.0050	mg/L	1	2/9/2012 09:52 PM
Vinyl chloride	ND		0.0020	mg/L	1	2/9/2012 09:52 PM
Xylenes, Total	**0.20**		**0.015**	**mg/L**	1	2/9/2012 09:52 PM
Surr: 1,2-Dichloroethane-d4	*100*		*70-125*	*%REC*	1	2/9/2012 09:52 PM
Surr: 1,2-Dichloroethane-d4	*98.2*		*70-125*	*%REC*	100	2/10/2012 03:22 PM
Surr: 4-Bromofluorobenzene	*92.2*		*72-125*	*%REC*	100	2/10/2012 03:22 PM
Surr: 4-Bromofluorobenzene	*102*		*72-125*	*%REC*	1	2/9/2012 09:52 PM
Surr: Dibromofluoromethane	*99.1*		*71-125*	*%REC*	1	2/9/2012 09:52 PM
Surr: Dibromofluoromethane	*96.6*		*71-125*	*%REC*	100	2/10/2012 03:22 PM
Surr: Toluene-d8	*96.0*		*75-125*	*%REC*	1	2/9/2012 09:52 PM
Surr: Toluene-d8	*103*		*75-125*	*%REC*	100	2/10/2012 03:22 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**175**		**5.00**	**mg/L**	10	2/7/2012 03:24 PM
Fluoride	**0.749**		**0.100**	**mg/L**	1	2/7/2012 01:22 AM
Sulfate	**4.96**		**0.500**	**mg/L**	1	2/7/2012 01:22 AM
Nitrate/Nitrite (as N)	ND		0.500	mg/L	5	2/7/2012 12:27 AM
Surr: Selenate (surr)	*97.4*		*85-115*	*%REC*	10	2/7/2012 03:24 PM
Surr: Selenate (surr)	*108*		*85-115*	*%REC*	1	2/7/2012 01:22 AM
Surr: Selenate (surr)	*100*		*85-115*	*%REC*	5	2/7/2012 12:27 AM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**608**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Total (As CaCO3)	**608**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**1,720**		**1.00**	**µmhos/cm**	1	2/8/2012 10:00 AM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**6.63**	H	**0.100**	**pH units**	1	2/3/2012 02:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**966**		**10.0**	**mg/L**	1	2/3/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-11-0212 (Dissolved)
Lab ID: 1202121-31
Collection Date: 2/1/2012 12:10 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	ND		0.0100	mg/L	1	2/9/2012 02:25 PM
Arsenic	**0.0176**		**0.00500**	**mg/L**	1	2/8/2012 03:35 AM
Barium	**1.40**		**0.00500**	**mg/L**	1	2/8/2012 03:35 AM
Boron	**0.288**		**0.0200**	**mg/L**	1	2/9/2012 02:25 PM
Cadmium	ND		0.00200	mg/L	1	2/8/2012 03:35 AM
Calcium	**172**		**0.500**	**mg/L**	1	2/8/2012 03:35 AM
Chromium	ND		0.00500	mg/L	1	2/8/2012 03:35 AM
Cobalt	ND		0.00500	mg/L	1	2/8/2012 03:35 AM
Copper	ND		0.00500	mg/L	1	2/8/2012 03:35 AM
Iron	**1.77**		**0.200**	**mg/L**	1	2/8/2012 03:35 AM
Lead	ND		0.00500	mg/L	1	2/8/2012 03:35 AM
Magnesium	**23.3**		**0.200**	**mg/L**	1	2/8/2012 11:55 PM
Manganese	**1.05**		**0.00500**	**mg/L**	1	2/8/2012 03:35 AM
Molybdenum	ND		0.00500	mg/L	1	2/8/2012 03:35 AM
Nickel	**0.0169**		**0.00500**	**mg/L**	1	2/8/2012 03:35 AM
Potassium	**3.47**		**0.200**	**mg/L**	1	2/8/2012 11:55 PM
Selenium	ND		0.00500	mg/L	1	2/8/2012 03:35 AM
Silver	ND		0.00500	mg/L	1	2/8/2012 03:35 AM
Sodium	**85.7**		**0.200**	**mg/L**	1	2/9/2012 02:25 PM
Uranium	**0.0138**		**0.00500**	**mg/L**	1	2/8/2012 11:55 PM
Zinc	**0.0189**		**0.00500**	**mg/L**	1	2/8/2012 03:35 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-8-0212
Lab ID: 1202121-32
Collection Date: 2/1/2012 01:00 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/7/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/7/2012 07:38 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
2,4,5-Trichlorophenol	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
2,4,6-Trichlorophenol	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
2,4-Dichlorophenol	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
2,4-Dimethylphenol	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
2,4-Dinitrophenol	ND		0.010	mg/L	10	2/7/2012 10:20 PM
2,4-Dinitrotoluene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
2,6-Dinitrotoluene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
2-Chloronaphthalene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
2-Chlorophenol	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
2-Methylnaphthalene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
2-Methylphenol	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
2-Nitroaniline	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
2-Nitrophenol	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
3&4-Methylphenol	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
3,3´-Dichlorobenzidine	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
3-Nitroaniline	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
4,6-Dinitro-2-methylphenol	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
4-Bromophenyl phenyl ether	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
4-Chloro-3-methylphenol	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
4-Chloroaniline	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
4-Chlorophenyl phenyl ether	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
4-Nitroaniline	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
4-Nitrophenol	ND		0.010	mg/L	10	2/7/2012 10:20 PM
Acenaphthene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Acenaphthylene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Acetophenone	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Anthracene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Atrazine	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Benz(a)anthracene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Benzaldehyde	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Benzo(a)pyrene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Benzo(b)fluoranthene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Benzo(g,h,i)perylene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Benzo(k)fluoranthene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Bis(2-chloroethoxy)methane	ND		0.0020	mg/L	10	2/7/2012 10:20 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-8-0212
Lab ID: 1202121-32
Collection Date: 2/1/2012 01:00 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Bis(2-chloroisopropyl)ether	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Bis(2-ethylhexyl)phthalate	**0.050**		**0.0020**	**mg/L**	10	2/7/2012 10:20 PM
Butyl benzyl phthalate	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Caprolactam	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Carbazole	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Chrysene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Dibenz(a,h)anthracene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Dibenzofuran	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Diethyl phthalate	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Dimethyl phthalate	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Di-n-butyl phthalate	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Di-n-octyl phthalate	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Fluoranthene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Fluorene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Hexachlorobenzene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Hexachlorobutadiene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Hexachlorocyclopentadiene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Hexachloroethane	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Indeno(1,2,3-cd)pyrene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Isophorone	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Naphthalene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Nitrobenzene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
N-Nitrosodi-n-propylamine	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
N-Nitrosodiphenylamine	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Pentachlorophenol	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Phenanthrene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Phenol	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Pyrene	ND		0.0020	mg/L	10	2/7/2012 10:20 PM
Surr: 2,4,6-Tribromophenol	*55.7*		*34-129*	*%REC*	10	2/7/2012 10:20 PM
Surr: 2-Fluorobiphenyl	*74.5*		*40-125*	*%REC*	10	2/7/2012 10:20 PM
Surr: 2-Fluorophenol	*66.2*		*20-120*	*%REC*	10	2/7/2012 10:20 PM
Surr: 4-Terphenyl-d14	*105*		*40-135*	*%REC*	10	2/7/2012 10:20 PM
Surr: Nitrobenzene-d5	*61.3*		*41-120*	*%REC*	10	2/7/2012 10:20 PM
Surr: Phenol-d6	*27.0*		*20-120*	*%REC*	10	2/7/2012 10:20 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/10/2012 03:52 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-8-0212
Lab ID: 1202121-32
Collection Date: 2/1/2012 01:00 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
2-Butanone	ND		0.010	mg/L	1	2/10/2012 03:52 AM
2-Hexanone	ND		0.010	mg/L	1	2/10/2012 03:52 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/10/2012 03:52 AM
Acetone	ND		0.010	mg/L	1	2/10/2012 03:52 AM
Benzene	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
Bromodichloromethane	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
Bromoform	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
Bromomethane	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
Carbon disulfide	ND		0.010	mg/L	1	2/10/2012 03:52 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
Chlorobenzene	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
Chloroethane	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
Chloroform	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
Chloromethane	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
Dibromochloromethane	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
Ethylbenzene	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
Isopropylbenzene	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
m,p-Xylene	ND		0.010	mg/L	1	2/10/2012 03:52 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
Methylene chloride	ND		0.010	mg/L	1	2/10/2012 03:52 AM
Naphthalene	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
n-Butylbenzene	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
n-Propylbenzene	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
o-Xylene	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
Styrene	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
Tetrachloroethene	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
Toluene	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/10/2012 03:52 AM
Trichloroethene	ND		0.0050	mg/L	1	2/10/2012 03:52 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-8-0212
Lab ID: 1202121-32
Collection Date: 2/1/2012 01:00 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/10/2012 03:52 AM
Xylenes, Total	ND		0.015	mg/L	1	2/10/2012 03:52 AM
Surr: 1,2-Dichloroethane-d4	*97.4*		*70-125*	*%REC*	1	2/10/2012 03:52 AM
Surr: 4-Bromofluorobenzene	*92.4*		*72-125*	*%REC*	1	2/10/2012 03:52 AM
Surr: Dibromofluoromethane	*99.5*		*71-125*	*%REC*	1	2/10/2012 03:52 AM
Surr: Toluene-d8	*104*		*75-125*	*%REC*	1	2/10/2012 03:52 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**376**		**5.00**	**mg/L**	10	2/7/2012 03:45 PM
Fluoride	**0.498**		**0.100**	**mg/L**	1	2/7/2012 01:43 AM
Sulfate	**102**		**5.00**	**mg/L**	10	2/7/2012 03:45 PM
Nitrate/Nitrite (as N)	**8.21**		**0.500**	**mg/L**	5	2/7/2012 12:49 AM
Surr: Selenate (surr)	*109*		*85-115*	*%REC*	1	2/7/2012 01:43 AM
Surr: Selenate (surr)	*100*		*85-115*	*%REC*	5	2/7/2012 12:49 AM
Surr: Selenate (surr)	*103*		*85-115*	*%REC*	10	2/7/2012 03:45 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**471**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Total (As CaCO3)	**471**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**2,380**		**1.00**	**µmhos/cm**	1	2/8/2012 10:00 AM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**6.70**	H	**0.100**	**pH units**	1	2/3/2012 02:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**1,530**		**10.0**	**mg/L**	1	2/3/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-8-0212 (Dissolved)
Lab ID: 1202121-33
Collection Date: 2/1/2012 01:00 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	ND		0.0100	mg/L	1	2/9/2012 02:32 PM
Arsenic	ND		0.00500	mg/L	1	2/8/2012 03:42 AM
Barium	**0.221**		**0.00500**	**mg/L**	1	2/8/2012 03:42 AM
Boron	**0.210**		**0.0200**	**mg/L**	1	2/9/2012 02:32 PM
Cadmium	ND		0.00200	mg/L	1	2/8/2012 03:42 AM
Calcium	**238**		**5.00**	**mg/L**	10	2/9/2012 12:09 AM
Chromium	ND		0.00500	mg/L	1	2/8/2012 03:42 AM
Cobalt	ND		0.00500	mg/L	1	2/8/2012 03:42 AM
Copper	ND		0.00500	mg/L	1	2/8/2012 03:42 AM
Iron	ND		0.200	mg/L	1	2/8/2012 03:42 AM
Lead	ND		0.00500	mg/L	1	2/8/2012 03:42 AM
Magnesium	**29.4**		**0.200**	**mg/L**	1	2/9/2012 12:02 AM
Manganese	**0.00636**		**0.00500**	**mg/L**	1	2/8/2012 03:42 AM
Molybdenum	ND		0.00500	mg/L	1	2/8/2012 03:42 AM
Nickel	**0.0119**		**0.00500**	**mg/L**	1	2/8/2012 03:42 AM
Potassium	**4.08**		**0.200**	**mg/L**	1	2/9/2012 12:02 AM
Selenium	ND		0.00500	mg/L	1	2/8/2012 03:42 AM
Silver	ND		0.00500	mg/L	1	2/8/2012 03:42 AM
Sodium	**98.5**		**0.200**	**mg/L**	1	2/9/2012 02:32 PM
Uranium	**0.00745**		**0.00500**	**mg/L**	1	2/9/2012 12:02 AM
Zinc	**0.0339**		**0.00500**	**mg/L**	1	2/8/2012 03:42 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-13-0212
Lab ID: 1202121-34
Collection Date: 2/1/2012 02:00 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/7/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/7/2012 07:40 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	**0.0014**		**0.00020**	**mg/L**	1	2/6/2012 11:57 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/6/2012 11:57 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/6/2012 11:57 PM
Acenaphthene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Acetophenone	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Anthracene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Atrazine	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/6/2012 11:57 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-13-0212
Lab ID: 1202121-34
Collection Date: 2/1/2012 02:00 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Bis(2-ethylhexyl)phthalate	**0.00082**		**0.00020**	**mg/L**	1	2/6/2012 11:57 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Caprolactam	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Carbazole	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Chrysene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Dibenzofuran	**0.00023**		**0.00020**	**mg/L**	1	2/6/2012 11:57 PM
Diethyl phthalate	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Fluoranthene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Fluorene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Isophorone	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Naphthalene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Phenanthrene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Phenol	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Pyrene	ND		0.00020	mg/L	1	2/6/2012 11:57 PM
Surr: 2,4,6-Tribromophenol	*58.4*		*34-129*	*%REC*	1	2/6/2012 11:57 PM
Surr: 2-Fluorobiphenyl	*61.4*		*40-125*	*%REC*	1	2/6/2012 11:57 PM
Surr: 2-Fluorophenol	*61.3*		*20-120*	*%REC*	1	2/6/2012 11:57 PM
Surr: 4-Terphenyl-d14	*73.8*		*40-135*	*%REC*	1	2/6/2012 11:57 PM
Surr: Nitrobenzene-d5	*69.8*		*41-120*	*%REC*	1	2/6/2012 11:57 PM
Surr: Phenol-d6	*66.4*		*20-120*	*%REC*	1	2/6/2012 11:57 PM
VOLATILES			**SW8260**			Analyst: **AKP**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/11/2012 02:24 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-13-0212
Lab ID: 1202121-34
Collection Date: 2/1/2012 02:00 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
2-Butanone	ND		0.010	mg/L	1	2/11/2012 02:24 AM
2-Hexanone	ND		0.010	mg/L	1	2/11/2012 02:24 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/11/2012 02:24 AM
Acetone	ND		0.010	mg/L	1	2/11/2012 02:24 AM
Benzene	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
Bromodichloromethane	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
Bromoform	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
Bromomethane	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
Carbon disulfide	ND		0.010	mg/L	1	2/11/2012 02:24 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
Chlorobenzene	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
Chloroethane	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
Chloroform	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
Chloromethane	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
Dibromochloromethane	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
Ethylbenzene	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
Isopropylbenzene	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
m,p-Xylene	ND		0.010	mg/L	1	2/11/2012 02:24 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
Methylene chloride	ND		0.010	mg/L	1	2/11/2012 02:24 AM
Naphthalene	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
n-Butylbenzene	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
n-Propylbenzene	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
o-Xylene	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
Styrene	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
Tetrachloroethene	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
Toluene	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/11/2012 02:24 AM
Trichloroethene	ND		0.0050	mg/L	1	2/11/2012 02:24 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-13-0212
Lab ID: 1202121-34
Collection Date: 2/1/2012 02:00 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/11/2012 02:24 AM
Xylenes, Total	ND		0.015	mg/L	1	2/11/2012 02:24 AM
Surr: 1,2-Dichloroethane-d4	*98.9*		*70-125*	*%REC*	1	2/11/2012 02:24 AM
Surr: 4-Bromofluorobenzene	*97.4*		*72-125*	*%REC*	1	2/11/2012 02:24 AM
Surr: Dibromofluoromethane	*96.3*		*71-125*	*%REC*	1	2/11/2012 02:24 AM
Surr: Toluene-d8	*100*		*75-125*	*%REC*	1	2/11/2012 02:24 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**418**		**5.00**	**mg/L**	10	2/7/2012 04:06 PM
Fluoride	**0.322**		**0.100**	**mg/L**	1	2/7/2012 02:46 AM
Sulfate	**122**		**5.00**	**mg/L**	10	2/7/2012 04:06 PM
Nitrate/Nitrite (as N)	ND		0.500	mg/L	5	2/7/2012 01:54 AM
Surr: Selenate (surr)	*108*		*85-115*	*%REC*	1	2/7/2012 02:46 AM
Surr: Selenate (surr)	*101*		*85-115*	*%REC*	5	2/7/2012 01:54 AM
Surr: Selenate (surr)	*101*		*85-115*	*%REC*	10	2/7/2012 04:06 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**443**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/6/2012 06:25 PM
Alkalinity, Total (As CaCO3)	**443**		**5.00**	**mg/L**	1	2/6/2012 06:25 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**2,390**		**1.00**	**µmhos/cm**	1	2/8/2012 10:00 AM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**6.59**	H	**0.100**	**pH units**	1	2/3/2012 02:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**1,590**		**10.0**	**mg/L**	1	2/3/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-13-0212 (Dissolved)
Lab ID: 1202121-35
Collection Date: 2/1/2012 02:00 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	ND		0.0100	mg/L	1	2/9/2012 02:40 PM
Arsenic	ND		0.00500	mg/L	1	2/8/2012 03:49 AM
Barium	**0.0752**		**0.00500**	**mg/L**	1	2/8/2012 03:49 AM
Boron	**0.228**		**0.0200**	**mg/L**	1	2/9/2012 02:40 PM
Cadmium	ND		0.00200	mg/L	1	2/8/2012 03:49 AM
Calcium	**253**		**5.00**	**mg/L**	10	2/9/2012 02:25 AM
Chromium	ND		0.00500	mg/L	1	2/8/2012 03:49 AM
Cobalt	**0.00663**		**0.00500**	**mg/L**	1	2/8/2012 03:49 AM
Copper	ND		0.00500	mg/L	1	2/8/2012 03:49 AM
Iron	ND		0.200	mg/L	1	2/8/2012 03:49 AM
Lead	ND		0.00500	mg/L	1	2/8/2012 03:49 AM
Magnesium	**30.6**		**0.200**	**mg/L**	1	2/9/2012 12:16 AM
Manganese	**0.341**		**0.00500**	**mg/L**	1	2/8/2012 03:49 AM
Molybdenum	ND		0.00500	mg/L	1	2/8/2012 03:49 AM
Nickel	**0.0136**		**0.00500**	**mg/L**	1	2/8/2012 03:49 AM
Potassium	**4.32**		**0.200**	**mg/L**	1	2/9/2012 12:16 AM
Selenium	ND		0.00500	mg/L	1	2/8/2012 03:49 AM
Silver	ND		0.00500	mg/L	1	2/8/2012 03:49 AM
Sodium	**79.7**		**0.200**	**mg/L**	1	2/9/2012 02:40 PM
Uranium	**0.0128**		**0.00500**	**mg/L**	1	2/9/2012 12:16 AM
Zinc	**0.0553**		**0.00500**	**mg/L**	1	2/8/2012 03:49 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-27-0212
Lab ID: 1202121-36
Collection Date: 2/1/2012 02:45 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			**SW7470**		Prep Date: **2/7/2012**	Analyst: **JCJ**
Mercury	ND		0.00800	mg/L	1	2/7/2012 07:42 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **2/5/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	2/7/2012 07:43 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
2,6-Dinitrotoluene	**0.00068**		**0.00020**	**mg/L**	1	2/7/2012 07:43 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
2-Chlorophenol	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
2-Methylphenol	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
2-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
2-Nitrophenol	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
3,3´-Dichlorobenzidine	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
3-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
4-Chloroaniline	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
4-Nitroaniline	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
4-Nitrophenol	ND		0.0010	mg/L	1	2/7/2012 07:43 PM
Acenaphthene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Acenaphthylene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Acetophenone	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Anthracene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Atrazine	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Benzaldehyde	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	2/7/2012 07:43 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-27-0212
Lab ID: 1202121-36
Collection Date: 2/1/2012 02:45 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Bis(2-ethylhexyl)phthalate	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Caprolactam	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Carbazole	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Chrysene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Dibenzofuran	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Diethyl phthalate	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Fluoranthene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Fluorene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Hexachloroethane	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Isophorone	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Naphthalene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Nitrobenzene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Pentachlorophenol	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Phenanthrene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Phenol	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Pyrene	ND		0.00020	mg/L	1	2/7/2012 07:43 PM
Surr: 2,4,6-Tribromophenol	*50.1*		*34-129*	*%REC*	1	2/7/2012 07:43 PM
Surr: 2-Fluorobiphenyl	*65.2*		*40-125*	*%REC*	1	2/7/2012 07:43 PM
Surr: 2-Fluorophenol	*65.4*		*20-120*	*%REC*	1	2/7/2012 07:43 PM
Surr: 4-Terphenyl-d14	*76.3*		*40-135*	*%REC*	1	2/7/2012 07:43 PM
Surr: Nitrobenzene-d5	*74.1*		*41-120*	*%REC*	1	2/7/2012 07:43 PM
Surr: Phenol-d6	*60.0*		*20-120*	*%REC*	1	2/7/2012 07:43 PM
VOLATILES			**SW8260**			Analyst: **AKP**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/11/2012 02:48 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-27-0212
Lab ID: 1202121-36
Collection Date: 2/1/2012 02:45 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
2-Butanone	ND		0.010	mg/L	1	2/11/2012 02:48 AM
2-Hexanone	ND		0.010	mg/L	1	2/11/2012 02:48 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/11/2012 02:48 AM
Acetone	ND		0.010	mg/L	1	2/11/2012 02:48 AM
Benzene	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
Bromodichloromethane	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
Bromoform	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
Bromomethane	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
Carbon disulfide	ND		0.010	mg/L	1	2/11/2012 02:48 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
Chlorobenzene	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
Chloroethane	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
Chloroform	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
Chloromethane	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
Dibromochloromethane	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
Ethylbenzene	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
Isopropylbenzene	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
m,p-Xylene	ND		0.010	mg/L	1	2/11/2012 02:48 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
Methylene chloride	ND		0.010	mg/L	1	2/11/2012 02:48 AM
Naphthalene	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
n-Butylbenzene	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
n-Propylbenzene	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
o-Xylene	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
Styrene	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
Tetrachloroethene	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
Toluene	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/11/2012 02:48 AM
Trichloroethene	ND		0.0050	mg/L	1	2/11/2012 02:48 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-27-0212
Lab ID: 1202121-36
Collection Date: 2/1/2012 02:45 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.0020	mg/L	1	2/11/2012 02:48 AM
Xylenes, Total	ND		0.015	mg/L	1	2/11/2012 02:48 AM
Surr: 1,2-Dichloroethane-d4	*101*		*70-125*	*%REC*	1	2/11/2012 02:48 AM
Surr: 4-Bromofluorobenzene	*97.7*		*72-125*	*%REC*	1	2/11/2012 02:48 AM
Surr: Dibromofluoromethane	*97.3*		*71-125*	*%REC*	1	2/11/2012 02:48 AM
Surr: Toluene-d8	*99.7*		*75-125*	*%REC*	1	2/11/2012 02:48 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**164**		**5.00**	**mg/L**	10	2/7/2012 04:27 PM
Fluoride	**0.691**		**0.100**	**mg/L**	1	2/7/2012 03:07 AM
Sulfate	**99.8**		**0.500**	**mg/L**	1	2/7/2012 03:07 AM
Nitrate/Nitrite (as N)	**2.43**		**0.500**	**mg/L**	5	2/7/2012 02:16 AM
Surr: Selenate (surr)	*109*		*85-115*	*%REC*	1	2/7/2012 03:07 AM
Surr: Selenate (surr)	*99.8*		*85-115*	*%REC*	5	2/7/2012 02:16 AM
Surr: Selenate (surr)	*102*		*85-115*	*%REC*	10	2/7/2012 04:27 PM
ALKALINITY			**SM2320B**			Analyst: **DM**
Alkalinity, Bicarbonate (As CaCO3)	**259**		**5.00**	**mg/L**	1	2/8/2012 11:07 AM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/8/2012 11:07 AM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/8/2012 11:07 AM
Alkalinity, Total (As CaCO3)	**259**		**5.00**	**mg/L**	1	2/8/2012 11:07 AM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **CMC**
Specific Conductivity	**1,250**		**1.00**	**µmhos/cm**	1	2/8/2012 10:00 AM
PH			**SM4500H+ B**			Analyst: **TDW**
pH	**7.06**	H	**0.100**	**pH units**	1	2/3/2012 02:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**676**		**10.0**	**mg/L**	1	2/3/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Apr-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 1202121
Sample ID: MW-27-0212 (Dissolved)
Lab ID: 1202121-37
Collection Date: 2/1/2012 02:45 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED METALS			**SW6020**		Prep Date: **2/6/2012**	Analyst: **IGF**
Aluminum	ND		0.0100	mg/L	1	2/9/2012 02:47 PM
Arsenic	ND		0.00500	mg/L	1	2/8/2012 03:56 AM
Barium	**0.0902**		**0.00500**	**mg/L**	1	2/8/2012 03:56 AM
Boron	**0.126**		**0.0200**	**mg/L**	1	2/9/2012 02:47 PM
Cadmium	ND		0.00200	mg/L	1	2/8/2012 03:56 AM
Calcium	**119**		**0.500**	**mg/L**	1	2/8/2012 03:56 AM
Chromium	ND		0.00500	mg/L	1	2/8/2012 03:56 AM
Cobalt	ND		0.00500	mg/L	1	2/8/2012 03:56 AM
Copper	ND		0.00500	mg/L	1	2/8/2012 03:56 AM
Iron	ND		0.200	mg/L	1	2/8/2012 03:56 AM
Lead	ND		0.00500	mg/L	1	2/8/2012 03:56 AM
Magnesium	**14.8**		**0.200**	**mg/L**	1	2/9/2012 12:22 AM
Manganese	**0.00556**		**0.00500**	**mg/L**	1	2/8/2012 03:56 AM
Molybdenum	ND		0.00500	mg/L	1	2/8/2012 03:56 AM
Nickel	**0.00533**		**0.00500**	**mg/L**	1	2/8/2012 03:56 AM
Potassium	**2.43**		**0.200**	**mg/L**	1	2/9/2012 12:22 AM
Selenium	ND		0.00500	mg/L	1	2/8/2012 03:56 AM
Silver	ND		0.00500	mg/L	1	2/8/2012 03:56 AM
Sodium	**72.2**		**0.200**	**mg/L**	1	2/9/2012 02:47 PM
Uranium	ND		0.00500	mg/L	1	2/9/2012 12:22 AM
Zinc	**0.0121**		**0.00500**	**mg/L**	1	2/8/2012 03:56 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **58710** Instrument ID **ICPMS04** Method: **SW6020** **(Dissolve)**

MBLK Sample ID: **MBLKW3-020612-58710** Units: **mg/L** Analysis Date: **2/7/2012 11:01 PM**

Client ID: Run ID: **ICPMS04_120207A** SeqNo: **2679957** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.004214	0.010								J
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Cadmium	ND	0.0020								
Calcium	ND	0.50								
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Copper	ND	0.0050								
Iron	ND	0.20								
Lead	ND	0.0050								
Magnesium	ND	0.20								
Manganese	ND	0.0050								
Molybdenum	ND	0.0050								
Nickel	ND	0.0050								
Potassium	ND	0.20								
Selenium	ND	0.0050								
Silver	ND	0.0050								
Sodium	ND	0.20								
Zinc	ND	0.0050								

MBLK Sample ID: **MBLKW3-020612-58710** Units: **mg/L** Analysis Date: **2/8/2012 07:43 PM**

Client ID: Run ID: **ICPMS04_120208A** SeqNo: **2681438** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	ND	0.050								
Uranium	ND	0.0050								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58710** Instrument ID **ICPMS04** Method: **SW6020** **(Dissolve)**

LCS Sample ID: **MLCSW3-020612-58710** Units: **mg/L** Analysis Date: **2/7/2012 11:08 PM**
Client ID: Run ID: **ICPMS04_120207A** SeqNo: **2679958** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1069	0.010	0.1	0	107	80-120	0			
Arsenic	0.05191	0.0050	0.05	0	104	80-120	0			
Barium	0.05425	0.0050	0.05	0	109	80-120	0			
Cadmium	0.05425	0.0020	0.05	0	108	80-120	0			
Calcium	5.247	0.50	5	0	105	80-120	0			
Chromium	0.05108	0.0050	0.05	0	102	80-120	0			
Cobalt	0.05133	0.0050	0.05	0	103	80-120	0			
Copper	0.05079	0.0050	0.05	0	102	80-120	0			
Iron	5.241	0.20	5	0	105	80-120	0			
Lead	0.05334	0.0050	0.05	0	107	80-120	0			
Magnesium	5.203	0.20	5	0	104	80-120	0			
Manganese	0.05011	0.0050	0.05	0	100	80-120	0			
Molybdenum	0.05337	0.0050	0.05	0	107	80-120	0			
Nickel	0.05234	0.0050	0.05	0	105	80-120	0			
Potassium	5.285	0.20	5	0	106	80-120	0			
Selenium	0.05152	0.0050	0.05	0	103	80-120	0			
Silver	0.05425	0.0050	0.05	0	109	80-120	0			
Sodium	4.897	0.20	5	0	97.9	80-120	0			
Zinc	0.05418	0.0050	0.05	0	108	80-120	0			

LCS Sample ID: **MLCSW3-020612-58710** Units: **mg/L** Analysis Date: **2/8/2012 07:50 PM**
Client ID: Run ID: **ICPMS04_120208A** SeqNo: **2681439** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.4639	0.050	0.5	0	92.8	80-120	0			
Uranium	0.09264	0.0050	0.1	0	92.6	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58710** Instrument ID **ICPMS04** Method: **SW6020** **(Dissolve)**

MS Sample ID: **1202121-25AMS** Units: **mg/L** Analysis Date: **2/8/2012 12:57 AM**
Client ID: **MW-23-0212 (Dissolved)** Run ID: **ICPMS04_120207A** SeqNo: **2679974** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05076	0.0050	0.05	0.001599	98.3	75-125	0			
Barium	0.3235	0.0050	0.05	0.2681	111	75-125	0			O
Cadmium	0.04915	0.0020	0.05	-0.000016	98.3	75-125	0			
Calcium	427.6	0.50	5	419.9	155	75-125	0			SEO
Chromium	0.04772	0.0050	0.05	0.001133	93.2	75-125	0			
Cobalt	0.04585	0.0050	0.05	0.000253	91.2	75-125	0			
Copper	0.04481	0.0050	0.05	0.000169	89.3	75-125	0			
Iron	4.863	0.20	5	0.04666	96.3	75-125	0			
Lead	0.0485	0.0050	0.05	0.000013	97	75-125	0			
Manganese	0.05412	0.0050	0.05	0.006581	95.1	75-125	0			
Molybdenum	0.04755	0.0050	0.05	0.000809	93.5	75-125	0			
Nickel	0.05275	0.0050	0.05	0.00714	91.2	75-125	0			
Selenium	0.04876	0.0050	0.05	0.001101	95.3	75-125	0			
Silver	0.0454	0.0050	0.05	-0.000025	90.8	75-125	0			
Zinc	0.0662	0.0050	0.05	0.02072	91	75-125	0			

MS Sample ID: **1202121-25AMS** Units: **mg/L** Analysis Date: **2/8/2012 08:24 PM**
Client ID: **MW-23-0212 (Dissolved)** Run ID: **ICPMS04_120208A** SeqNo: **2681444** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	10.15	0.20	5	5.336	96.3	75-125	0			
Uranium	0.09545	0.0050	0.1	0.003609	91.8	75-125	0			

MS Sample ID: **1202121-25AMS** Units: **mg/L** Analysis Date: **2/10/2012 09:24 AM**
Client ID: **MW-23-0212 (Dissolved)** Run ID: **ICPMS04_120209A** SeqNo: **2683320** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1059	0.010	0.1	0.0108	95.1	75-125	0			
Boron	0.6324	0.050	0.5	0.1594	94.6	75-125	0			

MS Sample ID: **1202121-25AMS** Units: **mg/L** Analysis Date: **2/10/2012 02:00 PM**
Client ID: **MW-23-0212 (Dissolved)** Run ID: **ICPMS04_120210A** SeqNo: **2683935** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Magnesium	48.74	0.20	5	44.11	92.5	75-125	0			O
Sodium	110.7	0.20	5	106.5	84	75-125	0			O

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58710** Instrument ID **ICPMS04** Method: **SW6020** **(Dissolve)**

MSD Sample ID: **1202121-25AMSD** Units: **mg/L** Analysis Date: **2/8/2012 01:04 AM**
Client ID: **MW-23-0212 (Dissolved)** Run ID: **ICPMS04_120207A** SeqNo: **2679975** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05162	0.0050	0.05	0.001599	100	75-125	0.05076	1.68	25	
Barium	0.3262	0.0050	0.05	0.2681	116	75-125	0.3235	0.828	25	O
Cadmium	0.0507	0.0020	0.05	-0.000016	101	75-125	0.04915	3.11	25	
Calcium	436.3	0.50	5	419.9	328	75-125	427.6	2.01	25	SEO
Chromium	0.04888	0.0050	0.05	0.001133	95.5	75-125	0.04772	2.4	25	
Cobalt	0.04655	0.0050	0.05	0.000253	92.6	75-125	0.04585	1.53	25	
Copper	0.04585	0.0050	0.05	0.000169	91.4	75-125	0.04481	2.3	25	
Iron	4.968	0.20	5	0.04666	98.4	75-125	4.863	2.14	25	
Lead	0.04994	0.0050	0.05	0.000013	99.9	75-125	0.0485	2.92	25	
Manganese	0.0554	0.0050	0.05	0.006581	97.6	75-125	0.05412	2.35	25	
Molybdenum	0.04855	0.0050	0.05	0.000809	95.5	75-125	0.04755	2.08	25	
Nickel	0.05269	0.0050	0.05	0.00714	91.1	75-125	0.05275	0.11	25	
Selenium	0.05162	0.0050	0.05	0.001101	101	75-125	0.04876	5.7	25	
Silver	0.04532	0.0050	0.05	-0.000025	90.7	75-125	0.0454	0.161	25	
Zinc	0.06756	0.0050	0.05	0.02072	93.7	75-125	0.0662	2.03	25	

MSD Sample ID: **1202121-25AMSD** Units: **mg/L** Analysis Date: **2/8/2012 08:31 PM**
Client ID: **MW-23-0212 (Dissolved)** Run ID: **ICPMS04_120208A** SeqNo: **2681445** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	10.5	0.20	5	5.336	103	75-125	10.15	3.42	25	
Uranium	0.09683	0.0050	0.1	0.003609	93.2	75-125	0.09545	1.44	25	

MSD Sample ID: **1202121-25AMSD** Units: **mg/L** Analysis Date: **2/9/2012 08:57 PM**
Client ID: **MW-23-0212 (Dissolved)** Run ID: **ICPMS04_120209A** SeqNo: **2683086** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09854	0.010	0.1	0.007763	90.8	75-125	0.1059	7.16	25	
Boron	0.7319	0.050	0.5	0.1979	107	75-125	0.6324	14.6	25	
Magnesium	47.74	0.20	5	39.89	157	75-125	51.84	8.22	25	SO
Sodium	110.4	0.20	5	97.36	261	75-125	116.8	5.63	25	SO

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58710** Instrument ID **ICPMS04** Method: **SW6020** **(Dissolve)**

DUP Sample ID: **1202121-25ADUP** Units: **mg/L** Analysis Date: **2/8/2012 12:50 AM**
Client ID: **MW-23-0212 (Dissolved)** Run ID: **ICPMS04_120207A** SeqNo: **2679973** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.001747	0.0050	0	0	0	0-0	0.001599	0	25	J
Barium	0.2732	0.0050	0	0	0	0-0	0.2681	1.89	25	
Cadmium	ND	0.0020	0	0	0	0-0	-0.000016	0	25	
Chromium	ND	0.0050	0	0	0	0-0	0.001133	0	25	
Cobalt	ND	0.0050	0	0	0	0-0	0.000253	0	25	
Copper	ND	0.0050	0	0	0	0-0	0.000169	0	25	
Iron	ND	0.20	0	0	0	0-0	0.04666	0	25	
Lead	ND	0.0050	0	0	0	0-0	0.000013	0	25	
Manganese	0.006738	0.0050	0	0	0	0-0	0.006581	2.36	25	
Molybdenum	ND	0.0050	0	0	0	0-0	0.000809	0	25	
Nickel	0.007204	0.0050	0	0	0	0-0	0.00714	0.892	25	
Selenium	0.001599	0.0050	0	0	0	0-0	0.001101	0	25	J
Silver	ND	0.0050	0	0	0	0-0	-0.000025	0	25	
Zinc	0.02119	0.0050	0	0	0	0-0	0.02072	2.23	25	

DUP Sample ID: **1202121-25ADUP** Units: **mg/L** Analysis Date: **2/8/2012 08:17 PM**
Client ID: **MW-23-0212 (Dissolved)** Run ID: **ICPMS04_120208A** SeqNo: **2681443** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	5.358	0.20	0	0	0	0-0	5.336	0.412	25	
Uranium	ND	0.0050	0	0	0		0.003609	0	25	

DUP Sample ID: **1202121-25ADUP** Units: **mg/L** Analysis Date: **2/8/2012 08:58 PM**
Client ID: **MW-23-0212 (Dissolved)** Run ID: **ICPMS04_120208A** SeqNo: **2681449** Prep Date: **2/6/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	387.1	5.0	0	0	0	0-0	378.8	2.19	25	

DUP Sample ID: **1202121-25ADUP** Units: **mg/L** Analysis Date: **2/10/2012 09:17 AM**
Client ID: **MW-23-0212 (Dissolved)** Run ID: **ICPMS04_120209A** SeqNo: **2683319** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.03798	0.010	0	0	0	0-0	0.0108	111	25	R
Boron	0.1586	0.050	0	0	0	0-0	0.1594	0.488	25	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58710** Instrument ID **ICPMS04** Method: **SW6020** **(Dissolve)**

DUP Sample ID: **1202121-25ADUP** Units: **mg/L** Analysis Date: **2/10/2012 01:54 PM**

Client ID: **MW-23-0212 (Dissolved)** Run ID: **ICPMS04_120210A** SeqNo: **2683934** Prep Date: **2/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Magnesium	44.22	0.20	0	0	0	0-0	44.11	0.249	25	
Sodium	107.1	0.20	0	0	0	0-0	106.5	0.573	25	

The following samples were analyzed in this batch:

1202121-02A	1202121-04A	1202121-06A
1202121-08A	1202121-10A	1202121-12A
1202121-14A	1202121-16A	1202121-18A
1202121-20A	1202121-23A	1202121-25A
1202121-27A	1202121-29A	1202121-31A
1202121-33A	1202121-35A	1202121-37A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58748** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW2-020712-58748** Units: **mg/L** Analysis Date: **2/7/2012 06:38 PM**
Client ID: Run ID: **MERCURY_120207A** SeqNo: **2680077** Prep Date: **2/7/2012** 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: **GLCSW2-020712-58748** Units: **mg/L** Analysis Date: **2/7/2012 06:40 PM**
Client ID: Run ID: **MERCURY_120207A** SeqNo: **2680078** Prep Date: **2/7/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00515	0.00020	0.005	0	103	85-115	0			

MS Sample ID: **1202121-01CMS** Units: **mg/L** Analysis Date: **2/7/2012 06:47 PM**
Client ID: **MW-9-0112** Run ID: **MERCURY_120207A** SeqNo: **2680081** Prep Date: **2/7/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00509	0.00020	0.005	0.000007	102	85-115	0			

MSD Sample ID: **1202121-01CMSD** Units: **mg/L** Analysis Date: **2/7/2012 06:49 PM**
Client ID: **MW-9-0112** Run ID: **MERCURY_120207A** SeqNo: **2680082** Prep Date: **2/7/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0051	0.00020	0.005	0.000007	102	85-115	0.00509	0.196	20	

DUP Sample ID: **1202121-01CDUP** Units: **mg/L** Analysis Date: **2/7/2012 06:45 PM**
Client ID: **MW-9-0112** Run ID: **MERCURY_120207A** SeqNo: **2680080** Prep Date: **2/7/2012** 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	0.000007	0	20	

The following samples were analyzed in this batch:

1202121-01C	1202121-03C	1202121-05C
1202121-07C	1202121-09C	1202121-11C
1202121-13C	1202121-15C	1202121-17C
1202121-19C	1202121-22C	1202121-24C
1202121-26C	1202121-28C	1202121-30C
1202121-32C	1202121-34C	1202121-36C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58694** Instrument ID **SV-4** Method: **SW8270**

MBLK Sample ID: **SBLKW1-120205-58694** Units: **µg/L** Analysis Date: **2/5/2012 06:41 PM**

Client ID: Run ID: **SV-4_120205A** SeqNo: **2678412** Prep Date: **2/5/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	ND	0.20								
2,4,5-Trichlorophenol	ND	0.20								
2,4,6-Trichlorophenol	ND	0.20								
2,4-Dichlorophenol	ND	0.20								
2,4-Dimethylphenol	ND	0.20								
2,4-Dinitrophenol	ND	1.0								
2,4-Dinitrotoluene	ND	0.20								
2,6-Dinitrotoluene	ND	0.20								
2-Chloronaphthalene	ND	0.20								
2-Chlorophenol	ND	0.20								
2-Methylnaphthalene	ND	0.20								
2-Methylphenol	ND	0.20								
2-Nitroaniline	ND	0.20								
2-Nitrophenol	ND	0.20								
3&4-Methylphenol	ND	0.20								
3,3´-Dichlorobenzidine	ND	0.20								
3-Nitroaniline	ND	0.20								
4,6-Dinitro-2-methylphenol	ND	0.20								
4-Bromophenyl phenyl ether	ND	0.20								
4-Chloro-3-methylphenol	ND	0.20								
4-Chloroaniline	ND	0.20								
4-Chlorophenyl phenyl ether	ND	0.20								
4-Nitroaniline	ND	0.20								
4-Nitrophenol	ND	1.0								
Acenaphthene	ND	0.20								
Acenaphthylene	ND	0.20								
Acetophenone	ND	0.20								
Anthracene	ND	0.20								
Atrazine	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzaldehyde	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								
Bis(2-chloroethoxy)methane	ND	0.20								
Bis(2-chloroethyl)ether	ND	0.20								
Bis(2-chloroisopropyl)ether	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.20								
Butyl benzyl phthalate	ND	0.20								
Caprolactam	ND	0.20								
Carbazole	ND	0.20								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **58694** Instrument ID **SV-4** Method: **SW8270**

Chrysene	ND	0.20					
Dibenz(a,h)anthracene	ND	0.20					
Dibenzofuran	ND	0.20					
Diethyl phthalate	ND	0.20					
Dimethyl phthalate	ND	0.20					
Di-n-butyl phthalate	ND	0.20					
Di-n-octyl phthalate	ND	0.20					
Fluoranthene	ND	0.20					
Fluorene	ND	0.20					
Hexachlorobenzene	ND	0.20					
Hexachlorobutadiene	ND	0.20					
Hexachlorocyclopentadiene	ND	0.20					
Hexachloroethane	ND	0.20					
Indeno(1,2,3-cd)pyrene	ND	0.20					
Isophorone	ND	0.20					
Naphthalene	ND	0.20					
Nitrobenzene	ND	0.20					
N-Nitrosodi-n-propylamine	ND	0.20					
N-Nitrosodiphenylamine	ND	0.20					
Pentachlorophenol	ND	0.20					
Phenanthrene	ND	0.20					
Phenol	ND	0.20					
Pyrene	ND	0.20					
Surr: 2,4,6-Tribromophenol	*3.82*	0.20	*5*	0	*76.4*	*34-129*	0
Surr: 2-Fluorobiphenyl	*4.095*	0.20	*5*	0	*81.9*	*40-125*	0
Surr: 2-Fluorophenol	*3.676*	0.20	*5*	0	*73.5*	*20-120*	0
Surr: 4-Terphenyl-d14	*4.602*	0.20	*5*	0	*92*	*40-135*	0
Surr: Nitrobenzene-d5	*4.219*	0.20	*5*	0	*84.4*	*41-120*	0
Surr: Phenol-d6	*3.852*	0.20	*5*	0	*77*	*20-120*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58694** Instrument ID **SV-4** Method: **SW8270**

LCS Sample ID: **SLCSW1-120205-58694** Units: **µg/L** Analysis Date: **2/5/2012 07:01 PM**

Client ID: Run ID: **SV-4_120205A** SeqNo: **2678413** Prep Date: **2/5/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	3.755	0.20	5	0	75.1	45-125	0			
2,4,5-Trichlorophenol	4.246	0.20	5	0	84.9	46-120	0			
2,4,6-Trichlorophenol	4.235	0.20	5	0	84.7	42-120	0			
2,4-Dichlorophenol	4.043	0.20	5	0	80.9	49-120	0			
2,4-Dimethylphenol	4.341	0.20	5	0	86.8	35-120	0			
2,4-Dinitrophenol	3.405	1.0	5	0	68.1	15-120	0			
2,4-Dinitrotoluene	4.169	0.20	5	0	83.4	50-122	0			
2,6-Dinitrotoluene	4.439	0.20	5	0	88.8	50-120	0			
2-Chloronaphthalene	3.803	0.20	5	0	76.1	50-120	0			
2-Chlorophenol	3.79	0.20	5	0	75.8	40-120	0			
2-Methylnaphthalene	3.848	0.20	5	0	77	50-120	0			
2-Methylphenol	3.985	0.20	5	0	79.7	45-120	0			
2-Nitroaniline	4.09	0.20	5	0	81.8	28-139	0			
2-Nitrophenol	4.245	0.20	5	0	84.9	40-120	0			
3&4-Methylphenol	4.184	0.20	5	0	83.7	35-120	0			
3,3´-Dichlorobenzidine	4.532	0.20	5	0	90.6	15-120	0			
3-Nitroaniline	4.446	0.20	5	0	88.9	30-120	0			
4,6-Dinitro-2-methylphenol	4.058	0.20	5	0	81.2	25-121	0			
4-Bromophenyl phenyl ether	3.982	0.20	5	0	79.6	45-120	0			
4-Chloro-3-methylphenol	4.124	0.20	5	0	82.5	47-120	0			
4-Chloroaniline	4.003	0.20	5	0	80.1	20-120	0			
4-Chlorophenyl phenyl ether	3.908	0.20	5	0	78.2	50-120	0			
4-Nitroaniline	3.321	0.20	5	0	66.4	30-133	0			
4-Nitrophenol	4.524	1.0	5	0	90.5	30-130	0			
Acenaphthene	3.829	0.20	5	0	76.6	45-120	0			
Acenaphthylene	3.965	0.20	5	0	79.3	47-120	0			
Acetophenone	3.958	0.20	5	0	79.2	40-120	0			
Anthracene	4.249	0.20	5	0	85	45-120	0			
Atrazine	3.887	0.20	5	0	77.7	40-130	0			
Benz(a)anthracene	4.3	0.20	5	0	86	40-120	0			
Benzaldehyde	1.398	0.20	5	0	28	15-120	0			
Benzo(a)pyrene	4.404	0.20	5	0	88.1	45-120	0			
Benzo(b)fluoranthene	4.39	0.20	5	0	87.8	50-120	0			
Benzo(g,h,i)perylene	4.583	0.20	5	0	91.7	42-127	0			
Benzo(k)fluoranthene	4.433	0.20	5	0	88.7	45-127	0			
Bis(2-chloroethoxy)methane	4.229	0.20	5	0	84.6	45-120	0			
Bis(2-chloroethyl)ether	3.962	0.20	5	0	79.2	37-121	0			
Bis(2-chloroisopropyl)ether	3.577	0.20	5	0	71.5	40-120	0			
Bis(2-ethylhexyl)phthalate	4.37	0.20	5	0	87.4	40-139	0			
Butyl benzyl phthalate	4.372	0.20	5	0	87.4	47-123	0			
Caprolactam	4.491	0.20	5	0	89.8	35-134	0			
Carbazole	4.236	0.20	5	0	84.7	42-128	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **58694** Instrument ID **SV-4** Method: **SW8270**

Chrysene	4.329	0.20	5	0	86.6	43-120	0
Dibenz(a,h)anthracene	4.644	0.20	5	0	92.9	45-125	0
Dibenzofuran	4.266	0.20	5	0	85.3	50-120	0
Diethyl phthalate	3.957	0.20	5	0	79.1	41-120	0
Dimethyl phthalate	4.175	0.20	5	0	83.5	40-122	0
Di-n-butyl phthalate	4.507	0.20	5	0	90.1	45-123	0
Di-n-octyl phthalate	4.399	0.20	5	0	88	45-129	0
Fluoranthene	4.41	0.20	5	0	88.2	45-125	0
Fluorene	3.919	0.20	5	0	78.4	49-120	0
Hexachlorobenzene	4.071	0.20	5	0	81.4	48-120	0
Hexachlorobutadiene	4.207	0.20	5	0	84.1	40-120	0
Hexachlorocyclopentadiene	4.147	0.20	5	0	82.9	34-136	0
Hexachloroethane	3.985	0.20	5	0	79.7	40-120	0
Indeno(1,2,3-cd)pyrene	4.774	0.20	5	0	95.5	41-128	0
Isophorone	4.238	0.20	5	0	84.8	40-121	0
Naphthalene	4.09	0.20	5	0	81.8	45-120	0
Nitrobenzene	4.115	0.20	5	0	82.3	44-120	0
N-Nitrosodi-n-propylamine	3.923	0.20	5	0	78.5	40-120	0
N-Nitrosodiphenylamine	4.488	0.20	5	0	89.8	40-125	0
Pentachlorophenol	3.24	0.20	5	0	64.8	19-121	0
Phenanthrene	4.198	0.20	5	0	84	45-121	0
Phenol	3.839	0.20	5	0	76.8	20-124	0
Pyrene	4.204	0.20	5	0	84.1	40-130	0
Surr: 2,4,6-Tribromophenol	*4.518*	0.20	*5*	0	*90.4*	*34-129*	0
Surr: 2-Fluorobiphenyl	*4.185*	0.20	*5*	0	*83.7*	*40-125*	0
Surr: 2-Fluorophenol	*3.922*	0.20	*5*	0	*78.4*	*20-120*	0
Surr: 4-Terphenyl-d14	*5.07*	0.20	*5*	0	*101*	*40-135*	0
Surr: Nitrobenzene-d5	*4.606*	0.20	*5*	0	*92.1*	*41-120*	0
Surr: Phenol-d6	*4.104*	0.20	*5*	0	*82.1*	*20-120*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **58694** Instrument ID **SV-4** Method: **SW8270**

LCSD Sample ID: **SLCSDW1-120205-58694** Units: **µg/L** Analysis Date: **2/5/2012 07:21 PM**

Client ID: Run ID: **SV-4_120205A** SeqNo: **2678414** Prep Date: **2/5/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	3.612	0.20	5	0	72.2	45-125	3.755	3.89	20	
2,4,5-Trichlorophenol	3.918	0.20	5	0	78.4	46-120	4.246	8.03	20	
2,4,6-Trichlorophenol	4.438	0.20	5	0	88.8	42-120	4.235	4.69	20	
2,4-Dichlorophenol	4.23	0.20	5	0	84.6	49-120	4.043	4.52	20	
2,4-Dimethylphenol	4.202	0.20	5	0	84	35-120	4.341	3.25	20	
2,4-Dinitrophenol	3.794	1.0	5	0	75.9	15-120	3.405	10.8	20	
2,4-Dinitrotoluene	4.177	0.20	5	0	83.5	50-122	4.169	0.202	20	
2,6-Dinitrotoluene	4.185	0.20	5	0	83.7	50-120	4.439	5.89	20	
2-Chloronaphthalene	3.903	0.20	5	0	78.1	50-120	3.803	2.6	20	
2-Chlorophenol	3.815	0.20	5	0	76.3	40-120	3.79	0.669	20	
2-Methylnaphthalene	3.948	0.20	5	0	79	50-120	3.848	2.56	20	
2-Methylphenol	4.154	0.20	5	0	83.1	45-120	3.985	4.14	20	
2-Nitroaniline	4.939	0.20	5	0	98.8	28-139	4.09	18.8	20	
2-Nitrophenol	4.223	0.20	5	0	84.5	40-120	4.245	0.51	20	
3&4-Methylphenol	4	0.20	5	0	80	35-120	4.184	4.49	20	
3,3´-Dichlorobenzidine	4.298	0.20	5	0	86	15-120	4.532	5.3	20	
3-Nitroaniline	4.189	0.20	5	0	83.8	30-120	4.446	5.95	20	
4,6-Dinitro-2-methylphenol	4.444	0.20	5	0	88.9	25-121	4.058	9.08	20	
4-Bromophenyl phenyl ether	4.323	0.20	5	0	86.5	45-120	3.982	8.2	20	
4-Chloro-3-methylphenol	4.113	0.20	5	0	82.3	47-120	4.124	0.266	20	
4-Chloroaniline	4.08	0.20	5	0	81.6	20-120	4.003	1.91	20	
4-Chlorophenyl phenyl ether	3.963	0.20	5	0	79.3	50-120	3.908	1.4	20	
4-Nitroaniline	3.572	0.20	5	0	71.4	30-133	3.321	7.29	20	
4-Nitrophenol	4.652	1.0	5	0	93	30-130	4.524	2.79	20	
Acenaphthene	3.721	0.20	5	0	74.4	45-120	3.829	2.86	20	
Acenaphthylene	3.791	0.20	5	0	75.8	47-120	3.965	4.49	20	
Acetophenone	3.795	0.20	5	0	75.9	40-120	3.958	4.2	20	
Anthracene	4.071	0.20	5	0	81.4	45-120	4.249	4.28	20	
Atrazine	3.558	0.20	5	0	71.2	40-130	3.887	8.84	20	
Benz(a)anthracene	4.191	0.20	5	0	83.8	40-120	4.3	2.55	20	
Benzaldehyde	1.433	0.20	5	0	28.7	15-120	1.398	2.47	20	
Benzo(a)pyrene	4.056	0.20	5	0	81.1	45-120	4.404	8.23	20	
Benzo(b)fluoranthene	4.592	0.20	5	0	91.8	50-120	4.39	4.49	20	
Benzo(g,h,i)perylene	4.315	0.20	5	0	86.3	42-127	4.583	6.02	20	
Benzo(k)fluoranthene	3.88	0.20	5	0	77.6	45-127	4.433	13.3	20	
Bis(2-chloroethoxy)methane	4.121	0.20	5	0	82.4	45-120	4.229	2.59	20	
Bis(2-chloroethyl)ether	3.729	0.20	5	0	74.6	37-121	3.962	6.07	20	
Bis(2-chloroisopropyl)ether	3.527	0.20	5	0	70.5	40-120	3.577	1.43	20	
Bis(2-ethylhexyl)phthalate	4.265	0.20	5	0	85.3	40-139	4.37	2.42	20	
Butyl benzyl phthalate	4.459	0.20	5	0	89.2	47-123	4.372	1.97	20	
Caprolactam	4.523	0.20	5	0	90.5	35-134	4.491	0.697	20	
Carbazole	4.139	0.20	5	0	82.8	42-128	4.236	2.31	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **58694** Instrument ID **SV-4** Method: **SW8270**

Chrysene	3.998	0.20	5	0	80	43-120	4.329	7.97	20
Dibenz(a,h)anthracene	4.272	0.20	5	0	85.4	45-125	4.644	8.33	20
Dibenzofuran	3.987	0.20	5	0	79.7	50-120	4.266	6.75	20
Diethyl phthalate	3.937	0.20	5	0	78.7	41-120	3.957	0.501	20
Dimethyl phthalate	3.964	0.20	5	0	79.3	40-122	4.175	5.17	20
Di-n-butyl phthalate	4.286	0.20	5	0	85.7	45-123	4.507	5.03	20
Di-n-octyl phthalate	4.128	0.20	5	0	82.6	45-129	4.399	6.35	20
Fluoranthene	4.222	0.20	5	0	84.4	45-125	4.41	4.36	20
Fluorene	3.898	0.20	5	0	78	49-120	3.919	0.532	20
Hexachlorobenzene	3.896	0.20	5	0	77.9	48-120	4.071	4.39	20
Hexachlorobutadiene	4.167	0.20	5	0	83.3	40-120	4.207	0.951	20
Hexachlorocyclopentadiene	4.052	0.20	5	0	81	34-136	4.147	2.3	20
Hexachloroethane	4.156	0.20	5	0	83.1	40-120	3.985	4.21	20
Indeno(1,2,3-cd)pyrene	4.383	0.20	5	0	87.7	41-128	4.774	8.55	20
Isophorone	3.931	0.20	5	0	78.6	40-121	4.238	7.51	20
Naphthalene	3.867	0.20	5	0	77.3	45-120	4.09	5.62	20
Nitrobenzene	3.829	0.20	5	0	76.6	44-120	4.115	7.21	20
N-Nitrosodi-n-propylamine	3.938	0.20	5	0	78.8	40-120	3.923	0.389	20
N-Nitrosodiphenylamine	4.318	0.20	5	0	86.4	40-125	4.488	3.87	20
Pentachlorophenol	3.382	0.20	5	0	67.6	19-121	3.24	4.31	20
Phenanthrene	3.987	0.20	5	0	79.7	45-121	4.198	5.14	20
Phenol	3.779	0.20	5	0	75.6	20-124	3.839	1.57	20
Pyrene	3.976	0.20	5	0	79.5	40-130	4.204	5.58	20
Surr: 2,4,6-Tribromophenol	*4.3*	0.20	*5*	0	*86*	*34-129*	4.518	*4.94*	*0*
Surr: 2-Fluorobiphenyl	*4.042*	0.20	*5*	0	*80.8*	*40-125*	4.185	*3.48*	*0*
Surr: 2-Fluorophenol	*3.957*	0.20	*5*	0	*79.1*	*20-120*	3.922	*0.882*	*0*
Surr: 4-Terphenyl-d14	*4.594*	0.20	*5*	0	*91.9*	*40-135*	5.07	*9.84*	*0*
Surr: Nitrobenzene-d5	*4.233*	0.20	*5*	0	*84.7*	*41-120*	4.606	*8.43*	*0*
Surr: Phenol-d6	*3.956*	0.20	*5*	0	*79.1*	*20-120*	4.104	*3.66*	*0*

The following samples were analyzed in this batch:

1202121-01E	1202121-03E	1202121-05E
1202121-07E	1202121-09E	1202121-11E
1202121-13E	1202121-15E	1202121-17E
1202121-19E	1202121-22E	1202121-24E
1202121-26E	1202121-28E	1202121-30E
1202121-32E	1202121-34E	1202121-36E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123168** Instrument ID **VOA6** Method: **SW8260**

MBLK Sample ID: **VBLKW-020912-R123168** Units: **µg/L** Analysis Date: **2/9/2012 06:14 PM**

Client ID: Run ID: **VOA6_120209B** SeqNo: **2683447** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
2-Butanone	ND	10								
2-Hexanone	ND	10								
4-Isopropyltoluene	ND	5.0								
4-Methyl-2-pentanone	ND	10								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	10								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								
Ethylbenzene	ND	5.0								
Isopropylbenzene	ND	5.0								
m,p-Xylene	ND	10								
Methyl tert-butyl ether	ND	5.0								
Methylene chloride	ND	10								
Naphthalene	ND	5.0								
n-Butylbenzene	ND	5.0								
n-Propylbenzene	ND	5.0								
o-Xylene	ND	5.0								
sec-Butylbenzene	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
trans-1,2-Dichloroethene	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R123168** Instrument ID **VOA6** Method: **SW8260**

trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Vinyl chloride	ND	2.0					
Xylenes, Total	ND	15					
Surr: 1,2-Dichloroethane-d4	*49.66*	5.0	*50*	0	*99.3*	*70-125*	0
Surr: 4-Bromofluorobenzene	*46.7*	5.0	*50*	0	*93.4*	*72-125*	0
Surr: Dibromofluoromethane	*49.24*	5.0	*50*	0	*98.5*	*71-125*	0
Surr: Toluene-d8	*52.45*	5.0	*50*	0	*105*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123168** Instrument ID **VOA6** Method: **SW8260**

LCS Sample ID: **VLCSW-020912-R123168** Units: **µg/L** Analysis Date: **2/9/2012 04:55 PM**

Client ID: Run ID: **VOA6_120209B** SeqNo: **2683446** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	50.03	5.0	50	0	100	80-120	0			
1,1,2,2-Tetrachloroethane	49.55	5.0	50	0	99.1	72-120	0			
1,1,2-Trichloroethane	50.87	5.0	50	0	102	80-120	0			
1,1-Dichloroethane	48.4	5.0	50	0	96.8	76-120	0			
1,1-Dichloroethene	49.75	5.0	50	0	99.5	73-124	0			
1,2,4-Trimethylbenzene	46.03	5.0	50	0	92.1	68-123	0			
1,2-Dibromoethane	48.76	5.0	50	0	97.5	80-120	0			
1,2-Dichloroethane	49.61	5.0	50	0	99.2	78-120	0			
1,2-Dichloropropane	48.9	5.0	50	0	97.8	80-120	0			
1,3,5-Trimethylbenzene	44.89	5.0	50	0	89.8	80-120	0			
2-Butanone	107.3	10	100	0	107	58-132	0			
2-Hexanone	104.6	10	100	0	105	61-130	0			
4-Isopropyltoluene	39.54	5.0	50	0	79.1	79-120	0			
4-Methyl-2-pentanone	102.4	10	100	0	102	65-127	0			
Acetone	103.3	10	100	0	103	59-137	0			
Benzene	47.89	5.0	50	0	95.8	73-121	0			
Bromodichloromethane	49.65	5.0	50	0	99.3	80-120	0			
Bromoform	52.07	5.0	50	0	104	79-120	0			
Bromomethane	47.6	5.0	50	0	95.2	66-137	0			
Carbon disulfide	99.41	10	100	0	99.4	68-141	0			
Carbon tetrachloride	46.92	5.0	50	0	93.8	75-124	0			
Chlorobenzene	48.89	5.0	50	0	97.8	80-120	0			
Chloroethane	48.31	5.0	50	0	96.6	76-121	0			
Chloroform	49.38	5.0	50	0	98.8	80-120	0			
Chloromethane	50.21	5.0	50	0	100	67-123	0			
cis-1,2-Dichloroethene	50.96	5.0	50	0	102	78-120	0			
cis-1,3-Dichloropropene	50.04	5.0	50	0	100	80-120	0			
Dibromochloromethane	49.73	5.0	50	0	99.5	80-120	0			
Ethylbenzene	47.91	5.0	50	0	95.8	80-120	0			
Isopropylbenzene	46.05	5.0	50	0	92.1	80-120	0			
m,p-Xylene	86.18	10	100	0	86.2	78-121	0			
Methyl tert-butyl ether	49.95	5.0	50	0	99.9	73-121	0			
Methylene chloride	49.29	10	50	0	98.6	65-133	0			
Naphthalene	50.38	5.0	50	0	101	65-135	0			
n-Butylbenzene	40.6	5.0	50	0	81.2	77-120	0			
n-Propylbenzene	44.34	5.0	50	0	88.7	78-120	0			
o-Xylene	43.58	5.0	50	0	87.2	80-120	0			
sec-Butylbenzene	40.47	5.0	50	0	80.9	78-120	0			
Styrene	49.81	5.0	50	0	99.6	80-120	0			
Tetrachloroethene	46.63	5.0	50	0	93.3	79-120	0			
Toluene	48.64	5.0	50	0	97.3	80-120	0			
trans-1,2-Dichloroethene	50.22	5.0	50	0	100	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R123168** Instrument ID **VOA6** Method: **SW8260**

trans-1,3-Dichloropropene	49.57	5.0	50	0	99.1	80-120	0
Trichloroethene	48.87	5.0	50	0	97.7	80-120	0
Vinyl chloride	50.11	2.0	50	0	100	70-127	0
Xylenes, Total	129.8	15	150	0	86.5	80-120	0
Surr: 1,2-Dichloroethane-d4	*51.29*	5.0	*50*	0	*103*	*70-125*	0
Surr: 4-Bromofluorobenzene	*55.31*	5.0	*50*	0	*111*	*72-125*	0
Surr: Dibromofluoromethane	*50.07*	5.0	*50*	0	*100*	*71-125*	0
Surr: Toluene-d8	*50.39*	5.0	*50*	0	*101*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123168** Instrument ID **VOA6** Method: **SW8260**

MS Sample ID: **1202137-19AMS** Units: **µg/L** Analysis Date: **2/9/2012 07:33 PM**

Client ID: Run ID: **VOA6_120209B** SeqNo: **2683449** Prep Date: DF: **25**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1145	120	1250	0	91.6	80-120	0			
1,1,2,2-Tetrachloroethane	1133	120	1250	0	90.7	72-120	0			
1,1,2-Trichloroethane	1202	120	1250	0	96.2	80-120	0			
1,1-Dichloroethane	1173	120	1250	0	93.8	76-120	0			
1,1-Dichloroethene	1111	120	1250	0	88.9	73-124	0			
1,2,4-Trimethylbenzene	1193	120	1250	0	95.4	68-123	0			
1,2-Dibromoethane	1152	120	1250	0	92.1	80-120	0			
1,2-Dichloroethane	1146	120	1250	0	91.7	78-120	0			
1,2-Dichloropropane	1154	120	1250	0	92.3	80-120	0			
1,3,5-Trimethylbenzene	1118	120	1250	0	89.5	80-120	0			
2-Butanone	2266	250	2500	0	90.6	58-132	0			
2-Hexanone	2347	250	2500	0	93.9	61-130	0			
4-Isopropyltoluene	1001	120	1250	0	80.1	79-120	0			
4-Methyl-2-pentanone	2403	250	2500	0	96.1	65-127	0			
Acetone	2025	250	2500	0	81	59-137	0			
Benzene	1155	120	1250	0	92.4	73-121	0			
Bromodichloromethane	1201	120	1250	0	96.1	80-120	0			
Bromoform	1238	120	1250	0	99.1	79-120	0			
Bromomethane	1087	120	1250	0	87	66-137	0			
Carbon disulfide	2256	250	2500	0	90.2	68-141	0			
Carbon tetrachloride	1076	120	1250	0	86.1	75-124	0			
Chlorobenzene	1210	120	1250	0	96.8	80-120	0			
Chloroethane	1112	120	1250	0	89	76-121	0			
Chloroform	1181	120	1250	0	94.4	80-120	0			
Chloromethane	1158	120	1250	0	92.6	67-123	0			
cis-1,2-Dichloroethene	1945	120	1250	655.4	103	78-120	0			
cis-1,3-Dichloropropene	1186	120	1250	0	94.8	80-120	0			
Dibromochloromethane	1207	120	1250	0	96.5	80-120	0			
Ethylbenzene	1207	120	1250	0	96.6	80-120	0			
Isopropylbenzene	1171	120	1250	0	93.7	80-120	0			
m,p-Xylene	2198	250	2500	0	87.9	78-121	0			
Methyl tert-butyl ether	1192	120	1250	30.18	92.9	73-121	0			
Methylene chloride	1210	250	1250	0	96.8	65-133	0			
Naphthalene	1140	120	1250	0	91.2	65-135	0			
n-Butylbenzene	1017	120	1250	0	81.3	77-120	0			
n-Propylbenzene	1103	120	1250	0	88.3	78-120	0			
o-Xylene	1099	120	1250	0	87.9	80-120	0			
sec-Butylbenzene	1007	120	1250	0	80.6	78-120	0			
Styrene	1225	120	1250	0	98	80-120	0			
Tetrachloroethene	1145	120	1250	0	91.6	79-120	0			
Toluene	1187	120	1250	0	95	80-120	0			
trans-1,2-Dichloroethene	1180	120	1250	0	94.4	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R123168** Instrument ID **VOA6** Method: **SW8260**

trans-1,3-Dichloropropene	1178	120	1250	0	94.2	80-120	0
Trichloroethene	1249	120	1250	60.23	95.1	80-120	0
Vinyl chloride	1101	50	1250	0	88.1	70-127	0
Xylenes, Total	3296	380	3750	0	87.9	80-120	0
Surr: 1,2-Dichloroethane-d4	*1220*	120	*1250*	0	*97.6*	*70-125*	0
Surr: 4-Bromofluorobenzene	*1308*	120	*1250*	0	*105*	*72-125*	0
Surr: Dibromofluoromethane	*1244*	120	*1250*	0	*99.5*	*71-125*	0
Surr: Toluene-d8	*1243*	120	*1250*	0	*99.4*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123168** Instrument ID **VOA6** Method: **SW8260**

MSD Sample ID: **1202137-19AMSD** Units: **µg/L** Analysis Date: **2/9/2012 07:59 PM**

Client ID: Run ID: **VOA6_120209B** SeqNo: **2683450** Prep Date: DF: **25**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1117	120	1250	0	89.3	80-120	1145	2.51	20	
1,1,2,2-Tetrachloroethane	1181	120	1250	0	94.5	72-120	1133	4.12	20	
1,1,2-Trichloroethane	1221	120	1250	0	97.7	80-120	1202	1.52	20	
1,1-Dichloroethane	1168	120	1250	0	93.5	76-120	1173	0.365	20	
1,1-Dichloroethene	1066	120	1250	0	85.3	73-124	1111	4.11	20	
1,2,4-Trimethylbenzene	1164	120	1250	0	93.1	68-123	1193	2.45	20	
1,2-Dibromoethane	1172	120	1250	0	93.7	80-120	1152	1.72	20	
1,2-Dichloroethane	1210	120	1250	0	96.8	78-120	1146	5.41	20	
1,2-Dichloropropane	1177	120	1250	0	94.2	80-120	1154	1.96	20	
1,3,5-Trimethylbenzene	1107	120	1250	0	88.6	80-120	1118	0.986	20	
2-Butanone	2444	250	2500	0	97.8	58-132	2266	7.56	20	
2-Hexanone	2479	250	2500	0	99.2	61-130	2347	5.5	20	
4-Isopropyltoluene	966	120	1250	0	77.3	79-120	1001	3.6	20	S
4-Methyl-2-pentanone	2550	250	2500	0	102	65-127	2403	5.92	20	
Acetone	2258	250	2500	0	90.3	59-137	2025	10.9	20	
Benzene	1166	120	1250	0	93.2	73-121	1155	0.911	20	
Bromodichloromethane	1210	120	1250	0	96.8	80-120	1201	0.698	20	
Bromoform	1282	120	1250	0	103	79-120	1238	3.45	20	
Bromomethane	1091	120	1250	0	87.3	66-137	1087	0.364	20	
Carbon disulfide	2220	250	2500	0	88.8	68-141	2256	1.6	20	
Carbon tetrachloride	1019	120	1250	0	81.6	75-124	1076	5.41	20	
Chlorobenzene	1214	120	1250	0	97.1	80-120	1210	0.331	20	
Chloroethane	1098	120	1250	0	87.8	76-121	1112	1.31	20	
Chloroform	1185	120	1250	0	94.8	80-120	1181	0.402	20	
Chloromethane	1155	120	1250	0	92.4	67-123	1158	0.23	20	
cis-1,2-Dichloroethene	1907	120	1250	655.4	100	78-120	1945	2	20	
cis-1,3-Dichloropropene	1200	120	1250	0	96	80-120	1186	1.25	20	
Dibromochloromethane	1223	120	1250	0	97.8	80-120	1207	1.32	20	
Ethylbenzene	1195	120	1250	0	95.6	80-120	1207	1.02	20	
Isopropylbenzene	1128	120	1250	0	90.2	80-120	1171	3.76	20	
m,p-Xylene	2164	250	2500	0	86.6	78-121	2198	1.53	20	
Methyl tert-butyl ether	1230	120	1250	30.18	95.9	73-121	1192	3.1	20	
Methylene chloride	1219	250	1250	0	97.5	65-133	1210	0.743	20	
Naphthalene	1225	120	1250	0	98	65-135	1140	7.18	20	
n-Butylbenzene	954	120	1250	0	76.3	77-120	1017	6.37	20	S
n-Propylbenzene	1080	120	1250	0	86.4	78-120	1103	2.16	20	
o-Xylene	1102	120	1250	0	88.2	80-120	1099	0.3	20	
sec-Butylbenzene	963.1	120	1250	0	77	78-120	1007	4.5	20	S
Styrene	1213	120	1250	0	97.1	80-120	1225	0.939	20	
Tetrachloroethene	1114	120	1250	0	89.2	79-120	1145	2.74	20	
Toluene	1190	120	1250	0	95.2	80-120	1187	0.213	20	
trans-1,2-Dichloroethene	1183	120	1250	0	94.6	78-120	1180	0.203	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R123168** Instrument ID **VOA6** Method: **SW8260**

trans-1,3-Dichloropropene	1212	120	1250	0	97	80-120	1178	2.87	20
Trichloroethene	1238	120	1250	60.23	94.2	80-120	1249	0.935	20
Vinyl chloride	1061	50	1250	0	84.9	70-127	1101	3.69	20
Xylenes, Total	3266	380	3750	0	87.1	80-120	3296	0.916	20
Surr: 1,2-Dichloroethane-d4	*1262*	120	*1250*	0	*101*	*70-125*	1220	*3.34*	*20*
Surr: 4-Bromofluorobenzene	*1319*	120	*1250*	0	*106*	*72-125*	1308	*0.866*	*20*
Surr: Dibromofluoromethane	*1264*	120	*1250*	0	*101*	*71-125*	1244	*1.57*	*20*
Surr: Toluene-d8	*1256*	120	*1250*	0	*100*	*75-125*	1243	*1.02*	*20*

The following samples were analyzed in this batch:

1202121-13A	1202121-15A	1202121-17A
1202121-19A	1202121-22A	1202121-24A
1202121-26A	1202121-28A	1202121-32A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123176** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-020912-R123176** Units: **µg/L** Analysis Date: **2/9/2012 12:09 PM**

Client ID: Run ID: **VOA1_120209C** SeqNo: **2683597** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
2-Butanone	ND	10								
2-Hexanone	ND	10								
4-Isopropyltoluene	ND	5.0								
4-Methyl-2-pentanone	ND	10								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	10								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								
Ethylbenzene	ND	5.0								
Isopropylbenzene	ND	5.0								
m,p-Xylene	ND	10								
Methyl tert-butyl ether	ND	5.0								
Methylene chloride	ND	10								
Naphthalene	ND	5.0								
n-Butylbenzene	ND	5.0								
n-Propylbenzene	ND	5.0								
o-Xylene	ND	5.0								
sec-Butylbenzene	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
trans-1,2-Dichloroethene	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R123176** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Vinyl chloride	ND	2.0					
Xylenes, Total	ND	15					
Surr: 1,2-Dichloroethane-d4	*51.17*	5.0	*50*	0	*102*	*70-125*	0
Surr: 4-Bromofluorobenzene	*48.75*	5.0	*50*	0	*97.5*	*72-125*	0
Surr: Dibromofluoromethane	*52.12*	5.0	*50*	0	*104*	*71-125*	0
Surr: Toluene-d8	*52.72*	5.0	*50*	0	*105*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123176** Instrument ID **VOA1** Method: **SW8260**

LCS Sample ID: **VLCSW-020912-R123176** Units: **µg/L** Analysis Date: **2/9/2012 10:52 AM**

Client ID: Run ID: **VOA1_120209C** SeqNo: **2683596** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	52.17	5.0	50	0	104	80-120	0			
1,1,2,2-Tetrachloroethane	50.2	5.0	50	0	100	72-120	0			
1,1,2-Trichloroethane	50.65	5.0	50	0	101	80-120	0			
1,1-Dichloroethane	52.21	5.0	50	0	104	76-120	0			
1,1-Dichloroethene	50.01	5.0	50	0	100	73-124	0			
1,2,4-Trimethylbenzene	50.56	5.0	50	0	101	68-123	0			
1,2-Dibromoethane	51.13	5.0	50	0	102	80-120	0			
1,2-Dichloroethane	53.92	5.0	50	0	108	78-120	0			
1,2-Dichloropropane	51.48	5.0	50	0	103	80-120	0			
1,3,5-Trimethylbenzene	49.09	5.0	50	0	98.2	80-120	0			
2-Butanone	99.93	10	100	0	99.9	58-132	0			
2-Hexanone	109.9	10	100	0	110	61-130	0			
4-Isopropyltoluene	49.35	5.0	50	0	98.7	79-120	0			
4-Methyl-2-pentanone	115.1	10	100	0	115	65-127	0			
Acetone	103.3	10	100	0	103	59-137	0			
Benzene	52.41	5.0	50	0	105	73-121	0			
Bromodichloromethane	53.51	5.0	50	0	107	80-120	0			
Bromoform	53.55	5.0	50	0	107	79-120	0			
Bromomethane	48.45	5.0	50	0	96.9	66-137	0			
Carbon disulfide	99.96	10	100	0	100	68-141	0			
Carbon tetrachloride	51.63	5.0	50	0	103	75-124	0			
Chlorobenzene	50.55	5.0	50	0	101	80-120	0			
Chloroethane	52.32	5.0	50	0	105	76-121	0			
Chloroform	51.7	5.0	50	0	103	80-120	0			
Chloromethane	47.25	5.0	50	0	94.5	67-123	0			
cis-1,2-Dichloroethene	51.07	5.0	50	0	102	78-120	0			
cis-1,3-Dichloropropene	55.16	5.0	50	0	110	80-120	0			
Dibromochloromethane	52.63	5.0	50	0	105	80-120	0			
Ethylbenzene	47.9	5.0	50	0	95.8	80-120	0			
Isopropylbenzene	50.11	5.0	50	0	100	80-120	0			
m,p-Xylene	105.1	10	100	0	105	78-121	0			
Methyl tert-butyl ether	54.19	5.0	50	0	108	73-121	0			
Methylene chloride	49.22	10	50	0	98.4	65-133	0			
Naphthalene	50.63	5.0	50	0	101	65-135	0			
n-Butylbenzene	52.19	5.0	50	0	104	77-120	0			
n-Propylbenzene	47.86	5.0	50	0	95.7	78-120	0			
o-Xylene	49.34	5.0	50	0	98.7	80-120	0			
sec-Butylbenzene	48.52	5.0	50	0	97	78-120	0			
Styrene	51.84	5.0	50	0	104	80-120	0			
Tetrachloroethene	45.98	5.0	50	0	92	79-120	0			
Toluene	49.62	5.0	50	0	99.2	80-120	0			
trans-1,2-Dichloroethene	54.06	5.0	50	0	108	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R123176** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	56.22	5.0	50	0	112	80-120	0
Trichloroethene	51.78	5.0	50	0	104	80-120	0
Vinyl chloride	48.92	2.0	50	0	97.8	70-127	0
Xylenes, Total	154.4	15	150	0	103	80-120	0
Surr: 1,2-Dichloroethane-d4	*48.96*	5.0	*50*	0	*97.9*	*70-125*	0
Surr: 4-Bromofluorobenzene	*50.15*	5.0	*50*	0	*100*	*72-125*	0
Surr: Dibromofluoromethane	*52.01*	5.0	*50*	0	*104*	*71-125*	0
Surr: Toluene-d8	*49.22*	5.0	*50*	0	*98.4*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123176** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **1202113-10ZMS** Units: **µg/L** Analysis Date: **2/9/2012 02:14 PM**

Client ID: Run ID: **VOA1_120209C** SeqNo: **2683599** Prep Date: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	4650	500	5000	0	93	80-120	0			
1,1,2,2-Tetrachloroethane	4483	500	5000	0	89.7	72-120	0			
1,1,2-Trichloroethane	4602	500	5000	0	92	80-120	0			
1,1-Dichloroethane	4530	500	5000	0	90.6	76-120	0			
1,1-Dichloroethene	4043	500	5000	0	80.9	73-124	0			
1,2,4-Trimethylbenzene	4863	500	5000	410.3	89	68-123	0			
1,2-Dibromoethane	4790	500	5000	0	95.8	80-120	0			
1,2-Dichloroethane	4967	500	5000	0	99.3	78-120	0			
1,2-Dichloropropane	4904	500	5000	0	98.1	80-120	0			
1,3,5-Trimethylbenzene	4729	500	5000	121.1	92.2	80-120	0			
2-Butanone	10040	1,000	10000	0	100	58-132	0			
2-Hexanone	9473	1,000	10000	0	94.7	61-130	0			
4-Isopropyltoluene	4748	500	5000	0	95	79-120	0			
4-Methyl-2-pentanone	9957	1,000	10000	0	99.6	65-127	0			
Acetone	11160	1,000	10000	0	112	59-137	0			
Benzene	6378	500	5000	1464	98.3	73-121	0			
Bromodichloromethane	4983	500	5000	0	99.7	80-120	0			
Bromoform	4573	500	5000	0	91.5	79-120	0			
Bromomethane	1637	500	5000	0	32.7	66-137	0			S
Carbon disulfide	8772	1,000	10000	0	87.7	68-141	0			
Carbon tetrachloride	3924	500	5000	0	78.5	75-124	0			
Chlorobenzene	4605	500	5000	0	92.1	80-120	0			
Chloroethane	4601	500	5000	0	92	76-121	0			
Chloroform	4775	500	5000	0	95.5	80-120	0			
Chloromethane	4587	500	5000	0	91.7	67-123	0			
cis-1,2-Dichloroethene	4944	500	5000	0	98.9	78-120	0			
cis-1,3-Dichloropropene	5001	500	5000	0	100	80-120	0			
Dibromochloromethane	4783	500	5000	0	95.7	80-120	0			
Ethylbenzene	8311	500	5000	4033	85.6	80-120	0			
Isopropylbenzene	5230	500	5000	1194	80.7	80-120	0			
m,p-Xylene	9410	1,000	10000	497.6	89.1	78-121	0			
Methyl tert-butyl ether	5090	500	5000	0	102	73-121	0			
Methylene chloride	5545	1,000	5000	471.8	101	65-133	0			
Naphthalene	5767	500	5000	744.8	100	65-135	0			
n-Butylbenzene	4918	500	5000	0	98.4	77-120	0			
n-Propylbenzene	4687	500	5000	185.5	90	78-120	0			
o-Xylene	4619	500	5000	258.1	87.2	80-120	0			
sec-Butylbenzene	4978	500	5000	164.3	96.3	78-120	0			
Styrene	4523	500	5000	0	90.5	80-120	0			
Tetrachloroethene	4293	500	5000	0	85.9	79-120	0			
Toluene	4896	500	5000	335.2	91.2	80-120	0			
trans-1,2-Dichloroethene	4639	500	5000	0	92.8	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R123176** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	5352	500	5000	0	107	80-120	0
Trichloroethene	4680	500	5000	0	93.6	80-120	0
Vinyl chloride	4577	200	5000	0	91.5	70-127	0
Xylenes, Total	14030	1,500	15000	755.7	88.5	80-120	0
Surr: 1,2-Dichloroethane-d4	*5129*	500	*5000*	0	*103*	*70-125*	0
Surr: 4-Bromofluorobenzene	*4575*	500	*5000*	0	*91.5*	*72-125*	0
Surr: Dibromofluoromethane	*5182*	500	*5000*	0	*104*	*71-125*	0
Surr: Toluene-d8	*4816*	500	*5000*	0	*96.3*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123176** Instrument ID **VOA1** Method: **SW8260**

MSD Sample ID: **1202113-10ZMSD** Units: **µg/L** Analysis Date: **2/9/2012 02:39 PM**

Client ID: Run ID: **VOA1_120209C** SeqNo: **2683600** Prep Date: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	4353	500	5000	0	87.1	80-120	4650	6.6	20	
1,1,2,2-Tetrachloroethane	4709	500	5000	0	94.2	72-120	4483	4.9	20	
1,1,2-Trichloroethane	4876	500	5000	0	97.5	80-120	4602	5.78	20	
1,1-Dichloroethane	4375	500	5000	0	87.5	76-120	4530	3.47	20	
1,1-Dichloroethene	4006	500	5000	0	80.1	73-124	4043	0.926	20	
1,2,4-Trimethylbenzene	4623	500	5000	410.3	84.2	68-123	4863	5.06	20	
1,2-Dibromoethane	4928	500	5000	0	98.6	80-120	4790	2.84	20	
1,2-Dichloroethane	4795	500	5000	0	95.9	78-120	4967	3.53	20	
1,2-Dichloropropane	4791	500	5000	0	95.8	80-120	4904	2.33	20	
1,3,5-Trimethylbenzene	4466	500	5000	121.1	86.9	80-120	4729	5.72	20	
2-Butanone	10130	1,000	10000	0	101	58-132	10040	0.926	20	
2-Hexanone	10260	1,000	10000	0	103	61-130	9473	7.98	20	
4-Isopropyltoluene	4215	500	5000	0	84.3	79-120	4748	11.9	20	
4-Methyl-2-pentanone	10540	1,000	10000	0	105	65-127	9957	5.67	20	
Acetone	11710	1,000	10000	0	117	59-137	11160	4.82	20	
Benzene	6227	500	5000	1464	95.3	73-121	6378	2.4	20	
Bromodichloromethane	4794	500	5000	0	95.9	80-120	4983	3.86	20	
Bromoform	4785	500	5000	0	95.7	79-120	4573	4.52	20	
Bromomethane	1388	500	5000	0	27.8	66-137	1637	16.5	20	S
Carbon disulfide	8490	1,000	10000	0	84.9	68-141	8772	3.26	20	
Carbon tetrachloride	3677	500	5000	0	73.5	75-124	3924	6.51	20	S
Chlorobenzene	4573	500	5000	0	91.5	80-120	4605	0.703	20	
Chloroethane	4192	500	5000	0	83.8	76-121	4601	9.31	20	
Chloroform	4782	500	5000	0	95.6	80-120	4775	0.145	20	
Chloromethane	4263	500	5000	0	85.3	67-123	4587	7.33	20	
cis-1,2-Dichloroethene	4524	500	5000	0	90.5	78-120	4944	8.85	20	
cis-1,3-Dichloropropene	4656	500	5000	0	93.1	80-120	5001	7.14	20	
Dibromochloromethane	5002	500	5000	0	100	80-120	4783	4.48	20	
Ethylbenzene	8834	500	5000	4033	96	80-120	8311	6.1	20	
Isopropylbenzene	5970	500	5000	1194	95.5	80-120	5230	13.2	20	
m,p-Xylene	9552	1,000	10000	497.6	90.5	78-121	9410	1.5	20	
Methyl tert-butyl ether	5075	500	5000	0	102	73-121	5090	0.288	20	
Methylene chloride	5349	1,000	5000	471.8	97.5	65-133	5545	3.6	20	
Naphthalene	5889	500	5000	744.8	103	65-135	5767	2.08	20	
n-Butylbenzene	4224	500	5000	0	84.5	77-120	4918	15.2	20	
n-Propylbenzene	4276	500	5000	185.5	81.8	78-120	4687	9.16	20	
o-Xylene	5025	500	5000	258.1	95.3	80-120	4619	8.43	20	
sec-Butylbenzene	4138	500	5000	164.3	79.5	78-120	4978	18.4	20	
Styrene	4965	500	5000	0	99.3	80-120	4523	9.32	20	
Tetrachloroethene	4470	500	5000	0	89.4	79-120	4293	4.04	20	
Toluene	4616	500	5000	335.2	85.6	80-120	4896	5.88	20	
trans-1,2-Dichloroethene	4230	500	5000	0	84.6	78-120	4639	9.21	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R123176** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	5120	500	5000	0	102	80-120	5352	4.43	20
Trichloroethene	4628	500	5000	0	92.6	80-120	4680	1.12	20
Vinyl chloride	4342	200	5000	0	86.8	70-127	4577	5.28	20
Xylenes, Total	14580	1,500	15000	755.7	92.1	80-120	14030	3.83	20
Surr: 1,2-Dichloroethane-d4	*4822*	500	*5000*	0	*96.4*	*70-125*	5129	*6.19*	*20*
Surr: 4-Bromofluorobenzene	*5374*	500	*5000*	0	*107*	*72-125*	4575	*16.1*	*20*
Surr: Dibromofluoromethane	*5075*	500	*5000*	0	*101*	*71-125*	5182	*2.09*	*20*
Surr: Toluene-d8	*5083*	500	*5000*	0	*102*	*75-125*	4816	*5.39*	*20*

The following samples were analyzed in this batch:

1202121-01A	1202121-03A	1202121-05A
1202121-07A	1202121-09A	1202121-11A
1202121-21A	1202121-30A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123191** Instrument ID **VOA6** Method: **SW8260**

MBLK Sample ID: **VBLKW-021012-R123191** Units: **µg/L** Analysis Date: **2/10/2012 10:59 AM**
Client ID: Run ID: **VOA6_120210A** SeqNo: **2683887** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	5.0								
Surr: 1,2-Dichloroethane-d4	*50.73*	5.0	*50*	0	*101*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*44.82*	5.0	*50*	0	*89.6*	*72-125*	0			
Surr: Dibromofluoromethane	*49.72*	5.0	*50*	0	*99.4*	*71-125*	0			
Surr: Toluene-d8	*50.06*	5.0	*50*	0	*100*	*75-125*	0			

LCS Sample ID: **VLCSW-020912-R123191** Units: **µg/L** Analysis Date: **2/10/2012 10:06 AM**
Client ID: Run ID: **VOA6_120210A** SeqNo: **2683886** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	47.5	5.0	50	0	95	73-121	0			
Surr: 1,2-Dichloroethane-d4	*49.21*	5.0	*50*	0	*98.4*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*52.84*	5.0	*50*	0	*106*	*72-125*	0			
Surr: Dibromofluoromethane	*49.66*	5.0	*50*	0	*99.3*	*71-125*	0			
Surr: Toluene-d8	*49.39*	5.0	*50*	0	*98.8*	*75-125*	0			

MS Sample ID: **1202137-21AMS** Units: **µg/L** Analysis Date: **2/10/2012 12:44 PM**
Client ID: Run ID: **VOA6_120210A** SeqNo: **2683890** Prep Date: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	2213	250	2500	0	88.5	73-121	0			
Surr: 1,2-Dichloroethane-d4	*2470*	250	*2500*	0	*98.8*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*2633*	250	*2500*	0	*105*	*72-125*	0			
Surr: Dibromofluoromethane	*2447*	250	*2500*	0	*97.9*	*71-125*	0			
Surr: Toluene-d8	*2482*	250	*2500*	0	*99.3*	*75-125*	0			

MSD Sample ID: **1202137-21AMSD** Units: **µg/L** Analysis Date: **2/10/2012 01:10 PM**
Client ID: Run ID: **VOA6_120210A** SeqNo: **2683891** Prep Date: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	2218	250	2500	0	88.7	73-121	2213	0.224	20	
Surr: 1,2-Dichloroethane-d4	*2488*	250	*2500*	0	*99.5*	*70-125*	2470	*0.743*	*20*	
Surr: 4-Bromofluorobenzene	*2628*	250	*2500*	0	*105*	*72-125*	2633	*0.192*	*20*	
Surr: Dibromofluoromethane	*2495*	250	*2500*	0	*99.8*	*71-125*	2447	*1.96*	*20*	
Surr: Toluene-d8	*2515*	250	*2500*	0	*101*	*75-125*	2482	*1.34*	*20*	

The following samples were analyzed in this batch: 1202121-30A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123219** Instrument ID **VOA8** Method: **SW8260**

MBLK Sample ID: **VBLKW2-120210-R123219** Units: **µg/L** Analysis Date: **2/11/2012 01:11 AM**

Client ID: Run ID: **VOA8_120210B** SeqNo: **2684454** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
2-Butanone	ND	10								
2-Hexanone	ND	10								
4-Isopropyltoluene	ND	5.0								
4-Methyl-2-pentanone	ND	10								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	10								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								
Ethylbenzene	ND	5.0								
Isopropylbenzene	ND	5.0								
m,p-Xylene	ND	10								
Methyl tert-butyl ether	ND	5.0								
Methylene chloride	ND	10								
Naphthalene	ND	5.0								
n-Butylbenzene	ND	5.0								
n-Propylbenzene	ND	5.0								
o-Xylene	ND	5.0								
sec-Butylbenzene	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
trans-1,2-Dichloroethene	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R123219** Instrument ID **VOA8** Method: **SW8260**

trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Vinyl chloride	ND	2.0					
Xylenes, Total	ND	15					
Surr: 1,2-Dichloroethane-d4	*50.04*	5.0	*50*	0	*100*	*70-125*	0
Surr: 4-Bromofluorobenzene	*49.22*	5.0	*50*	0	*98.4*	*72-125*	0
Surr: Dibromofluoromethane	*48.76*	5.0	*50*	0	*97.5*	*71-125*	0
Surr: Toluene-d8	*49.37*	5.0	*50*	0	*98.7*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123219** Instrument ID **VOA8** Method: **SW8260**

LCS Sample ID: **VLCSW2-120210-R123219** Units: **µg/L** Analysis Date: **2/10/2012 11:58 PM**

Client ID: Run ID: **VOA8_120210B** SeqNo: **2684453** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	50.93	5.0	50	0	102	80-120	0			
1,1,2,2-Tetrachloroethane	47.22	5.0	50	0	94.4	72-120	0			
1,1,2-Trichloroethane	50.17	5.0	50	0	100	80-120	0			
1,1-Dichloroethane	48.04	5.0	50	0	96.1	76-120	0			
1,1-Dichloroethene	48.75	5.0	50	0	97.5	73-124	0			
1,2,4-Trimethylbenzene	52.75	5.0	50	0	106	68-123	0			
1,2-Dibromoethane	50.84	5.0	50	0	102	80-120	0			
1,2-Dichloroethane	48.07	5.0	50	0	96.1	78-120	0			
1,2-Dichloropropane	49.31	5.0	50	0	98.6	80-120	0			
1,3,5-Trimethylbenzene	54.21	5.0	50	0	108	80-120	0			
2-Butanone	98.64	10	100	0	98.6	58-132	0			
2-Hexanone	96.38	10	100	0	96.4	61-130	0			
4-Isopropyltoluene	51.82	5.0	50	0	104	79-120	0			
4-Methyl-2-pentanone	95.66	10	100	0	95.7	65-127	0			
Acetone	93.69	10	100	0	93.7	59-137	0			
Benzene	48.4	5.0	50	0	96.8	73-121	0			
Bromodichloromethane	50.35	5.0	50	0	101	80-120	0			
Bromoform	54.21	5.0	50	0	108	79-120	0			
Bromomethane	57.09	5.0	50	0	114	66-137	0			
Carbon disulfide	98.82	10	100	0	98.8	68-141	0			
Carbon tetrachloride	48.36	5.0	50	0	96.7	75-124	0			
Chlorobenzene	49.65	5.0	50	0	99.3	80-120	0			
Chloroethane	45.16	5.0	50	0	90.3	76-121	0			
Chloroform	47.89	5.0	50	0	95.8	80-120	0			
Chloromethane	40.1	5.0	50	0	80.2	67-123	0			
cis-1,2-Dichloroethene	47.25	5.0	50	0	94.5	78-120	0			
cis-1,3-Dichloropropene	51.51	5.0	50	0	103	80-120	0			
Dibromochloromethane	50.89	5.0	50	0	102	80-120	0			
Ethylbenzene	50.88	5.0	50	0	102	80-120	0			
Isopropylbenzene	51.79	5.0	50	0	104	80-120	0			
m,p-Xylene	101.6	10	100	0	102	78-121	0			
Methyl tert-butyl ether	49.47	5.0	50	0	98.9	73-121	0			
Methylene chloride	44.8	10	50	0	89.6	65-133	0			
Naphthalene	53.52	5.0	50	0	107	65-135	0			
n-Butylbenzene	49.82	5.0	50	0	99.6	77-120	0			
n-Propylbenzene	52.54	5.0	50	0	105	78-120	0			
o-Xylene	50.39	5.0	50	0	101	80-120	0			
sec-Butylbenzene	54.21	5.0	50	0	108	78-120	0			
Styrene	53.62	5.0	50	0	107	80-120	0			
Tetrachloroethene	49.99	5.0	50	0	100	79-120	0			
Toluene	49.03	5.0	50	0	98.1	80-120	0			
trans-1,2-Dichloroethene	46.74	5.0	50	0	93.5	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R123219** Instrument ID **VOA8** Method: **SW8260**

trans-1,3-Dichloropropene	54.09	5.0	50	0	108	80-120	0
Trichloroethene	50.65	5.0	50	0	101	80-120	0
Vinyl chloride	51.73	2.0	50	0	103	70-127	0
Xylenes, Total	152	15	150	0	101	80-120	0
Surr: 1,2-Dichloroethane-d4	*48.13*	5.0	*50*	0	*96.3*	*70-125*	0
Surr: 4-Bromofluorobenzene	*49.8*	5.0	*50*	0	*99.6*	*72-125*	0
Surr: Dibromofluoromethane	*49.26*	5.0	*50*	0	*98.5*	*71-125*	0
Surr: Toluene-d8	*49.32*	5.0	*50*	0	*98.6*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123219** Instrument ID **VOA8** Method: **SW8260**

MS Sample ID: **1202150-20ZMS** Units: **µg/L** Analysis Date: **2/11/2012 09:42 AM**

Client ID: Run ID: **VOA8_120210B** SeqNo: **2684520** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	51.46	5.0	50	0	103	80-120	0			
1,1,2,2-Tetrachloroethane	40.99	5.0	50	0	82	72-120	0			
1,1,2-Trichloroethane	48.34	5.0	50	0	96.7	80-120	0			
1,1-Dichloroethane	48.06	5.0	50	0	96.1	76-120	0			
1,1-Dichloroethene	48.83	5.0	50	0	97.7	73-124	0			
1,2,4-Trimethylbenzene	49.58	5.0	50	0	99.2	68-123	0			
1,2-Dibromoethane	49.67	5.0	50	0	99.3	80-120	0			
1,2-Dichloroethane	49.08	5.0	50	0	98.2	78-120	0			
1,2-Dichloropropane	50.32	5.0	50	0	101	80-120	0			
1,3,5-Trimethylbenzene	52.5	5.0	50	0	105	80-120	0			
2-Butanone	98.48	10	100	0	98.5	58-132	0			
2-Hexanone	88.69	10	100	0	88.7	61-130	0			
4-Isopropyltoluene	51.85	5.0	50	0	104	79-120	0			
4-Methyl-2-pentanone	88.95	10	100	0	89	65-127	0			
Acetone	91.31	10	100	0	91.3	59-137	0			
Benzene	48.7	5.0	50	0	97.4	73-121	0			
Bromodichloromethane	51.36	5.0	50	0	103	80-120	0			
Bromoform	52.99	5.0	50	0	106	79-120	0			
Bromomethane	57.89	5.0	50	0	116	66-137	0			
Carbon disulfide	91.85	10	100	0	91.9	68-141	0			
Carbon tetrachloride	49.71	5.0	50	0	99.4	75-124	0			
Chlorobenzene	49.17	5.0	50	0	98.3	80-120	0			
Chloroethane	44.67	5.0	50	0	89.3	76-121	0			
Chloroform	48.22	5.0	50	0	96.4	80-120	0			
Chloromethane	36.44	5.0	50	0	72.9	67-123	0			
cis-1,2-Dichloroethene	46.92	5.0	50	0	93.8	78-120	0			
cis-1,3-Dichloropropene	48.75	5.0	50	0	97.5	80-120	0			
Dibromochloromethane	51.84	5.0	50	0	104	80-120	0			
Ethylbenzene	51.4	5.0	50	0	103	80-120	0			
Isopropylbenzene	52.46	5.0	50	0	105	80-120	0			
m,p-Xylene	103.3	10	100	0	103	78-121	0			
Methyl tert-butyl ether	49.3	5.0	50	0	98.6	73-121	0			
Methylene chloride	43.72	10	50	0	87.4	65-133	0			
Naphthalene	52.15	5.0	50	0	104	65-135	0			
n-Butylbenzene	46.09	5.0	50	0	92.2	77-120	0			
n-Propylbenzene	51.48	5.0	50	0	103	78-120	0			
o-Xylene	51.62	5.0	50	0	103	80-120	0			
sec-Butylbenzene	52.5	5.0	50	0	105	78-120	0			
Styrene	52.61	5.0	50	0	105	80-120	0			
Tetrachloroethene	49.85	5.0	50	0	99.7	79-120	0			
Toluene	49.14	5.0	50	0	98.3	80-120	0			
trans-1,2-Dichloroethene	46.02	5.0	50	0	92	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R123219** Instrument ID **VOA8** Method: **SW8260**

trans-1,3-Dichloropropene	49.93	5.0	50	0	99.9	80-120	0
Trichloroethene	55.28	5.0	50	0	111	80-120	0
Vinyl chloride	46.87	2.0	50	0	93.7	70-127	0
Xylenes, Total	154.9	15	150	0	103	80-120	0
Surr: 1,2-Dichloroethane-d4	*49.02*	5.0	*50*	0	*98*	*70-125*	0
Surr: 4-Bromofluorobenzene	*50.4*	5.0	*50*	0	*101*	*72-125*	0
Surr: Dibromofluoromethane	*48.82*	5.0	*50*	0	*97.6*	*71-125*	0
Surr: Toluene-d8	*49.01*	5.0	*50*	0	*98*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123219** Instrument ID **VOA8** Method: **SW8260**

MSD Sample ID: **1202150-20ZMSD** Units: **µg/L** Analysis Date: **2/11/2012 10:06 AM**

Client ID: Run ID: **VOA8_120210B** SeqNo: **2684521** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.06	5.0	50	0	98.1	80-120	51.46	4.77	20	
1,1,2,2-Tetrachloroethane	39.3	5.0	50	0	78.6	72-120	40.99	4.21	20	
1,1,2-Trichloroethane	47.66	5.0	50	0	95.3	80-120	48.34	1.41	20	
1,1-Dichloroethane	45.27	5.0	50	0	90.5	76-120	48.06	5.97	20	
1,1-Dichloroethene	46.13	5.0	50	0	92.3	73-124	48.83	5.68	20	
1,2,4-Trimethylbenzene	48.98	5.0	50	0	98	68-123	49.58	1.21	20	
1,2-Dibromoethane	49.54	5.0	50	0	99.1	80-120	49.67	0.26	20	
1,2-Dichloroethane	46.67	5.0	50	0	93.3	78-120	49.08	5.03	20	
1,2-Dichloropropane	46.32	5.0	50	0	92.6	80-120	50.32	8.29	20	
1,3,5-Trimethylbenzene	50.53	5.0	50	0	101	80-120	52.5	3.83	20	
2-Butanone	96.85	10	100	0	96.9	58-132	98.48	1.66	20	
2-Hexanone	90.23	10	100	0	90.2	61-130	88.69	1.71	20	
4-Isopropyltoluene	49.23	5.0	50	0	98.5	79-120	51.85	5.19	20	
4-Methyl-2-pentanone	87.83	10	100	0	87.8	65-127	88.95	1.27	20	
Acetone	88.34	10	100	0	88.3	59-137	91.31	3.3	20	
Benzene	45.16	5.0	50	0	90.3	73-121	48.7	7.54	20	
Bromodichloromethane	48.3	5.0	50	0	96.6	80-120	51.36	6.14	20	
Bromoform	51.8	5.0	50	0	104	79-120	52.99	2.27	20	
Bromomethane	55.98	5.0	50	0	112	66-137	57.89	3.36	20	
Carbon disulfide	86.81	10	100	0	86.8	68-141	91.85	5.64	20	
Carbon tetrachloride	46.56	5.0	50	0	93.1	75-124	49.71	6.55	20	
Chlorobenzene	46.69	5.0	50	0	93.4	80-120	49.17	5.17	20	
Chloroethane	41.43	5.0	50	0	82.9	76-121	44.67	7.52	20	
Chloroform	45.82	5.0	50	0	91.6	80-120	48.22	5.12	20	
Chloromethane	34.89	5.0	50	0	69.8	67-123	36.44	4.36	20	
cis-1,2-Dichloroethene	44.71	5.0	50	0	89.4	78-120	46.92	4.81	20	
cis-1,3-Dichloropropene	46.33	5.0	50	0	92.7	80-120	48.75	5.09	20	
Dibromochloromethane	49.75	5.0	50	0	99.5	80-120	51.84	4.1	20	
Ethylbenzene	49.1	5.0	50	0	98.2	80-120	51.4	4.58	20	
Isopropylbenzene	50.25	5.0	50	0	100	80-120	52.46	4.31	20	
m,p-Xylene	97.93	10	100	0	97.9	78-121	103.3	5.32	20	
Methyl tert-butyl ether	48.9	5.0	50	0	97.8	73-121	49.3	0.811	20	
Methylene chloride	42.82	10	50	0	85.6	65-133	43.72	2.09	20	
Naphthalene	51.23	5.0	50	0	102	65-135	52.15	1.76	20	
n-Butylbenzene	46.26	5.0	50	0	92.5	77-120	46.09	0.383	20	
n-Propylbenzene	49.3	5.0	50	0	98.6	78-120	51.48	4.32	20	
o-Xylene	48.55	5.0	50	0	97.1	80-120	51.62	6.13	20	
sec-Butylbenzene	50.53	5.0	50	0	101	78-120	52.5	3.83	20	
Styrene	49.29	5.0	50	0	98.6	80-120	52.61	6.53	20	
Tetrachloroethene	47.16	5.0	50	0	94.3	79-120	49.85	5.54	20	
Toluene	46.92	5.0	50	0	93.8	80-120	49.14	4.61	20	
trans-1,2-Dichloroethene	44.8	5.0	50	0	89.6	78-120	46.02	2.7	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R123219** Instrument ID **VOA8** Method: **SW8260**

trans-1,3-Dichloropropene	48.08	5.0	50	0	96.2	80-120	49.93	3.78	20
Trichloroethene	51.84	5.0	50	0	104	80-120	55.28	6.42	20
Vinyl chloride	43.91	2.0	50	0	87.8	70-127	46.87	6.52	20
Xylenes, Total	146.5	15	150	0	97.7	80-120	154.9	5.59	20
Surr: 1,2-Dichloroethane-d4	*49.17*	5.0	*50*	0	*98.3*	*70-125*	49.02	*0.309*	*20*
Surr: 4-Bromofluorobenzene	*51.46*	5.0	*50*	0	*103*	*72-125*	50.4	*2.07*	*20*
Surr: Dibromofluoromethane	*49.21*	5.0	*50*	0	*98.4*	*71-125*	48.82	*0.798*	*20*
Surr: Toluene-d8	*50.05*	5.0	*50*	0	*100*	*75-125*	49.01	*2.11*	*20*

The following samples were analyzed in this batch: 1202121-34A 1202121-36A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R122859** Instrument ID **WetChem** Method: **SM4500H+ B**

LCS Sample ID: **WLCSW1-020312-R122859** Units: **pH units** Analysis Date: **2/3/2012 02:00 PM**
Client ID: Run ID: **WETCHEM_120203E** SeqNo: **2676116** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	5.98	0.10	6	0	99.7	90-110	0			

DUP Sample ID: **1202010-01CDUPZ** Units: **pH units** Analysis Date: **2/3/2012 02:00 PM**
Client ID: Run ID: **WETCHEM_120203E** SeqNo: **2676136** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.1	0.10	0	0	0	0-0	8.13	0.37	20	H

The following samples were analyzed in this batch:

1202121-01D	1202121-03D	1202121-05D
1202121-07D	1202121-09D	1202121-11D
1202121-13D	1202121-15D	1202121-17D
1202121-19D	1202121-22D	1202121-24D
1202121-26D	1202121-28D	1202121-30D
1202121-32D	1202121-34D	1202121-36D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R122914** Instrument ID **Balance1** Method: **M2540C**

MBLK Sample ID: **BLK-R122914** Units: **mg/L** Analysis Date: **2/3/2012 05:00 PM**
Client ID: Run ID: **BALANCE1_120203C** SeqNo: **2677602** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	ND	10								

LCS Sample ID: **LCS-R122914** Units: **mg/L** Analysis Date: **2/3/2012 05:00 PM**
Client ID: Run ID: **BALANCE1_120203C** SeqNo: **2677603** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	978	10	1000	0	97.8	85-115	0			

DUP Sample ID: **1202121-01DDUP** Units: **mg/L** Analysis Date: **2/3/2012 05:00 PM**
Client ID: **MW-9-0112** Run ID: **BALANCE1_120203C** SeqNo: **2677575** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	478	10	0	0	0	0-0	484	1.25	20	

DUP Sample ID: **1202121-36DDUP** Units: **mg/L** Analysis Date: **2/3/2012 05:00 PM**
Client ID: **MW-27-0212** Run ID: **BALANCE1_120203C** SeqNo: **2677601** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	628	10	0	0	0	0-0	676	7.36	20	

The following samples were analyzed in this batch:

1202121-01D	1202121-03D	1202121-05D
1202121-07D	1202121-09D	1202121-11D
1202121-13D	1202121-15D	1202121-17D
1202121-19D	1202121-22D	1202121-24D
1202121-26D	1202121-28D	1202121-30D
1202121-32D	1202121-34D	1202121-36D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R122960** Instrument ID **WetChem** Method: **SM2320B**

MBLK Sample ID: **WBLKW1-020612-R122960** Units: **mg/L** Analysis Date: **2/6/2012 06:25 PM**
Client ID: Run ID: **WETCHEM_120206M** SeqNo: **2678508** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.0								
Alkalinity, Carbonate (As CaCO3)	ND	5.0								
Alkalinity, Hydroxide (As CaCO3)	ND	5.0								
Alkalinity, Total (As CaCO3)	ND	5.0								

LCS Sample ID: **WLCSW1-020612-R122960** Units: **mg/L** Analysis Date: **2/6/2012 06:25 PM**
Client ID: Run ID: **WETCHEM_120206M** SeqNo: **2678509** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1035	5.0	1000	0	104	80-120	0			

DUP Sample ID: **1202121-34DDUP** Units: **mg/L** Analysis Date: **2/6/2012 06:25 PM**
Client ID: **MW-13-0212** Run ID: **WETCHEM_120206M** SeqNo: **2678530** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	445.1	5.0	0	0	0	0-0	443.2	0.428	20	
Alkalinity, Carbonate (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	445.1	5.0	0	0	0	0-0	443.2	0.428	20	

The following samples were analyzed in this batch:

1202121-01D	1202121-03D	1202121-05D
1202121-07D	1202121-09D	1202121-11D
1202121-13D	1202121-15D	1202121-17D
1202121-19D	1202121-22D	1202121-24D
1202121-26D	1202121-28D	1202121-30D
1202121-32D	1202121-34D	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123020** Instrument ID **ICS3K2** Method: **E300**

MBLK Sample ID: **WBLKW3-020612-R123020** Units: **mg/L** Analysis Date: **2/7/2012 10:37 AM**
Client ID: Run ID: **ICS3K2_120206B** SeqNo: **2679692** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	ND	0.20								
Surr: Selenate (surr)	*4.789*	0.10	*5*	0	*95.8*	*85-115*	0			

LCS Sample ID: **WLCSW3-020612-R123020** Units: **mg/L** Analysis Date: **2/7/2012 10:59 AM**
Client ID: Run ID: **ICS3K2_120206B** SeqNo: **2679693** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	8.045	0.20	8	0	101	90-110	0			
Surr: Selenate (surr)	*4.836*	0.10	*5*	0	*96.7*	*85-115*	0			

LCSD Sample ID: **WLCSDW3-020612-R123020** Units: **mg/L** Analysis Date: **2/7/2012 11:20 AM**
Client ID: Run ID: **ICS3K2_120206B** SeqNo: **2679694** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	7.927	0.20	8	0	99.1	90-110	8.045	1.48	20	
Surr: Selenate (surr)	*4.856*	0.10	*5*	0	*97.1*	*85-115*	4.836	*0.413*	*20*	

MS Sample ID: **1202121-36BMS** Units: **mg/L** Analysis Date: **2/7/2012 02:37 AM**
Client ID: **MW-27-0212** Run ID: **ICS3K2_120206B** SeqNo: **2679688** Prep Date: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	20.55	1.0	20	2.43	90.6	80-120	0			
Surr: Selenate (surr)	*25.6*	0.50	*25*	0	*102*	*85-115*	0			

MSD Sample ID: **1202121-36BMSD** Units: **mg/L** Analysis Date: **2/7/2012 02:59 AM**
Client ID: **MW-27-0212** Run ID: **ICS3K2_120206B** SeqNo: **2679689** Prep Date: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	20.37	1.0	20	2.43	89.7	80-120	20.55	0.894	20	
Surr: Selenate (surr)	*25.64*	0.50	*25*	0	*103*	*85-115*	25.6	*0.137*	*20*	

The following samples were analyzed in this batch:

1202121-01B	1202121-03B	1202121-05B
1202121-07B	1202121-09B	1202121-11B
1202121-13B	1202121-15B	1202121-17B
1202121-19B	1202121-22B	1202121-24B
1202121-26B	1202121-28B	1202121-30B
1202121-32B	1202121-34B	1202121-36B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123021** Instrument ID **ICS3000** Method: **E300**

MBLK Sample ID: **WBLKW2-020612-R123021** Units: **mg/L** Analysis Date: **2/6/2012 06:41 PM**
Client ID: Run ID: **ICS3000_120206B** SeqNo: **2679697** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.332	0.50								J
Fluoride	ND	0.10								
Sulfate	ND	0.50								
Surr: Selenate (surr)	*4.784*	0.10	*5*	0	*95.7*	*85-115*	0			

LCS Sample ID: **WLCSW2-020612-R123021** Units: **mg/L** Analysis Date: **2/6/2012 07:02 PM**
Client ID: Run ID: **ICS3000_120206B** SeqNo: **2679698** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.95	0.50	20	0	110	90-110	0			
Fluoride	4.285	0.10	4	0	107	90-110	0			
Sulfate	19.78	0.50	20	0	98.9	90-110	0			
Surr: Selenate (surr)	*5.07*	0.10	*5*	0	*101*	*85-115*	0			

LCSD Sample ID: **WLCSDW2-020612-R123021** Units: **mg/L** Analysis Date: **2/6/2012 07:23 PM**
Client ID: Run ID: **ICS3000_120206B** SeqNo: **2679699** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.78	0.50	20	0	109	90-110	21.95	0.75	20	
Fluoride	4.315	0.10	4	0	108	90-110	4.285	0.698	20	
Sulfate	19.99	0.50	20	0	100	90-110	19.78	1.06	20	
Surr: Selenate (surr)	*5.086*	0.10	*5*	0	*102*	*85-115*	5.07	*0.315*	*20*	

MS Sample ID: **1202121-36DMS** Units: **mg/L** Analysis Date: **2/7/2012 03:28 AM**
Client ID: **MW-27-0212** Run ID: **ICS3000_120206B** SeqNo: **2679722** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	173.2	0.50	10	164.2	90.5	80-120	0			EO
Fluoride	2.946	0.10	2	0.463	124	80-120	0			S
Sulfate	109.6	0.50	10	0	1100	80-120	0			SE
Surr: Selenate (surr)	*5.36*	0.10	*5*	0	*107*	*85-115*	0			

MSD Sample ID: **1202121-36DMSD** Units: **mg/L** Analysis Date: **2/7/2012 03:49 AM**
Client ID: **MW-27-0212** Run ID: **ICS3000_120206B** SeqNo: **2679723** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	170.2	0.50	10	164.2	60	80-120	173.2	1.77	20	SEO
Fluoride	2.906	0.10	2	0.463	122	80-120	2.946	1.37	20	S
Sulfate	107.8	0.50	10	0	1080	80-120	109.6	1.72	20	SE
Surr: Selenate (surr)	*5.263*	0.10	*5*	0	*105*	*85-115*	5.36	*1.83*	*20*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123021** Instrument ID **ICS3000** Method: **E300**

The following samples were analyzed in this batch:

1202121-01D	1202121-03D	1202121-05D
1202121-07D	1202121-09D	1202121-11D
1202121-13D	1202121-15D	1202121-17D
1202121-19D	1202121-22D	1202121-24D
1202121-26D	1202121-28D	1202121-30D
1202121-32D	1202121-34D	1202121-36D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123048** Instrument ID **WetChem** Method: **SM2320B**

MBLK Sample ID: **WBLKW1-020812-R123048** Units: **mg/L** Analysis Date: **2/8/2012 11:07 AM**
Client ID: Run ID: **WETCHEM_120208A** SeqNo: **2680645** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.0								
Alkalinity, Carbonate (As CaCO3)	ND	5.0								
Alkalinity, Hydroxide (As CaCO3)	ND	5.0								
Alkalinity, Total (As CaCO3)	ND	5.0								

LCS Sample ID: **WLCSW1-020812-R123048** Units: **mg/L** Analysis Date: **2/8/2012 11:07 AM**
Client ID: Run ID: **WETCHEM_120208A** SeqNo: **2680646** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1037	5.0	1000	0	104	80-120	0			

DUP Sample ID: **1202121-36DDUP** Units: **mg/L** Analysis Date: **2/8/2012 11:07 AM**
Client ID: **MW-27-0212** Run ID: **WETCHEM_120208A** SeqNo: **2680661** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	258.6	5.0	0	0	0	0-0	259	0.155	20	
Alkalinity, Carbonate (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	258.6	5.0	0	0	0	0-0	259	0.155	20	

The following samples were analyzed in this batch: 1202121-36D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123067** Instrument ID **ICS3000** Method: **E300**

MBLK Sample ID: **WBLKS1-020812-R123067** Units: **mg/L** Analysis Date: **2/8/2012 11:41 AM**
Client ID: Run ID: **ICS3000_120208A** SeqNo: **2680947** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.344	0.50								J
Sulfate	ND	0.50								
Surr: Selenate (surr)	*4.816*	0.10	*5*	0	*96.3*	*85-115*	0			

LCS Sample ID: **WLCSS1-020812-R123067** Units: **mg/L** Analysis Date: **2/8/2012 12:02 PM**
Client ID: Run ID: **ICS3000_120208A** SeqNo: **2680951** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.94	0.50	20	0	110	90-110	0			
Sulfate	19.93	0.50	20	0	99.6	90-110	0			
Surr: Selenate (surr)	*5.148*	0.10	*5*	0	*103*	*85-115*	0			

LCSD Sample ID: **WLCSDS1-020812-R123067** Units: **mg/L** Analysis Date: **2/8/2012 12:23 PM**
Client ID: Run ID: **ICS3000_120208A** SeqNo: **2680954** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.8	0.50	20	0	109	90-110	21.94	0.668	20	
Sulfate	20.2	0.50	20	0	101	90-110	19.93	1.32	20	
Surr: Selenate (surr)	*5.188*	0.10	*5*	0	*104*	*85-115*	5.148	*0.774*	*20*	

MS Sample ID: **1202144-13DMS** Units: **mg/L** Analysis Date: **2/8/2012 09:01 PM**
Client ID: Run ID: **ICS3000_120208A** SeqNo: **2681867** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	165.7	0.50	20	149.5	80.7	80-120	0			EO
Sulfate	101.7	0.50	20	67.27	172	80-120	0			SE
Surr: Selenate (surr)	*5.306*	0.10	*5*	0	*106*	*85-115*	0			

MSD Sample ID: **1202144-13DMSD** Units: **mg/L** Analysis Date: **2/8/2012 09:22 PM**
Client ID: Run ID: **ICS3000_120208A** SeqNo: **2681868** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	166.4	0.50	20	149.5	84.4	80-120	165.7	0.451	20	EO
Sulfate	102.6	0.50	20	67.27	176	80-120	101.7	0.853	20	SE
Surr: Selenate (surr)	*5.338*	0.10	*5*	0	*107*	*85-115*	5.306	*0.601*	*20*	

The following samples were analyzed in this batch: 1202121-28D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R123079** Instrument ID **WetChem** Method: **M2510 B**

MBLK Sample ID: **WBLKW1-020812-R123079** Units: **µmhos/cm** Analysis Date: **2/8/2012 10:00 AM**
Client ID: Run ID: **WETCHEM_120208E** SeqNo: **2681403** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	ND	1.0								

LCS Sample ID: **WLCSW1-020812-R123079** Units: **µmhos/cm** Analysis Date: **2/8/2012 10:00 AM**
Client ID: Run ID: **WETCHEM_120208E** SeqNo: **2681279** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	1494	1.0	1413	0	106	80-120	0			

DUP Sample ID: **1202121-36DDUP** Units: **µmhos/cm** Analysis Date: **2/8/2012 10:00 AM**
Client ID: **MW-27-0212** Run ID: **WETCHEM_120208E** SeqNo: **2681299** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	1254	1.0	0	0	0		1250	0.319	20	

The following samples were analyzed in this batch:

1202121-01D	1202121-03D	1202121-05D
1202121-07D	1202121-09D	1202121-11D
1202121-13D	1202121-15D	1202121-17D
1202121-19D	1202121-22D	1202121-24D
1202121-26D	1202121-28D	1202121-30D
1202121-32D	1202121-34D	1202121-36D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1202121
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R124412** Instrument ID **Balance1** Method: **M2540C**

MBLK Sample ID: **WBLK-030512-R124412** Units: **mg/L** Analysis Date: **3/5/2012 05:30 PM**
Client ID: Run ID: **BALANCE1_120305F** SeqNo: **2709390** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	ND	10								

LCS Sample ID: **WLCS-030512-R124412** Units: **mg/L** Analysis Date: **3/5/2012 05:30 PM**
Client ID: Run ID: **BALANCE1_120305F** SeqNo: **2709391** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	982	10	1000	0	98.2	85-115	0			

DUP Sample ID: **1202121-22DDUP** Units: **mg/L** Analysis Date: **3/5/2012 05:30 PM**
Client ID: **MW-24-0212** Run ID: **BALANCE1_120305F** SeqNo: **2709388** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	434	10	0	0	0	0-0	418	3.76	20	HHH

The following samples were analyzed in this batch: 1202121-22D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 03-Apr-12

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
WorkOrder: **1202121**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µmhos/cm	
mg/L	Milligrams per Liter
pH units	

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **02-Feb-12 09:20**

Work Order: **1202121** Received by: **RNG**

Checklist completed by Robert D. Harris (eSignature) 02-Feb-12 (Date) Reviewed by: Chris Bryson (eSignature) 03-Feb-12 (Date)

Matrices: waters
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):	1.9c,2.4c,2.3c,1.9c,1.8c,2.4c,2.2c	002	
Cooler(s)/Kit(s):	4201,4093,4212,4087,3308,4047,4204		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes: Container received for Anions (300) Nitrate (as N) analysis was preserved with 250PH2SO4 (instead of being non-preserved). Therefore, had to run for Nitrate/Nitrite (as N). Instead of Nitrate (as N) by itself.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Chain of Custody Form

ALS Environmental

Page 1 of 2 (1 & 2 R2)

COC ID: 46582

1202121

NAVAJO REFINING: Navajo Refining Company

Project: Navajo Lea Refinery Semi-Annual

ALS Project Manager:

Customer Information		Project Information			
Purchase Order	106881	Project Name	Navajo Lea Refinery Semi-Annual	A	VOC (8260) Select
Work Order		Project Number		B	LL SVOC (8270) TCL
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (6020/7000) Hg
Send Report To	Aaron Strange	Invoice Attn	Carrie Hernandez	D	Dissolved Metals (6020/7000) Select
Address	P.O. Box 159	Address	PO Box 159	E	Anions (300) Cl,F,SO4
				F	Alkalinity
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	pH
Phone	(505) 748-3311	Phone	(575) 748-6733	H	Specific Conductivity
Fax	(505) 746-5421	Fax	(575) 746-5421	I	TDS
e-Mail Address	aaron.strange@hollycorp.com	e-Mail Address	carrie.hernandez@hollycorp.com	J	Nitrate as N

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-9-0112	01/31/12	0830	H2O	2,3,8	6		X	X	X	X	X	X	X	X	X	
2	MW-10-0112	01/31/12	0930	H2O	2,3,8	6											
3	MW-18-0112	01/31/12	1025	H2O		6											
4	MW-19-0112	01/31/12	1125	H2O		6											
5	MW-20-0112	01/31/12	1240	H2O		6											
6	MW-14-0112	01/31/12	1321	H2O		6											
7	MW-5-0112	01/31/12	1420	H2O		6											
8	MW-21-0112	01/31/12	1530	H2O		6											
9	MW-22-0112	01/31/12	1615	H2O		6											
10	Duplicate-1-0112	01/31/12		H2O	2,3,8	6		X	X	X	X	X	X	X	X	X	

Sampler(s) Please Print & Sign: Jose Jerry Son Jerry

Shipment Method: FED X

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

Results Due Date:

Relinquished by: Son Jerry — Date: 02/01/12 — Time: 1700 — Received by:

Relinquished by: — Date: — Time: — Received by (Laboratory): 2/2/12 09:20

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

Notes: 10 Day TAT. Cc Dave Boyer on Final Report. dgboyer@SESI-nm.com

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 / EDD ☐ 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 Environmental.
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Page 2 of 2 (1 of 2 on 2nd COC)

COC ID: 46581

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Fort Collins, CO +1 970 490 1511 | Middletown, PA +1 717 944 5541 | York, PA +1 717 505 5280

ALS Project Manager: | ALS Work Order #: 1202121

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	106881	Project Name	Navajo Lea Refinery Semi-Annual	A	VOC (8260) Select
Work Order		Project Number		B	LL SVOC (8270) TCL
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (6020/7000) Hg
Send Report To	Aaron Strange	Invoice Attn	Carrie Hernandez	D	Dissolved Metals (6020/7000) Select
Address	P.O. Box 159	Address	PO Box 159	E	Anions (300) Cl,F,SO4
				F	Alkalinity
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	pH
Phone	(505) 748-3311	Phone	(575) 748-6733	H	Specific Conductivity
Fax	(505) 746-5421	Fax	(575) 746-5421	I	TDS
e-Mail Address	aaron.strange@hollycorp.com	e-Mail Address	carrie.hernandez@hollycorp.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-9-0112	01/31/12	0830	H2O	1,8	3	X										
2	MW-10-0112	01/31/12	0930			3	X										
3	MW-18-0112	01/31/12	1025			3	X										
4	MW-19-0112	01/31/12	1125			3	X										
5	MW-20-0112	01/31/12	1240			3	X										
6	MW-14-0112	01/31/12	1340			3	X										
7	MW-5-0112	01/31/12	1420			3	X										
8	MW-21-0112	01/31/12	1530			3	X										
9	MW-22-0112	01/31/12	1615			3	X										
10	DUPLICATE-1-0112	01/31/12		H2O	1,8	3	X										

Sampler(s) Please Print & Sign: Son Jarry Son Jarry

Shipment Method: FED-X

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:
Son Jarry	02/01/12	1700	
Relinquished by:	Date:	Time:	Received by (Laboratory): 2/2/12 09:20
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: 10 Day TAT. Cc Dave Boyer on Final Report. dboyer@SESI-nm.com

Cooler ID	Cooler Temp.

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

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 Environmental.
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COC ID: 46580

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☐ Fort Collins, CO +1 970 490 1511 ☐ Middletown, PA +1 717 944 5541 ☐ York, PA +1 717 505 5280

ALS Project Manager: | ALS Work Order #: 120121

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	106881	Project Name	Navajo Lea Refinery Semi-Annual	A	VOC (8260) Select
Work Order		Project Number		B	LL SVOC (8270) TCL
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (6020/7000) Hg
Send Report To	Aaron Strange	Invoice Attn	Carrie Hernandez	D	Dissolved Metals (6020/7000) Select
Address	P.O. Box 159	Address	PO Box 159	E	Anions (300) Cl,F,SO4
				F	Alkalinity
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	pH
Phone	(505) 748-3311	Phone	(575) 748-6733	H	Specific Conductivity
Fax	(505) 746-5421	Fax	(575) 746-5421	I	TDS
e-Mail Address	aaron.strange@hollycorp.com	e-Mail Address	carrie.hernandez@hollycorp.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	TRIP BLANK 01/26/12-46	—	—	H2O	1,8	2	X										
2	MW-24-0212	02/01	0850	H2O	1,8	3	X										
3	MW-23-0212	02/01	0935	H2O	1,8	3	X										
4	MW-25-0212	02/01	1047	H2O	1,8	3	X										
5	MW-26-0212	02/01	1125	H2O	1,8	3	X										
6	MW-11-0212	02/01	1210	H2O	1,8	3	X										
7	MW-8-0212	02/01	1300	H2O	1,8	3	X										
8	MW-13-0212	02/01	1400	H2O	1,8	3	X										
9	MW-27-0212	02/01	1445	H2O	1,8	3	X										
10																	

Sampler(s) Please Print & Sign: Sosa Jorge Sosa Jorge

Shipment Method: Fed Ex

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

Results Due Date:

Relinquished by: Sosa Jorge Date: 02/01/12 Time: 1800 Received by:

Relinquished by: Date: Time: 1705 Received by (Laboratory): 2/2/12 0920

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

Notes: 10 Day TAT. Cc Dave Boyer on Final Report. dgboyer@SESI-nm.com

Cooler ID	Cooler Temp.

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

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 Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental 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.

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Chain of Custody Form

ALS Environmental

Page 4 of 4

COC ID: 46575

☐ Cincinnati, OH +1 513 733 5336 ☐ Holland, MI +1 513 733 5336 ☐ Salt Lake City, UT +1 801 266 7700
☐ Everett, WA +1 425 356 2600 ☐ Houston, TX +1 281 530 5656 ☐ Spring City, PA +1 610 948 4903
☐ Fort Collins, CO +1 970 490 1511 ☐ Middletown, PA +1 717 944 5541 ☐ York, PA +1 717 505 5280

ALS Project Manager: ALS Work Order #: 1202121

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	106881	Project Name	Navajo Lea Refinery Semi-Annual	A	VOC (8260) Select
Work Order		Project Number		B	LL SVOC (8270) TCL
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (6020/7000) Hg
Send Report To	Aaron Strange	Invoice Attn	Carrie Hernandez	D	Dissolved Metals (6020/7000) Select
Address	P.O. Box 159	Address	PO Box 159	E	Anions (300) Cl,F,SO4
				F	Alkalinity
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	pH
Phone	(505) 748-3311	Phone	(575) 748-6733	H	Specific Conductivity
Fax	(505) 746-5421	Fax	(575) 746-5421	I	TDS
e-Mail Address	aaron.strange@hollycorp.com	e-Mail Address	carrie.hernandez@hollycorp.com	J	Nitrate as N

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-24-0212	02/01	0850	H2O	2,3,8	6		X	X	X	X	X	X	X	X	X	
2	MW-23-0212	02/01	0935	H2O	2,3,8	6											
3	MW-25-0212	02/01	1047			6											
4	MW-26-0212	02/01	1125			6											
5	MW-11-0212	02/01	1210			6											
6	MW-8-0212	02/01	1300			6											
7	MW-13-0212	02/01	1400			6											
8	MW-27-0212	02/01	1445	H2O	2,3,8	6		X	X	X	X	X	X	X	X	X	
9																	
10																	

Sampler(s) Please Print & Sign: Josh Young Josh Young

Shipment Method: FED X

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

Results Due Date:

Relinquished by: Josh Young	Date: 02/01/12	Time: 1600	Received by:		
Relinquished by: Josh Young	Date:	Time:	Received by (Laboratory):	Date: 2/2/12	Time: 09:20
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):		

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

Notes: 10 Day TAT. Cc Dave Boyer on Final Report. dghover@SESI-nm.com

Cooler ID	Cooler Temp.

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

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
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120212

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

FedEx Tracking Number 875882544369

...a 2/2/12

...der's ...ne [illegible] Phone [illegible]

Company [illegible]

...ddress [illegible]

...Dept./Floor/Suite/Room

...State AK ZIP 99518

...r Internal Billing Reference

CUSTODY SEAL

Date: 02/02/12 Time: 1630

Name: [illegible]

Company: [illegible]

Seal Broken By: AW

Date: 2/2/12

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

4204

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

4204

CUSTODY SEAL

Date: 02/02/12 Time: 1630

Name: [illegible]

Company: [illegible]

Seal Broken By: AW

Date: 2/2/12

120212

This portion can be removed for Recipient's records.

FedEx Tracking Number 875882544406

Phone

Company

Dept./Floor/Suite/Room

State ZIP

Internal Billing Reference

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

CUSTODY SEAL 3308
Date: 02/01/12 Time: 1600
Name:
Company:
Seal Broken By:
Date: 2/2/12

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

CUSTODY SEAL 3308
Date: 02/01/12 Time: 1600
Name:
Company:
Seal Broken By:
Date: 2/2/12

This portion can be removed for Recipient's records.

FedEx Tracking Number 875882544380

Phone

Company

Dept./Floor/Suite/Room

State

Internal Billing Reference

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

CUSTODY SEAL 4047
Date: 02/01/12 Time: 1600
Name:
Company:
Seal Broken By:
Date: 2/2/12

120212

This portion can be removed for Recipient's records.

Date 2/1/12 FedEx Tracking Number 875882544370

Sender's Name Jerry Sosa Phone 575 397.0510

Company SESI

Address 703 E Clinton 4201 Dept./Floor/Suite/Room

City Hobbs State NM ZIP 88240

Your Internal Billing Reference

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

Date: 02
Name:
Company:

CUSTODY SEAL 4201
Date: 2/1/12 Time: 1500
Signature: Sosa

Seal Broken By: KNG
Date: 2/2/12

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

Date: 02
Name:
Company:

CUSTODY SEAL 4201
Date: 2/1/12 Time: 1600
Signature: Sosa

Seal Broken By: KNG
Date: 2/2/12

This portion can be removed for Recipient's records.

Date 02/01/12 FedEx Tracking Number 875882544417

Sender's Name Sosa, Jerry Phone 575 397.0510

Company Society of Environmental Sol

Address 703 E Clinton 4093 Dept./Floor/Suite/Room

City Hobbs State NM ZIP 88240

Your Internal Billing Reference

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

Date:
Name:
Company:

CUSTODY SEAL 4093
Date: 02/01/12 Time: 1600
Name: Sosa
Company: SESI

Seal Broken By: KNG
Date: 2/2/12

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

CUSTODY SEAL 4093
Date: 02/01/12 Time: 1600
Name: Sosa
Company: SESI

Seal Broken By: KNG
Date: 2/2/12

120114

This portion can be removed for Recipient's records.

e 02/01/12 FedEx Tracking Number 875882544428

der's Sosa, Sonny Phone 575 397 0510

Company Safety + Environmental Sol

Address 703 E Clinton 4212 Dept./Floor/Suite/Room

Hobbs State NM ZIP 88240

r Internal Billing Reference

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

4212

Date: 02
Name: S
Company: S

CUSTODY SEAL

Date: 02/01/12 Time: 1600
Sign Sosa

Seal Broken By: RHG
Date: 2/2/12

CUSTODY SEAL 4212

Date: 02/01/12 Time: 1600
Name: Sosa
Company: Sosa

Seal Broken By: RHG
Date: 2/2/12

This portion can be removed for Recipient's records.

e 02/01/12 FedEx Tracking Number 875882544391

der's Tony Sosa Phone 575-397-0510

Company Safety + Environmental Sol

Address 703 E Clinton 4057 Dept./Floor/Suite/Room

Hobbs State NM ZIP 88240

r Internal Billing Reference Mewbourne Oil Co

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

Date:
Name:
Compar

CUSTODY SEAL 4057

02/01/12 Time: 1600
ny: Sosa Sosa

Seal Broken By: RHG
Date: 2/2/12

16-Aug-2012

Aaron Strange
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 748-6733
Fax: (575) 746-5421

Re: Lovington Lea Refinery - SA Work Order: **12071240**

Dear Aaron,

ALS Environmental received 16 samples on 26-Jul-2012 09:05 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental 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 Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 120.

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

Sincerely,

Patricia L. Lynch

Electronically approved by: Jumoke M. Lawal

Patricia L. Lynch
Project Manager

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 16-Aug-12

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: **12071240**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
12071240-01	MW-29-0712	Water		7/24/2012 09:08	7/26/2012 09:05	☐
12071240-02	MW-2-0712	Water		7/24/2012 09:50	7/26/2012 09:05	☐
12071240-03	MW-28-0712	Water		7/24/2012 10:40	7/26/2012 09:05	☐
12071240-04	MW-15-0712	Water		7/24/2012 11:30	7/26/2012 09:05	☐
12071240-05	MW-16-0712	Water		7/24/2012 12:45	7/26/2012 09:05	☐
12071240-06	MW-4-0712	Water		7/24/2012 13:35	7/26/2012 09:05	☐
12071240-07	MW-6-0712	Water		7/24/2012 14:25	7/26/2012 09:05	☐
12071240-08	MW-9-0712	Water		7/25/2012 08:30	7/26/2012 09:05	☐
12071240-09	MW-10-0712	Water		7/25/2012 09:15	7/26/2012 09:05	☐
12071240-10	MW-3-0712	Water		7/25/2012 09:55	7/26/2012 09:05	☐
12071240-11	MW-18-0712	Water		7/25/2012 10:40	7/26/2012 09:05	☐
12071240-12	MW-19-0712	Water		7/25/2012 11:45	7/26/2012 09:05	☐
12071240-13	MW-20-0712	Water		7/25/2012 13:10	7/26/2012 09:05	☐
12071240-14	MW-14-0712	Water		7/25/2012 13:50	7/26/2012 09:05	☐
12071240-15	MW-5-0712	Water		7/25/2012 14:35	7/26/2012 09:05	☐
12071240-16	Trip Blank 070912-47	Water		7/25/2012	7/26/2012 09:05	☐

Client:	Navajo Refining Company
Project:	Lovington Lea Refinery - SA
Work Order:	12071240

Case Narrative

The samples were received outside method holding time for pH which is "immediate" per 40CFR136. Therefore, the results are flagged with H.

Batch 63164, Metals, Sample 63164: MS/MSD recoveries and RPD are for an unrelated sample.

Batch 62997, Semivolatile Organics: Several LCS/LCSD RPDs are above the control limits, but all recoveries are in control. Insufficient sample was available for MS/MSD. The LCS/LCSD was used for batch quality control.

Batch R132138, Nitrate, Sample 1207396-01: MS/MSD recoveries are for an unrelated sample.

Batch R132316, Sulfate, Sample 12071350: MS recovery and MS/MSD RPD are for an unrelated sample.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-29-0712
Lab ID: 12071240-01
Collection Date: 7/24/2012 09:08 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/1/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/1/2012 05:34 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/3/2012**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	8/6/2012 07:52 PM
Arsenic	ND		0.00500	mg/L	1	8/6/2012 07:52 PM
Barium	**0.0978**		**0.00500**	**mg/L**	1	8/6/2012 07:52 PM
Boron	**0.249**		**0.0500**	**mg/L**	1	8/7/2012 02:28 PM
Cadmium	ND		0.00200	mg/L	1	8/6/2012 07:52 PM
Calcium	**171**		**0.500**	**mg/L**	1	8/6/2012 07:52 PM
Chromium	**0.261**		**0.00500**	**mg/L**	1	8/6/2012 07:52 PM
Cobalt	ND		0.00500	mg/L	1	8/6/2012 07:52 PM
Copper	ND		0.00500	mg/L	1	8/6/2012 07:52 PM
Iron	ND		0.200	mg/L	1	8/6/2012 07:52 PM
Lead	ND		0.00500	mg/L	1	8/6/2012 07:52 PM
Magnesium	**23.0**		**0.200**	**mg/L**	1	8/6/2012 07:52 PM
Manganese	ND		0.00500	mg/L	1	8/6/2012 07:52 PM
Molybdenum	ND		0.00500	mg/L	1	8/6/2012 07:52 PM
Nickel	ND		0.00500	mg/L	1	8/6/2012 07:52 PM
Potassium	**2.63**		**0.200**	**mg/L**	1	8/6/2012 07:52 PM
Selenium	ND		0.00500	mg/L	1	8/6/2012 07:52 PM
Silver	ND		0.00500	mg/L	1	8/6/2012 07:52 PM
Sodium	**62.5**		**0.200**	**mg/L**	1	8/7/2012 02:28 PM
Uranium	ND		0.00500	mg/L	1	8/6/2012 07:52 PM
Zinc	**0.0162**		**0.00500**	**mg/L**	1	8/6/2012 07:52 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/28/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/1/2012 03:27 AM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 03:27 AM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 03:27 AM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/1/2012 03:27 AM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/1/2012 03:27 AM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/1/2012 03:27 AM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
2-Chlorophenol	ND		0.20	µg/L	1	8/1/2012 03:27 AM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
2-Methylphenol	ND		0.20	µg/L	1	8/1/2012 03:27 AM
2-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 03:27 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Sample ID: MW-29-0712
Collection Date: 7/24/2012 09:08 AM

Work Order: 12071240
Lab ID: 12071240-01
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/1/2012 03:27 AM
3&4-Methylphenol	ND		0.20	µg/L	1	8/1/2012 03:27 AM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/1/2012 03:27 AM
3-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 03:27 AM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/1/2012 03:27 AM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 03:27 AM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/1/2012 03:27 AM
4-Chloroaniline	ND		0.20	µg/L	1	8/1/2012 03:27 AM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 03:27 AM
4-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 03:27 AM
4-Nitrophenol	ND		1.0	µg/L	1	8/1/2012 03:27 AM
Acenaphthene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Acenaphthylene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Acetophenone	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Anthracene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Atrazine	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Benz(a)anthracene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Benzaldehyde	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Bis(2-ethylhexyl)phthalate	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Caprolactam	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Carbazole	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Chrysene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Dibenzofuran	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Diethyl phthalate	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Dimethyl phthalate	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Fluoranthene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Fluorene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Hexachlorobenzene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/1/2012 03:27 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-29-0712 **Lab ID:** 12071240-01
Collection Date: 7/24/2012 09:08 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Hexachloroethane	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Isophorone	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Naphthalene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Nitrobenzene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/1/2012 03:27 AM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Pentachlorophenol	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Phenanthrene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Phenol	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Pyrene	ND		0.20	µg/L	1	8/1/2012 03:27 AM
Surr: 2,4,6-Tribromophenol	*58.9*		*34-129*	*%REC*	1	8/1/2012 03:27 AM
Surr: 2-Fluorobiphenyl	*80.8*		*40-125*	*%REC*	1	8/1/2012 03:27 AM
Surr: 2-Fluorophenol	*69.2*		*20-120*	*%REC*	1	8/1/2012 03:27 AM
Surr: 4-Terphenyl-d14	*93.3*		*40-135*	*%REC*	1	8/1/2012 03:27 AM
Surr: Nitrobenzene-d5	*81.1*		*41-120*	*%REC*	1	8/1/2012 03:27 AM
Surr: Phenol-d6	*77.7*		*20-120*	*%REC*	1	8/1/2012 03:27 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
2-Butanone	ND		0.010	mg/L	1	7/30/2012 02:37 AM
2-Hexanone	ND		0.010	mg/L	1	7/30/2012 02:37 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	7/30/2012 02:37 AM
Acetone	ND		0.010	mg/L	1	7/30/2012 02:37 AM
Benzene	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
Bromodichloromethane	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
Bromoform	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
Bromomethane	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
Carbon disulfide	ND		0.010	mg/L	1	7/30/2012 02:37 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	7/30/2012 02:37 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-29-0712 **Lab ID:** 12071240-01
Collection Date: 7/24/2012 09:08 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
Chloroethane	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
Chloroform	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
Chloromethane	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
Dibromochloromethane	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
Ethylbenzene	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
Isopropylbenzene	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
m,p-Xylene	ND		0.010	mg/L	1	7/30/2012 02:37 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
Methylene chloride	ND		0.010	mg/L	1	7/30/2012 02:37 AM
Naphthalene	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
n-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
n-Propylbenzene	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
o-Xylene	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
Styrene	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
Tetrachloroethene	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
Toluene	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
Trichloroethene	ND		0.0050	mg/L	1	7/30/2012 02:37 AM
Vinyl chloride	ND		0.0020	mg/L	1	7/30/2012 02:37 AM
Xylenes, Total	ND		0.015	mg/L	1	7/30/2012 02:37 AM
Surr: 1,2-Dichloroethane-d4	*116*		*70-125*	*%REC*	1	7/30/2012 02:37 AM
Surr: 4-Bromofluorobenzene	*95.6*		*72-125*	*%REC*	1	7/30/2012 02:37 AM
Surr: Dibromofluoromethane	*102*		*71-125*	*%REC*	1	7/30/2012 02:37 AM
Surr: Toluene-d8	*104*		*75-125*	*%REC*	1	7/30/2012 02:37 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**250**		**5.00**	**mg/L**	10	8/1/2012 08:25 PM
Fluoride	**0.828**		**0.100**	**mg/L**	1	7/31/2012 06:26 PM
Sulfate	**90.1**		**0.500**	**mg/L**	1	7/31/2012 06:26 PM
Nitrate/Nitrite (as N)	**4.08**		**2.00**	**mg/L**	10	7/30/2012 07:36 PM
Surr: Selenate (surr)	*110*		*85-115*	*%REC*	10	8/1/2012 08:25 PM
Surr: Selenate (surr)	*108*		*85-115*	*%REC*	1	7/31/2012 06:26 PM
Surr: Selenate (surr)	*99.9*		*85-115*	*%REC*	10	7/30/2012 07:36 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**282**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-29-0712
Lab ID: 12071240-01
Collection Date: 7/24/2012 09:08 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM
Alkalinity, Total (As CaCO3)	**282**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**1,380**		**1.00**	**µmhos/cm**	1	7/31/2012 10:30 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**6.93**	H	**0.100**	**pH Units**	1	8/1/2012 12:10 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**1,120**		**10.0**	**mg/L**	1	7/30/2012 11:45 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-2-0712
Lab ID: 12071240-02
Collection Date: 7/24/2012 09:50 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/1/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/1/2012 05:36 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/3/2012**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	8/6/2012 07:54 PM
Arsenic	ND		0.00500	mg/L	1	8/6/2012 07:54 PM
Barium	**0.140**		**0.00500**	**mg/L**	1	8/6/2012 07:54 PM
Boron	**0.233**		**0.0500**	**mg/L**	1	8/7/2012 02:30 PM
Cadmium	ND		0.00200	mg/L	1	8/6/2012 07:54 PM
Calcium	**132**		**0.500**	**mg/L**	1	8/6/2012 07:54 PM
Chromium	ND		0.00500	mg/L	1	8/6/2012 07:54 PM
Cobalt	ND		0.00500	mg/L	1	8/6/2012 07:54 PM
Copper	ND		0.00500	mg/L	1	8/6/2012 07:54 PM
Iron	ND		0.200	mg/L	1	8/6/2012 07:54 PM
Lead	ND		0.00500	mg/L	1	8/6/2012 07:54 PM
Magnesium	**16.5**		**0.200**	**mg/L**	1	8/6/2012 07:54 PM
Manganese	ND		0.00500	mg/L	1	8/6/2012 07:54 PM
Molybdenum	ND		0.00500	mg/L	1	8/6/2012 07:54 PM
Nickel	ND		0.00500	mg/L	1	8/6/2012 07:54 PM
Potassium	**2.24**		**0.200**	**mg/L**	1	8/6/2012 07:54 PM
Selenium	ND		0.00500	mg/L	1	8/6/2012 07:54 PM
Silver	ND		0.00500	mg/L	1	8/6/2012 07:54 PM
Sodium	**62.1**		**0.200**	**mg/L**	1	8/7/2012 02:30 PM
Uranium	ND		0.00500	mg/L	1	8/6/2012 07:54 PM
Zinc	**0.0191**		**0.00500**	**mg/L**	1	8/6/2012 07:54 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/28/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/1/2012 03:47 AM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 03:47 AM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 03:47 AM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/1/2012 03:47 AM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/1/2012 03:47 AM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/1/2012 03:47 AM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
2-Chlorophenol	ND		0.20	µg/L	1	8/1/2012 03:47 AM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
2-Methylphenol	ND		0.20	µg/L	1	8/1/2012 03:47 AM
2-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 03:47 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-2-0712
Lab ID: 12071240-02
Collection Date: 7/24/2012 09:50 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/1/2012 03:47 AM
3&4-Methylphenol	ND		0.20	µg/L	1	8/1/2012 03:47 AM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/1/2012 03:47 AM
3-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 03:47 AM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/1/2012 03:47 AM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 03:47 AM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/1/2012 03:47 AM
4-Chloroaniline	ND		0.20	µg/L	1	8/1/2012 03:47 AM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 03:47 AM
4-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 03:47 AM
4-Nitrophenol	ND		1.0	µg/L	1	8/1/2012 03:47 AM
Acenaphthene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Acenaphthylene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Acetophenone	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Anthracene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Atrazine	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Benz(a)anthracene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Benzaldehyde	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Bis(2-ethylhexyl)phthalate	**4.9**		**0.20**	**µg/L**	1	8/1/2012 03:47 AM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Caprolactam	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Carbazole	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Chrysene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Dibenzofuran	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Diethyl phthalate	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Dimethyl phthalate	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Fluoranthene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Fluorene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Hexachlorobenzene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/1/2012 03:47 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-2-0712 **Lab ID:** 12071240-02
Collection Date: 7/24/2012 09:50 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Hexachloroethane	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Isophorone	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Naphthalene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Nitrobenzene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/1/2012 03:47 AM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Pentachlorophenol	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Phenanthrene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Phenol	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Pyrene	ND		0.20	µg/L	1	8/1/2012 03:47 AM
Surr: 2,4,6-Tribromophenol	*62.0*		*34-129*	*%REC*	1	8/1/2012 03:47 AM
Surr: 2-Fluorobiphenyl	*80.1*		*40-125*	*%REC*	1	8/1/2012 03:47 AM
Surr: 2-Fluorophenol	*57.6*		*20-120*	*%REC*	1	8/1/2012 03:47 AM
Surr: 4-Terphenyl-d14	*94.5*		*40-135*	*%REC*	1	8/1/2012 03:47 AM
Surr: Nitrobenzene-d5	*72.7*		*41-120*	*%REC*	1	8/1/2012 03:47 AM
Surr: Phenol-d6	*61.6*		*20-120*	*%REC*	1	8/1/2012 03:47 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
2-Butanone	ND		0.010	mg/L	1	7/30/2012 03:04 AM
2-Hexanone	ND		0.010	mg/L	1	7/30/2012 03:04 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	7/30/2012 03:04 AM
Acetone	ND		0.010	mg/L	1	7/30/2012 03:04 AM
Benzene	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
Bromodichloromethane	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
Bromoform	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
Bromomethane	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
Carbon disulfide	ND		0.010	mg/L	1	7/30/2012 03:04 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	7/30/2012 03:04 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-2-0712 **Lab ID:** 12071240-02
Collection Date: 7/24/2012 09:50 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
Chloroethane	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
Chloroform	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
Chloromethane	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
Dibromochloromethane	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
Ethylbenzene	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
Isopropylbenzene	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
m,p-Xylene	ND		0.010	mg/L	1	7/30/2012 03:04 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
Methylene chloride	ND		0.010	mg/L	1	7/30/2012 03:04 AM
Naphthalene	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
n-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
n-Propylbenzene	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
o-Xylene	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
Styrene	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
Tetrachloroethene	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
Toluene	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
Trichloroethene	ND		0.0050	mg/L	1	7/30/2012 03:04 AM
Vinyl chloride	ND		0.0020	mg/L	1	7/30/2012 03:04 AM
Xylenes, Total	ND		0.015	mg/L	1	7/30/2012 03:04 AM
Surr: 1,2-Dichloroethane-d4	*117*		*70-125*	*%REC*	1	7/30/2012 03:04 AM
Surr: 4-Bromofluorobenzene	*91.8*		*72-125*	*%REC*	1	7/30/2012 03:04 AM
Surr: Dibromofluoromethane	*105*		*71-125*	*%REC*	1	7/30/2012 03:04 AM
Surr: Toluene-d8	*105*		*75-125*	*%REC*	1	7/30/2012 03:04 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**201**		**5.00**	**mg/L**	10	8/1/2012 08:39 PM
Fluoride	**0.898**		**0.100**	**mg/L**	1	7/31/2012 06:41 PM
Sulfate	**76.3**		**0.500**	**mg/L**	1	7/31/2012 06:41 PM
Nitrate/Nitrite (as N)	**3.24**		**2.00**	**mg/L**	10	7/30/2012 07:57 PM
Surr: Selenate (surr)	*108*		*85-115*	*%REC*	10	8/1/2012 08:39 PM
Surr: Selenate (surr)	*108*		*85-115*	*%REC*	1	7/31/2012 06:41 PM
Surr: Selenate (surr)	*101*		*85-115*	*%REC*	10	7/30/2012 07:57 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**209**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-2-0712
Lab ID: 12071240-02
Collection Date: 7/24/2012 09:50 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM
Alkalinity, Total (As CaCO3)	**209**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**1,140**		**1.00**	**µmhos/cm**	1	7/31/2012 10:30 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**7.05**	H	**0.100**	**pH Units**	1	8/1/2012 12:10 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**908**		**10.0**	**mg/L**	1	7/30/2012 11:45 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-28-0712
Lab ID: 12071240-03
Collection Date: 7/24/2012 10:40 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/1/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/1/2012 05:38 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/3/2012**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	8/6/2012 07:57 PM
Arsenic	ND		0.00500	mg/L	1	8/6/2012 07:57 PM
Barium	**0.0830**		**0.00500**	**mg/L**	1	8/6/2012 07:57 PM
Boron	**0.204**		**0.0500**	**mg/L**	1	8/7/2012 02:33 PM
Cadmium	ND		0.00200	mg/L	1	8/6/2012 07:57 PM
Calcium	**90.2**		**0.500**	**mg/L**	1	8/6/2012 07:57 PM
Chromium	ND		0.00500	mg/L	1	8/6/2012 07:57 PM
Cobalt	ND		0.00500	mg/L	1	8/6/2012 07:57 PM
Copper	ND		0.00500	mg/L	1	8/6/2012 07:57 PM
Iron	ND		0.200	mg/L	1	8/6/2012 07:57 PM
Lead	ND		0.00500	mg/L	1	8/6/2012 07:57 PM
Magnesium	**12.4**		**0.200**	**mg/L**	1	8/6/2012 07:57 PM
Manganese	ND		0.00500	mg/L	1	8/6/2012 07:57 PM
Molybdenum	ND		0.00500	mg/L	1	8/6/2012 07:57 PM
Nickel	ND		0.00500	mg/L	1	8/6/2012 07:57 PM
Potassium	**1.87**		**0.200**	**mg/L**	1	8/6/2012 07:57 PM
Selenium	ND		0.00500	mg/L	1	8/6/2012 07:57 PM
Silver	ND		0.00500	mg/L	1	8/6/2012 07:57 PM
Sodium	**38.1**		**0.200**	**mg/L**	1	8/7/2012 02:33 PM
Uranium	ND		0.00500	mg/L	1	8/6/2012 07:57 PM
Zinc	**0.00812**		**0.00500**	**mg/L**	1	8/6/2012 07:57 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/28/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/1/2012 04:08 AM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 04:08 AM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 04:08 AM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/1/2012 04:08 AM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/1/2012 04:08 AM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/1/2012 04:08 AM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
2-Chlorophenol	ND		0.20	µg/L	1	8/1/2012 04:08 AM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
2-Methylphenol	ND		0.20	µg/L	1	8/1/2012 04:08 AM
2-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 04:08 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Sample ID: MW-28-0712
Collection Date: 7/24/2012 10:40 AM

Work Order: 12071240
Lab ID: 12071240-03
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/1/2012 04:08 AM
3&4-Methylphenol	ND		0.20	µg/L	1	8/1/2012 04:08 AM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/1/2012 04:08 AM
3-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 04:08 AM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/1/2012 04:08 AM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 04:08 AM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/1/2012 04:08 AM
4-Chloroaniline	ND		0.20	µg/L	1	8/1/2012 04:08 AM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 04:08 AM
4-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 04:08 AM
4-Nitrophenol	ND		1.0	µg/L	1	8/1/2012 04:08 AM
Acenaphthene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Acenaphthylene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Acetophenone	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Anthracene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Atrazine	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Benz(a)anthracene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Benzaldehyde	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Bis(2-ethylhexyl)phthalate	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Caprolactam	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Carbazole	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Chrysene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Dibenzofuran	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Diethyl phthalate	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Dimethyl phthalate	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Fluoranthene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Fluorene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Hexachlorobenzene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/1/2012 04:08 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-28-0712 **Lab ID:** 12071240-03
Collection Date: 7/24/2012 10:40 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Hexachloroethane	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Isophorone	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Naphthalene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Nitrobenzene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/1/2012 04:08 AM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Pentachlorophenol	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Phenanthrene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Phenol	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Pyrene	ND		0.20	µg/L	1	8/1/2012 04:08 AM
Surr: 2,4,6-Tribromophenol	*53.3*		*34-129*	*%REC*	1	8/1/2012 04:08 AM
Surr: 2-Fluorobiphenyl	*82.6*		*40-125*	*%REC*	1	8/1/2012 04:08 AM
Surr: 2-Fluorophenol	*65.4*		*20-120*	*%REC*	1	8/1/2012 04:08 AM
Surr: 4-Terphenyl-d14	*99.1*		*40-135*	*%REC*	1	8/1/2012 04:08 AM
Surr: Nitrobenzene-d5	*84.4*		*41-120*	*%REC*	1	8/1/2012 04:08 AM
Surr: Phenol-d6	*74.4*		*20-120*	*%REC*	1	8/1/2012 04:08 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
2-Butanone	ND		0.010	mg/L	1	7/30/2012 03:30 AM
2-Hexanone	ND		0.010	mg/L	1	7/30/2012 03:30 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	7/30/2012 03:30 AM
Acetone	ND		0.010	mg/L	1	7/30/2012 03:30 AM
Benzene	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
Bromodichloromethane	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
Bromoform	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
Bromomethane	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
Carbon disulfide	ND		0.010	mg/L	1	7/30/2012 03:30 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	7/30/2012 03:30 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-28-0712 **Lab ID:** 12071240-03
Collection Date: 7/24/2012 10:40 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
Chloroethane	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
Chloroform	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
Chloromethane	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
Dibromochloromethane	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
Ethylbenzene	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
Isopropylbenzene	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
m,p-Xylene	ND		0.010	mg/L	1	7/30/2012 03:30 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
Methylene chloride	ND		0.010	mg/L	1	7/30/2012 03:30 AM
Naphthalene	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
n-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
n-Propylbenzene	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
o-Xylene	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
Styrene	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
Tetrachloroethene	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
Toluene	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
Trichloroethene	ND		0.0050	mg/L	1	7/30/2012 03:30 AM
Vinyl chloride	ND		0.0020	mg/L	1	7/30/2012 03:30 AM
Xylenes, Total	ND		0.015	mg/L	1	7/30/2012 03:30 AM
Surr: 1,2-Dichloroethane-d4	*120*		*70-125*	*%REC*	1	7/30/2012 03:30 AM
Surr: 4-Bromofluorobenzene	*93.7*		*72-125*	*%REC*	1	7/30/2012 03:30 AM
Surr: Dibromofluoromethane	*105*		*71-125*	*%REC*	1	7/30/2012 03:30 AM
Surr: Toluene-d8	*105*		*75-125*	*%REC*	1	7/30/2012 03:30 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**74.9**		**0.500**	**mg/L**	1	7/31/2012 06:55 PM
Fluoride	**1.79**		**0.100**	**mg/L**	1	7/31/2012 06:55 PM
Sulfate	**81.6**		**0.500**	**mg/L**	1	7/31/2012 06:55 PM
Nitrate/Nitrite (as N)	**2.33**		**2.00**	**mg/L**	10	7/30/2012 08:18 PM
Surr: Selenate (surr)	*111*		*85-115*	*%REC*	1	7/31/2012 06:55 PM
Surr: Selenate (surr)	*101*		*85-115*	*%REC*	10	7/30/2012 08:18 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**208**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-28-0712
Lab ID: 12071240-03
Collection Date: 7/24/2012 10:40 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM
Alkalinity, Total (As CaCO3)	**208**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**746**		**1.00**	**µmhos/cm**	1	7/31/2012 10:30 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**7.14**	H	**0.100**	**pH Units**	1	8/1/2012 12:10 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**500**		**10.0**	**mg/L**	1	7/31/2012 10:45 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-15-0712
Lab ID: 12071240-04
Collection Date: 7/24/2012 11:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/1/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/1/2012 05:40 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/3/2012**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	8/6/2012 08:00 PM
Arsenic	ND		0.00500	mg/L	1	8/6/2012 08:00 PM
Barium	**0.178**		**0.00500**	**mg/L**	1	8/6/2012 08:00 PM
Boron	**0.227**		**0.0500**	**mg/L**	1	8/7/2012 02:35 PM
Cadmium	ND		0.00200	mg/L	1	8/6/2012 08:00 PM
Calcium	**123**		**0.500**	**mg/L**	1	8/6/2012 08:00 PM
Chromium	**0.0110**		**0.00500**	**mg/L**	1	8/6/2012 08:00 PM
Cobalt	ND		0.00500	mg/L	1	8/6/2012 08:00 PM
Copper	ND		0.00500	mg/L	1	8/6/2012 08:00 PM
Iron	ND		0.200	mg/L	1	8/6/2012 08:00 PM
Lead	ND		0.00500	mg/L	1	8/6/2012 08:00 PM
Magnesium	**16.7**		**0.200**	**mg/L**	1	8/6/2012 08:00 PM
Manganese	ND		0.00500	mg/L	1	8/6/2012 08:00 PM
Molybdenum	ND		0.00500	mg/L	1	8/6/2012 08:00 PM
Nickel	ND		0.00500	mg/L	1	8/6/2012 08:00 PM
Potassium	**3.26**		**0.200**	**mg/L**	1	8/6/2012 08:00 PM
Selenium	ND		0.00500	mg/L	1	8/6/2012 08:00 PM
Silver	ND		0.00500	mg/L	1	8/6/2012 08:00 PM
Sodium	**104**		**0.200**	**mg/L**	1	8/7/2012 02:35 PM
Uranium	ND		0.00500	mg/L	1	8/6/2012 08:00 PM
Zinc	**0.00636**		**0.00500**	**mg/L**	1	8/6/2012 08:00 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/28/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/1/2012 04:28 AM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 04:28 AM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 04:28 AM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/1/2012 04:28 AM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/1/2012 04:28 AM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/1/2012 04:28 AM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
2-Chlorophenol	ND		0.20	µg/L	1	8/1/2012 04:28 AM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
2-Methylphenol	ND		0.20	µg/L	1	8/1/2012 04:28 AM
2-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 04:28 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-15-0712
Lab ID: 12071240-04
Collection Date: 7/24/2012 11:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/1/2012 04:28 AM
3&4-Methylphenol	ND		0.20	µg/L	1	8/1/2012 04:28 AM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/1/2012 04:28 AM
3-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 04:28 AM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/1/2012 04:28 AM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 04:28 AM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/1/2012 04:28 AM
4-Chloroaniline	ND		0.20	µg/L	1	8/1/2012 04:28 AM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 04:28 AM
4-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 04:28 AM
4-Nitrophenol	ND		1.0	µg/L	1	8/1/2012 04:28 AM
Acenaphthene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Acenaphthylene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Acetophenone	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Anthracene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Atrazine	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Benz(a)anthracene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Benzaldehyde	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Bis(2-ethylhexyl)phthalate	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Caprolactam	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Carbazole	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Chrysene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Dibenzofuran	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Diethyl phthalate	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Dimethyl phthalate	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Fluoranthene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Fluorene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Hexachlorobenzene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/1/2012 04:28 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-15-0712 **Lab ID:** 12071240-04
Collection Date: 7/24/2012 11:30 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Hexachloroethane	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Isophorone	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Naphthalene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Nitrobenzene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/1/2012 04:28 AM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Pentachlorophenol	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Phenanthrene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Phenol	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Pyrene	ND		0.20	µg/L	1	8/1/2012 04:28 AM
Surr: 2,4,6-Tribromophenol	*61.0*		*34-129*	*%REC*	1	8/1/2012 04:28 AM
Surr: 2-Fluorobiphenyl	*82.2*		*40-125*	*%REC*	1	8/1/2012 04:28 AM
Surr: 2-Fluorophenol	*64.7*		*20-120*	*%REC*	1	8/1/2012 04:28 AM
Surr: 4-Terphenyl-d14	*113*		*40-135*	*%REC*	1	8/1/2012 04:28 AM
Surr: Nitrobenzene-d5	*84.7*		*41-120*	*%REC*	1	8/1/2012 04:28 AM
Surr: Phenol-d6	*69.3*		*20-120*	*%REC*	1	8/1/2012 04:28 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
2-Butanone	ND		0.010	mg/L	1	7/30/2012 03:57 AM
2-Hexanone	ND		0.010	mg/L	1	7/30/2012 03:57 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	7/30/2012 03:57 AM
Acetone	ND		0.010	mg/L	1	7/30/2012 03:57 AM
Benzene	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
Bromodichloromethane	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
Bromoform	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
Bromomethane	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
Carbon disulfide	ND		0.010	mg/L	1	7/30/2012 03:57 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	7/30/2012 03:57 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Sample ID: MW-15-0712
Collection Date: 7/24/2012 11:30 AM

Work Order: 12071240
Lab ID: 12071240-04
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
Chloroethane	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
Chloroform	**0.017**		**0.0050**	**mg/L**	1	7/30/2012 03:57 AM
Chloromethane	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
Dibromochloromethane	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
Ethylbenzene	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
Isopropylbenzene	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
m,p-Xylene	ND		0.010	mg/L	1	7/30/2012 03:57 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
Methylene chloride	ND		0.010	mg/L	1	7/30/2012 03:57 AM
Naphthalene	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
n-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
n-Propylbenzene	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
o-Xylene	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
Styrene	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
Tetrachloroethene	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
Toluene	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
Trichloroethene	ND		0.0050	mg/L	1	7/30/2012 03:57 AM
Vinyl chloride	ND		0.0020	mg/L	1	7/30/2012 03:57 AM
Xylenes, Total	ND		0.015	mg/L	1	7/30/2012 03:57 AM
Surr: 1,2-Dichloroethane-d4	*116*		*70-125*	*%REC*	1	7/30/2012 03:57 AM
Surr: 4-Bromofluorobenzene	*89.7*		*72-125*	*%REC*	1	7/30/2012 03:57 AM
Surr: Dibromofluoromethane	*104*		*71-125*	*%REC*	1	7/30/2012 03:57 AM
Surr: Toluene-d8	*105*		*75-125*	*%REC*	1	7/30/2012 03:57 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**291**		**5.00**	**mg/L**	10	8/1/2012 08:54 PM
Fluoride	**0.965**		**0.100**	**mg/L**	1	7/31/2012 07:39 PM
Sulfate	**80.3**		**0.500**	**mg/L**	1	7/31/2012 07:39 PM
Nitrate/Nitrite (as N)	**8.22**		**2.00**	**mg/L**	10	7/30/2012 08:39 PM
Surr: Selenate (surr)	*112*		*85-115*	*%REC*	10	8/1/2012 08:54 PM
Surr: Selenate (surr)	*105*		*85-115*	*%REC*	1	7/31/2012 07:39 PM
Surr: Selenate (surr)	*101*		*85-115*	*%REC*	10	7/30/2012 08:39 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**199**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-15-0712
Lab ID: 12071240-04
Collection Date: 7/24/2012 11:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM
Alkalinity, Total (As CaCO3)	**199**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**1,350**		**1.00**	**µmhos/cm**	1	7/31/2012 10:30 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**7.04**	H	**0.100**	**pH Units**	1	8/1/2012 12:10 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**1,060**		**10.0**	**mg/L**	1	7/30/2012 11:45 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-16-0712
Lab ID: 12071240-05
Collection Date: 7/24/2012 12:45 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/1/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/1/2012 05:42 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/3/2012**	Analyst: **SKS**
Aluminum	**0.0102**		**0.0100**	**mg/L**	1	8/6/2012 08:07 PM
Arsenic	ND		0.00500	mg/L	1	8/6/2012 08:07 PM
Barium	**0.0966**		**0.00500**	**mg/L**	1	8/6/2012 08:07 PM
Boron	**0.202**		**0.0500**	**mg/L**	1	8/7/2012 02:38 PM
Cadmium	ND		0.00200	mg/L	1	8/6/2012 08:07 PM
Calcium	**71.9**		**0.500**	**mg/L**	1	8/6/2012 08:07 PM
Chromium	ND		0.00500	mg/L	1	8/6/2012 08:07 PM
Cobalt	ND		0.00500	mg/L	1	8/6/2012 08:07 PM
Copper	ND		0.00500	mg/L	1	8/6/2012 08:07 PM
Iron	ND		0.200	mg/L	1	8/6/2012 08:07 PM
Lead	ND		0.00500	mg/L	1	8/6/2012 08:07 PM
Magnesium	**8.19**		**0.200**	**mg/L**	1	8/6/2012 08:07 PM
Manganese	**0.0162**		**0.00500**	**mg/L**	1	8/6/2012 08:07 PM
Molybdenum	ND		0.00500	mg/L	1	8/6/2012 08:07 PM
Nickel	**0.0112**		**0.00500**	**mg/L**	1	8/6/2012 08:07 PM
Potassium	**1.77**		**0.200**	**mg/L**	1	8/6/2012 08:07 PM
Selenium	ND		0.00500	mg/L	1	8/6/2012 08:07 PM
Silver	ND		0.00500	mg/L	1	8/6/2012 08:07 PM
Sodium	**34.8**		**0.200**	**mg/L**	1	8/7/2012 02:38 PM
Uranium	ND		0.00500	mg/L	1	8/6/2012 08:07 PM
Zinc	**0.0167**		**0.00500**	**mg/L**	1	8/6/2012 08:07 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/28/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/1/2012 04:48 AM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 04:48 AM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 04:48 AM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/1/2012 04:48 AM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/1/2012 04:48 AM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/1/2012 04:48 AM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
2-Chlorophenol	ND		0.20	µg/L	1	8/1/2012 04:48 AM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
2-Methylphenol	ND		0.20	µg/L	1	8/1/2012 04:48 AM
2-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 04:48 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-16-0712
Lab ID: 12071240-05
Collection Date: 7/24/2012 12:45 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/1/2012 04:48 AM
3&4-Methylphenol	ND		0.20	µg/L	1	8/1/2012 04:48 AM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/1/2012 04:48 AM
3-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 04:48 AM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/1/2012 04:48 AM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 04:48 AM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/1/2012 04:48 AM
4-Chloroaniline	ND		0.20	µg/L	1	8/1/2012 04:48 AM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 04:48 AM
4-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 04:48 AM
4-Nitrophenol	ND		1.0	µg/L	1	8/1/2012 04:48 AM
Acenaphthene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Acenaphthylene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Acetophenone	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Anthracene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Atrazine	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Benz(a)anthracene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Benzaldehyde	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Bis(2-ethylhexyl)phthalate	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Caprolactam	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Carbazole	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Chrysene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Dibenzofuran	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Diethyl phthalate	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Dimethyl phthalate	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Di-n-octyl phthalate	**0.52**		**0.20**	**µg/L**	1	8/1/2012 04:48 AM
Fluoranthene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Fluorene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Hexachlorobenzene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/1/2012 04:48 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-16-0712 **Lab ID:** 12071240-05
Collection Date: 7/24/2012 12:45 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Hexachloroethane	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Isophorone	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Naphthalene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Nitrobenzene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/1/2012 04:48 AM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Pentachlorophenol	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Phenanthrene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Phenol	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Pyrene	ND		0.20	µg/L	1	8/1/2012 04:48 AM
Surr: 2,4,6-Tribromophenol	*57.6*		*34-129*	*%REC*	1	8/1/2012 04:48 AM
Surr: 2-Fluorobiphenyl	*77.1*		*40-125*	*%REC*	1	8/1/2012 04:48 AM
Surr: 2-Fluorophenol	*57.2*		*20-120*	*%REC*	1	8/1/2012 04:48 AM
Surr: 4-Terphenyl-d14	*94.5*		*40-135*	*%REC*	1	8/1/2012 04:48 AM
Surr: Nitrobenzene-d5	*69.4*		*41-120*	*%REC*	1	8/1/2012 04:48 AM
Surr: Phenol-d6	*63.8*		*20-120*	*%REC*	1	8/1/2012 04:48 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
2-Butanone	ND		0.010	mg/L	1	7/30/2012 04:23 AM
2-Hexanone	ND		0.010	mg/L	1	7/30/2012 04:23 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	7/30/2012 04:23 AM
Acetone	ND		0.010	mg/L	1	7/30/2012 04:23 AM
Benzene	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
Bromodichloromethane	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
Bromoform	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
Bromomethane	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
Carbon disulfide	ND		0.010	mg/L	1	7/30/2012 04:23 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	7/30/2012 04:23 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-16-0712 **Lab ID:** 12071240-05
Collection Date: 7/24/2012 12:45 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
Chloroethane	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
Chloroform	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
Chloromethane	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
Dibromochloromethane	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
Ethylbenzene	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
Isopropylbenzene	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
m,p-Xylene	ND		0.010	mg/L	1	7/30/2012 04:23 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
Methylene chloride	ND		0.010	mg/L	1	7/30/2012 04:23 AM
Naphthalene	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
n-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
n-Propylbenzene	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
o-Xylene	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
Styrene	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
Tetrachloroethene	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
Toluene	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
Trichloroethene	ND		0.0050	mg/L	1	7/30/2012 04:23 AM
Vinyl chloride	ND		0.0020	mg/L	1	7/30/2012 04:23 AM
Xylenes, Total	ND		0.015	mg/L	1	7/30/2012 04:23 AM
Surr: 1,2-Dichloroethane-d4	*119*		*70-125*	*%REC*	1	7/30/2012 04:23 AM
Surr: 4-Bromofluorobenzene	*92.5*		*72-125*	*%REC*	1	7/30/2012 04:23 AM
Surr: Dibromofluoromethane	*103*		*71-125*	*%REC*	1	7/30/2012 04:23 AM
Surr: Toluene-d8	*105*		*75-125*	*%REC*	1	7/30/2012 04:23 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**26.6**		**0.500**	**mg/L**	1	7/31/2012 07:54 PM
Fluoride	**1.14**		**0.100**	**mg/L**	1	7/31/2012 07:54 PM
Sulfate	**72.6**		**0.500**	**mg/L**	1	7/31/2012 07:54 PM
Nitrate/Nitrite (as N)	ND		2.00	mg/L	10	7/30/2012 09:00 PM
Surr: Selenate (surr)	*113*		*85-115*	*%REC*	1	7/31/2012 07:54 PM
Surr: Selenate (surr)	*101*		*85-115*	*%REC*	10	7/30/2012 09:00 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**205**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Sample ID: MW-16-0712
Collection Date: 7/24/2012 12:45 PM

Work Order: 12071240
Lab ID: 12071240-05
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM
Alkalinity, Total (As CaCO3)	**205**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**594**		**1.00**	**µmhos/cm**	1	7/31/2012 10:30 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**7.15**	H	**0.100**	**pH Units**	1	8/1/2012 12:10 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**404**		**10.0**	**mg/L**	1	7/31/2012 10:45 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-4-0712
Lab ID: 12071240-06
Collection Date: 7/24/2012 01:35 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/1/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/1/2012 05:44 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/3/2012**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	8/6/2012 08:10 PM
Arsenic	ND		0.00500	mg/L	1	8/6/2012 08:10 PM
Barium	**0.0883**		**0.00500**	**mg/L**	1	8/6/2012 08:10 PM
Boron	**0.199**		**0.0500**	**mg/L**	1	8/7/2012 02:41 PM
Cadmium	ND		0.00200	mg/L	1	8/6/2012 08:10 PM
Calcium	**68.0**		**0.500**	**mg/L**	1	8/6/2012 08:10 PM
Chromium	ND		0.00500	mg/L	1	8/6/2012 08:10 PM
Cobalt	ND		0.00500	mg/L	1	8/6/2012 08:10 PM
Copper	ND		0.00500	mg/L	1	8/6/2012 08:10 PM
Iron	ND		0.200	mg/L	1	8/6/2012 08:10 PM
Lead	ND		0.00500	mg/L	1	8/6/2012 08:10 PM
Magnesium	**8.32**		**0.200**	**mg/L**	1	8/6/2012 08:10 PM
Manganese	ND		0.00500	mg/L	1	8/6/2012 08:10 PM
Molybdenum	ND		0.00500	mg/L	1	8/6/2012 08:10 PM
Nickel	ND		0.00500	mg/L	1	8/6/2012 08:10 PM
Potassium	**1.99**		**0.200**	**mg/L**	1	8/6/2012 08:10 PM
Selenium	ND		0.00500	mg/L	1	8/6/2012 08:10 PM
Silver	ND		0.00500	mg/L	1	8/6/2012 08:10 PM
Sodium	**32.9**		**0.200**	**mg/L**	1	8/7/2012 02:41 PM
Uranium	ND		0.00500	mg/L	1	8/6/2012 08:10 PM
Zinc	**0.0102**		**0.00500**	**mg/L**	1	8/6/2012 08:10 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/28/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/1/2012 05:08 AM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 05:08 AM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 05:08 AM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/1/2012 05:08 AM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/1/2012 05:08 AM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/1/2012 05:08 AM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
2-Chlorophenol	ND		0.20	µg/L	1	8/1/2012 05:08 AM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
2-Methylphenol	ND		0.20	µg/L	1	8/1/2012 05:08 AM
2-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 05:08 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-4-0712
Lab ID: 12071240-06
Collection Date: 7/24/2012 01:35 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/1/2012 05:08 AM
3&4-Methylphenol	ND		0.20	µg/L	1	8/1/2012 05:08 AM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/1/2012 05:08 AM
3-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 05:08 AM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/1/2012 05:08 AM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 05:08 AM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/1/2012 05:08 AM
4-Chloroaniline	ND		0.20	µg/L	1	8/1/2012 05:08 AM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 05:08 AM
4-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 05:08 AM
4-Nitrophenol	ND		1.0	µg/L	1	8/1/2012 05:08 AM
Acenaphthene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Acenaphthylene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Acetophenone	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Anthracene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Atrazine	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Benz(a)anthracene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Benzaldehyde	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Bis(2-ethylhexyl)phthalate	**5.4**		**0.20**	**µg/L**	1	8/1/2012 05:08 AM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Caprolactam	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Carbazole	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Chrysene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Dibenzofuran	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Diethyl phthalate	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Dimethyl phthalate	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Di-n-octyl phthalate	**3.8**		**0.20**	**µg/L**	1	8/1/2012 05:08 AM
Fluoranthene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Fluorene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Hexachlorobenzene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/1/2012 05:08 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-4-0712 **Lab ID:** 12071240-06
Collection Date: 7/24/2012 01:35 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Hexachloroethane	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Isophorone	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Naphthalene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Nitrobenzene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/1/2012 05:08 AM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Pentachlorophenol	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Phenanthrene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Phenol	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Pyrene	ND		0.20	µg/L	1	8/1/2012 05:08 AM
Surr: 2,4,6-Tribromophenol	*55.8*		*34-129*	*%REC*	1	8/1/2012 05:08 AM
Surr: 2-Fluorobiphenyl	*79.8*		*40-125*	*%REC*	1	8/1/2012 05:08 AM
Surr: 2-Fluorophenol	*60.2*		*20-120*	*%REC*	1	8/1/2012 05:08 AM
Surr: 4-Terphenyl-d14	*88.5*		*40-135*	*%REC*	1	8/1/2012 05:08 AM
Surr: Nitrobenzene-d5	*69.9*		*41-120*	*%REC*	1	8/1/2012 05:08 AM
Surr: Phenol-d6	*65.6*		*20-120*	*%REC*	1	8/1/2012 05:08 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
2-Butanone	ND		0.010	mg/L	1	7/30/2012 04:55 AM
2-Hexanone	ND		0.010	mg/L	1	7/30/2012 04:55 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	7/30/2012 04:55 AM
Acetone	**0.014**		**0.010**	**mg/L**	1	7/30/2012 04:55 AM
Benzene	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
Bromodichloromethane	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
Bromoform	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
Bromomethane	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
Carbon disulfide	ND		0.010	mg/L	1	7/30/2012 04:55 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	7/30/2012 04:55 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-4-0712
Lab ID: 12071240-06
Collection Date: 7/24/2012 01:35 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
Chloroethane	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
Chloroform	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
Chloromethane	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
Dibromochloromethane	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
Ethylbenzene	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
Isopropylbenzene	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
m,p-Xylene	ND		0.010	mg/L	1	7/30/2012 04:55 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
Methylene chloride	ND		0.010	mg/L	1	7/30/2012 04:55 AM
Naphthalene	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
n-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
n-Propylbenzene	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
o-Xylene	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
Styrene	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
Tetrachloroethene	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
Toluene	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
Trichloroethene	ND		0.0050	mg/L	1	7/30/2012 04:55 AM
Vinyl chloride	ND		0.0020	mg/L	1	7/30/2012 04:55 AM
Xylenes, Total	ND		0.015	mg/L	1	7/30/2012 04:55 AM
Surr: 1,2-Dichloroethane-d4	*117*		*70-125*	*%REC*	1	7/30/2012 04:55 AM
Surr: 4-Bromofluorobenzene	*93.1*		*72-125*	*%REC*	1	7/30/2012 04:55 AM
Surr: Dibromofluoromethane	*105*		*71-125*	*%REC*	1	7/30/2012 04:55 AM
Surr: Toluene-d8	*104*		*75-125*	*%REC*	1	7/30/2012 04:55 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**28.9**		**0.500**	**mg/L**	1	7/31/2012 08:08 PM
Fluoride	**1.18**		**0.100**	**mg/L**	1	7/31/2012 08:08 PM
Sulfate	**69.4**		**0.500**	**mg/L**	1	7/31/2012 08:08 PM
Nitrate/Nitrite (as N)	ND		2.00	mg/L	10	7/30/2012 09:21 PM
Surr: Selenate (surr)	*109*		*85-115*	*%REC*	1	7/31/2012 08:08 PM
Surr: Selenate (surr)	*101*		*85-115*	*%REC*	10	7/30/2012 09:21 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**194**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-4-0712
Lab ID: 12071240-06
Collection Date: 7/24/2012 01:35 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM
Alkalinity, Total (As CaCO3)	**194**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**585**		**1.00**	**µmhos/cm**	1	7/31/2012 10:30 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**7.28**	H	**0.100**	**pH Units**	1	8/1/2012 12:10 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**414**		**10.0**	**mg/L**	1	7/31/2012 10:45 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-6-0712
Lab ID: 12071240-07
Collection Date: 7/24/2012 02:25 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/1/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/1/2012 05:46 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/3/2012**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	8/6/2012 08:12 PM
Arsenic	**0.0128**		**0.00500**	**mg/L**	1	8/6/2012 08:12 PM
Barium	**0.143**		**0.00500**	**mg/L**	1	8/6/2012 08:12 PM
Boron	**0.265**		**0.0500**	**mg/L**	1	8/7/2012 02:43 PM
Cadmium	ND		0.00200	mg/L	1	8/6/2012 08:12 PM
Calcium	**121**		**0.500**	**mg/L**	1	8/6/2012 08:12 PM
Chromium	ND		0.00500	mg/L	1	8/6/2012 08:12 PM
Cobalt	ND		0.00500	mg/L	1	8/6/2012 08:12 PM
Copper	ND		0.00500	mg/L	1	8/6/2012 08:12 PM
Iron	**1.28**		**0.200**	**mg/L**	1	8/6/2012 08:12 PM
Lead	ND		0.00500	mg/L	1	8/6/2012 08:12 PM
Magnesium	**16.2**		**0.200**	**mg/L**	1	8/6/2012 08:12 PM
Manganese	**2.53**		**0.0500**	**mg/L**	10	8/7/2012 03:32 PM
Molybdenum	ND		0.00500	mg/L	1	8/6/2012 08:12 PM
Nickel	ND		0.00500	mg/L	1	8/6/2012 08:12 PM
Potassium	**2.25**		**0.200**	**mg/L**	1	8/6/2012 08:12 PM
Selenium	ND		0.00500	mg/L	1	8/6/2012 08:12 PM
Silver	ND		0.00500	mg/L	1	8/6/2012 08:12 PM
Sodium	**55.3**		**0.200**	**mg/L**	1	8/7/2012 02:43 PM
Uranium	**0.0102**		**0.00500**	**mg/L**	1	8/6/2012 08:12 PM
Zinc	**0.0194**		**0.00500**	**mg/L**	1	8/6/2012 08:12 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/28/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/1/2012 05:28 AM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 05:28 AM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 05:28 AM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/1/2012 05:28 AM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/1/2012 05:28 AM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/1/2012 05:28 AM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
2-Chlorophenol	ND		0.20	µg/L	1	8/1/2012 05:28 AM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
2-Methylphenol	ND		0.20	µg/L	1	8/1/2012 05:28 AM
2-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 05:28 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-6-0712
Lab ID: 12071240-07
Collection Date: 7/24/2012 02:25 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/1/2012 05:28 AM
3&4-Methylphenol	ND		0.20	µg/L	1	8/1/2012 05:28 AM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/1/2012 05:28 AM
3-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 05:28 AM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/1/2012 05:28 AM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 05:28 AM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/1/2012 05:28 AM
4-Chloroaniline	ND		0.20	µg/L	1	8/1/2012 05:28 AM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 05:28 AM
4-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 05:28 AM
4-Nitrophenol	ND		1.0	µg/L	1	8/1/2012 05:28 AM
Acenaphthene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Acenaphthylene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Acetophenone	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Anthracene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Atrazine	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Benz(a)anthracene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Benzaldehyde	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Bis(2-ethylhexyl)phthalate	**3.0**		**0.20**	**µg/L**	1	8/1/2012 05:28 AM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Caprolactam	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Carbazole	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Chrysene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Dibenzofuran	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Diethyl phthalate	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Dimethyl phthalate	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Fluoranthene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Fluorene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Hexachlorobenzene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/1/2012 05:28 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-6-0712
Lab ID: 12071240-07
Collection Date: 7/24/2012 02:25 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Hexachloroethane	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Isophorone	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Naphthalene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Nitrobenzene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/1/2012 05:28 AM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Pentachlorophenol	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Phenanthrene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Phenol	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Pyrene	ND		0.20	µg/L	1	8/1/2012 05:28 AM
Surr: 2,4,6-Tribromophenol	*47.8*		*34-129*	*%REC*	1	8/1/2012 05:28 AM
Surr: 2-Fluorobiphenyl	*49.0*		*40-125*	*%REC*	1	8/1/2012 05:28 AM
Surr: 2-Fluorophenol	*70.5*		*20-120*	*%REC*	1	8/1/2012 05:28 AM
Surr: 4-Terphenyl-d14	*112*		*40-135*	*%REC*	1	8/1/2012 05:28 AM
Surr: Nitrobenzene-d5	*84.5*		*41-120*	*%REC*	1	8/1/2012 05:28 AM
Surr: Phenol-d6	*85.4*		*20-120*	*%REC*	1	8/1/2012 05:28 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
2-Butanone	ND		0.010	mg/L	1	7/30/2012 05:22 AM
2-Hexanone	ND		0.010	mg/L	1	7/30/2012 05:22 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	7/30/2012 05:22 AM
Acetone	ND		0.010	mg/L	1	7/30/2012 05:22 AM
Benzene	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
Bromodichloromethane	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
Bromoform	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
Bromomethane	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
Carbon disulfide	ND		0.010	mg/L	1	7/30/2012 05:22 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	7/30/2012 05:22 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-6-0712 **Lab ID:** 12071240-07
Collection Date: 7/24/2012 02:25 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
Chloroethane	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
Chloroform	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
Chloromethane	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
Dibromochloromethane	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
Ethylbenzene	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
Isopropylbenzene	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
m,p-Xylene	ND		0.010	mg/L	1	7/30/2012 05:22 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
Methylene chloride	ND		0.010	mg/L	1	7/30/2012 05:22 AM
Naphthalene	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
n-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
n-Propylbenzene	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
o-Xylene	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
Styrene	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
Tetrachloroethene	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
Toluene	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
Trichloroethene	ND		0.0050	mg/L	1	7/30/2012 05:22 AM
Vinyl chloride	ND		0.0020	mg/L	1	7/30/2012 05:22 AM
Xylenes, Total	ND		0.015	mg/L	1	7/30/2012 05:22 AM
Surr: 1,2-Dichloroethane-d4	*118*		*70-125*	*%REC*	1	7/30/2012 05:22 AM
Surr: 4-Bromofluorobenzene	*94.8*		*72-125*	*%REC*	1	7/30/2012 05:22 AM
Surr: Dibromofluoromethane	*102*		*71-125*	*%REC*	1	7/30/2012 05:22 AM
Surr: Toluene-d8	*107*		*75-125*	*%REC*	1	7/30/2012 05:22 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**77.7**		**0.500**	**mg/L**	1	7/31/2012 08:23 PM
Fluoride	**0.217**		**0.100**	**mg/L**	1	7/31/2012 08:23 PM
Sulfate	**80.1**		**0.500**	**mg/L**	1	7/31/2012 08:23 PM
Nitrate/Nitrite (as N)	ND		2.00	mg/L	10	7/30/2012 09:42 PM
Surr: Selenate (surr)	*110*		*85-115*	*%REC*	1	7/31/2012 08:23 PM
Surr: Selenate (surr)	*101*		*85-115*	*%REC*	10	7/30/2012 09:42 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**342**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-6-0712
Lab ID: 12071240-07
Collection Date: 7/24/2012 02:25 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM
Alkalinity, Total (As CaCO3)	**342**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**929**		**1.00**	**µmhos/cm**	1	7/31/2012 10:30 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**6.67**	H	**0.100**	**pH Units**	1	8/1/2012 12:10 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**690**		**10.0**	**mg/L**	1	7/31/2012 10:45 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-9-0712
Lab ID: 12071240-08
Collection Date: 7/25/2012 08:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/1/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/1/2012 05:48 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/3/2012**	Analyst: **SKS**
Aluminum	**0.0306**		**0.0100**	**mg/L**	1	8/6/2012 08:15 PM
Arsenic	**0.0292**		**0.00500**	**mg/L**	1	8/6/2012 08:15 PM
Barium	**0.0721**		**0.00500**	**mg/L**	1	8/6/2012 08:15 PM
Boron	**0.182**		**0.0500**	**mg/L**	1	8/7/2012 02:46 PM
Cadmium	ND		0.00200	mg/L	1	8/6/2012 08:15 PM
Calcium	**23.7**		**0.500**	**mg/L**	1	8/6/2012 08:15 PM
Chromium	ND		0.00500	mg/L	1	8/6/2012 08:15 PM
Cobalt	ND		0.00500	mg/L	1	8/6/2012 08:15 PM
Copper	ND		0.00500	mg/L	1	8/6/2012 08:15 PM
Iron	ND		0.200	mg/L	1	8/6/2012 08:15 PM
Lead	ND		0.00500	mg/L	1	8/6/2012 08:15 PM
Magnesium	**2.05**		**0.200**	**mg/L**	1	8/6/2012 08:15 PM
Manganese	**0.00708**		**0.00500**	**mg/L**	1	8/6/2012 08:15 PM
Molybdenum	ND		0.00500	mg/L	1	8/6/2012 08:15 PM
Nickel	ND		0.00500	mg/L	1	8/6/2012 08:15 PM
Potassium	**2.05**		**0.200**	**mg/L**	1	8/6/2012 08:15 PM
Selenium	ND		0.00500	mg/L	1	8/6/2012 08:15 PM
Silver	ND		0.00500	mg/L	1	8/6/2012 08:15 PM
Sodium	**122**		**0.200**	**mg/L**	1	8/7/2012 02:46 PM
Uranium	ND		0.00500	mg/L	1	8/6/2012 08:15 PM
Zinc	**0.00716**		**0.00500**	**mg/L**	1	8/6/2012 08:15 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/28/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/1/2012 05:48 AM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 05:48 AM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 05:48 AM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/1/2012 05:48 AM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/1/2012 05:48 AM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/1/2012 05:48 AM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
2-Chlorophenol	ND		0.20	µg/L	1	8/1/2012 05:48 AM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
2-Methylphenol	ND		0.20	µg/L	1	8/1/2012 05:48 AM
2-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 05:48 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-9-0712
Lab ID: 12071240-08
Collection Date: 7/25/2012 08:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/1/2012 05:48 AM
3&4-Methylphenol	ND		0.20	µg/L	1	8/1/2012 05:48 AM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/1/2012 05:48 AM
3-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 05:48 AM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/1/2012 05:48 AM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 05:48 AM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/1/2012 05:48 AM
4-Chloroaniline	ND		0.20	µg/L	1	8/1/2012 05:48 AM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 05:48 AM
4-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 05:48 AM
4-Nitrophenol	ND		1.0	µg/L	1	8/1/2012 05:48 AM
Acenaphthene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Acenaphthylene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Acetophenone	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Anthracene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Atrazine	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Benz(a)anthracene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Benzaldehyde	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Bis(2-ethylhexyl)phthalate	**1.1**		**0.20**	**µg/L**	1	8/1/2012 05:48 AM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Caprolactam	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Carbazole	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Chrysene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Dibenzofuran	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Diethyl phthalate	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Dimethyl phthalate	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Fluoranthene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Fluorene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Hexachlorobenzene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/1/2012 05:48 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-9-0712 **Lab ID:** 12071240-08
Collection Date: 7/25/2012 08:30 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Hexachloroethane	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Isophorone	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Naphthalene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Nitrobenzene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/1/2012 05:48 AM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Pentachlorophenol	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Phenanthrene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Phenol	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Pyrene	ND		0.20	µg/L	1	8/1/2012 05:48 AM
Surr: 2,4,6-Tribromophenol	*77.8*		*34-129*	*%REC*	1	8/1/2012 05:48 AM
Surr: 2-Fluorobiphenyl	*111*		*40-125*	*%REC*	1	8/1/2012 05:48 AM
Surr: 2-Fluorophenol	*63.5*		*20-120*	*%REC*	1	8/1/2012 05:48 AM
Surr: 4-Terphenyl-d14	*81.7*		*40-135*	*%REC*	1	8/1/2012 05:48 AM
Surr: Nitrobenzene-d5	*85.0*		*41-120*	*%REC*	1	8/1/2012 05:48 AM
Surr: Phenol-d6	*67.9*		*20-120*	*%REC*	1	8/1/2012 05:48 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
2-Butanone	ND		0.010	mg/L	1	7/30/2012 05:49 AM
2-Hexanone	ND		0.010	mg/L	1	7/30/2012 05:49 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	7/30/2012 05:49 AM
Acetone	ND		0.010	mg/L	1	7/30/2012 05:49 AM
Benzene	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
Bromodichloromethane	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
Bromoform	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
Bromomethane	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
Carbon disulfide	ND		0.010	mg/L	1	7/30/2012 05:49 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	7/30/2012 05:49 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-9-0712
Lab ID: 12071240-08
Collection Date: 7/25/2012 08:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
Chloroethane	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
Chloroform	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
Chloromethane	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
Dibromochloromethane	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
Ethylbenzene	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
Isopropylbenzene	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
m,p-Xylene	ND		0.010	mg/L	1	7/30/2012 05:49 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
Methylene chloride	ND		0.010	mg/L	1	7/30/2012 05:49 AM
Naphthalene	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
n-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
n-Propylbenzene	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
o-Xylene	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
Styrene	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
Tetrachloroethene	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
Toluene	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
Trichloroethene	ND		0.0050	mg/L	1	7/30/2012 05:49 AM
Vinyl chloride	ND		0.0020	mg/L	1	7/30/2012 05:49 AM
Xylenes, Total	ND		0.015	mg/L	1	7/30/2012 05:49 AM
Surr: 1,2-Dichloroethane-d4	*117*		*70-125*	*%REC*	1	7/30/2012 05:49 AM
Surr: 4-Bromofluorobenzene	*96.0*		*72-125*	*%REC*	1	7/30/2012 05:49 AM
Surr: Dibromofluoromethane	*99.2*		*71-125*	*%REC*	1	7/30/2012 05:49 AM
Surr: Toluene-d8	*104*		*75-125*	*%REC*	1	7/30/2012 05:49 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**30.4**		**0.500**	**mg/L**	1	7/31/2012 08:37 PM
Fluoride	**1.99**		**0.100**	**mg/L**	1	7/31/2012 08:37 PM
Sulfate	**77.8**		**0.500**	**mg/L**	1	7/31/2012 08:37 PM
Nitrate/Nitrite (as N)	ND		2.00	mg/L	10	7/30/2012 10:03 PM
Surr: Selenate (surr)	*108*		*85-115*	*%REC*	1	7/31/2012 08:37 PM
Surr: Selenate (surr)	*102*		*85-115*	*%REC*	10	7/30/2012 10:03 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**219**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Sample ID: MW-9-0712
Collection Date: 7/25/2012 08:30 AM

Work Order: 12071240
Lab ID: 12071240-08
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM
Alkalinity, Total (As CaCO3)	**224**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**671**		**1.00**	**µmhos/cm**	1	7/31/2012 10:30 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**7.66**	H	**0.100**	**pH Units**	1	8/2/2012 09:30 AM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**420**		**10.0**	**mg/L**	1	8/1/2012 08:15 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-10-0712
Lab ID: 12071240-09
Collection Date: 7/25/2012 09:15 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/1/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/1/2012 05:50 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/3/2012**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	8/6/2012 08:18 PM
Arsenic	**0.00516**		**0.00500**	**mg/L**	1	8/6/2012 08:18 PM
Barium	**0.0882**		**0.00500**	**mg/L**	1	8/6/2012 08:18 PM
Boron	**0.186**		**0.0500**	**mg/L**	1	8/7/2012 02:48 PM
Cadmium	ND		0.00200	mg/L	1	8/6/2012 08:18 PM
Calcium	**78.2**		**0.500**	**mg/L**	1	8/6/2012 08:18 PM
Chromium	ND		0.00500	mg/L	1	8/6/2012 08:18 PM
Cobalt	ND		0.00500	mg/L	1	8/6/2012 08:18 PM
Copper	ND		0.00500	mg/L	1	8/6/2012 08:18 PM
Iron	ND		0.200	mg/L	1	8/6/2012 08:18 PM
Lead	ND		0.00500	mg/L	1	8/6/2012 08:18 PM
Magnesium	**9.28**		**0.200**	**mg/L**	1	8/6/2012 08:18 PM
Manganese	ND		0.00500	mg/L	1	8/6/2012 08:18 PM
Molybdenum	ND		0.00500	mg/L	1	8/6/2012 08:18 PM
Nickel	ND		0.00500	mg/L	1	8/6/2012 08:18 PM
Potassium	**1.76**		**0.200**	**mg/L**	1	8/6/2012 08:18 PM
Selenium	ND		0.00500	mg/L	1	8/6/2012 08:18 PM
Silver	ND		0.00500	mg/L	1	8/6/2012 08:18 PM
Sodium	**34.3**		**0.200**	**mg/L**	1	8/7/2012 02:48 PM
Uranium	ND		0.00500	mg/L	1	8/6/2012 08:18 PM
Zinc	**0.00861**		**0.00500**	**mg/L**	1	8/6/2012 08:18 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/28/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/1/2012 06:05 PM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 06:05 PM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 06:05 PM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/1/2012 06:05 PM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/1/2012 06:05 PM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/1/2012 06:05 PM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
2-Chlorophenol	ND		0.20	µg/L	1	8/1/2012 06:05 PM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
2-Methylphenol	ND		0.20	µg/L	1	8/1/2012 06:05 PM
2-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 06:05 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Sample ID: MW-10-0712
Collection Date: 7/25/2012 09:15 AM

Work Order: 12071240
Lab ID: 12071240-09
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/1/2012 06:05 PM
3&4-Methylphenol	ND		0.20	µg/L	1	8/1/2012 06:05 PM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/1/2012 06:05 PM
3-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 06:05 PM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/1/2012 06:05 PM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 06:05 PM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/1/2012 06:05 PM
4-Chloroaniline	ND		0.20	µg/L	1	8/1/2012 06:05 PM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 06:05 PM
4-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 06:05 PM
4-Nitrophenol	ND		1.0	µg/L	1	8/1/2012 06:05 PM
Acenaphthene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Acenaphthylene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Acetophenone	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Anthracene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Atrazine	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Benz(a)anthracene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Benzaldehyde	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Bis(2-ethylhexyl)phthalate	**0.52**		**0.20**	**µg/L**	1	8/1/2012 06:05 PM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Caprolactam	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Carbazole	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Chrysene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Dibenzofuran	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Diethyl phthalate	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Dimethyl phthalate	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Fluoranthene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Fluorene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Hexachlorobenzene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/1/2012 06:05 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-10-0712 **Lab ID:** 12071240-09
Collection Date: 7/25/2012 09:15 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Hexachloroethane	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Isophorone	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Naphthalene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Nitrobenzene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/1/2012 06:05 PM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Pentachlorophenol	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Phenanthrene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Phenol	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Pyrene	ND		0.20	µg/L	1	8/1/2012 06:05 PM
Surr: 2,4,6-Tribromophenol	*77.1*		*34-129*	*%REC*	1	8/1/2012 06:05 PM
Surr: 2-Fluorobiphenyl	*80.0*		*40-125*	*%REC*	1	8/1/2012 06:05 PM
Surr: 2-Fluorophenol	*75.0*		*20-120*	*%REC*	1	8/1/2012 06:05 PM
Surr: 4-Terphenyl-d14	*88.3*		*40-135*	*%REC*	1	8/1/2012 06:05 PM
Surr: Nitrobenzene-d5	*81.0*		*41-120*	*%REC*	1	8/1/2012 06:05 PM
Surr: Phenol-d6	*83.3*		*20-120*	*%REC*	1	8/1/2012 06:05 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
2-Butanone	ND		0.010	mg/L	1	7/30/2012 06:15 AM
2-Hexanone	ND		0.010	mg/L	1	7/30/2012 06:15 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	7/30/2012 06:15 AM
Acetone	ND		0.010	mg/L	1	7/30/2012 06:15 AM
Benzene	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
Bromodichloromethane	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
Bromoform	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
Bromomethane	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
Carbon disulfide	ND		0.010	mg/L	1	7/30/2012 06:15 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	7/30/2012 06:15 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-10-0712 **Lab ID:** 12071240-09
Collection Date: 7/25/2012 09:15 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
Chloroethane	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
Chloroform	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
Chloromethane	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
Dibromochloromethane	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
Ethylbenzene	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
Isopropylbenzene	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
m,p-Xylene	ND		0.010	mg/L	1	7/30/2012 06:15 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
Methylene chloride	ND		0.010	mg/L	1	7/30/2012 06:15 AM
Naphthalene	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
n-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
n-Propylbenzene	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
o-Xylene	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
Styrene	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
Tetrachloroethene	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
Toluene	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
Trichloroethene	ND		0.0050	mg/L	1	7/30/2012 06:15 AM
Vinyl chloride	ND		0.0020	mg/L	1	7/30/2012 06:15 AM
Xylenes, Total	ND		0.015	mg/L	1	7/30/2012 06:15 AM
Surr: 1,2-Dichloroethane-d4	*119*		*70-125*	*%REC*	1	7/30/2012 06:15 AM
Surr: 4-Bromofluorobenzene	*96.6*		*72-125*	*%REC*	1	7/30/2012 06:15 AM
Surr: Dibromofluoromethane	*105*		*71-125*	*%REC*	1	7/30/2012 06:15 AM
Surr: Toluene-d8	*106*		*75-125*	*%REC*	1	7/30/2012 06:15 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**42.7**		**0.500**	**mg/L**	1	7/31/2012 08:52 PM
Fluoride	**1.10**		**0.100**	**mg/L**	1	7/31/2012 08:52 PM
Sulfate	**82.6**		**0.500**	**mg/L**	1	7/31/2012 08:52 PM
Nitrate/Nitrite (as N)	ND		2.00	mg/L	10	7/30/2012 11:06 PM
Surr: Selenate (surr)	*107*		*85-115*	*%REC*	1	7/31/2012 08:52 PM
Surr: Selenate (surr)	*102*		*85-115*	*%REC*	10	7/30/2012 11:06 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**186**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client:	Navajo Refining Company		
Project:	Lovington Lea Refinery - SA	**Work Order:**	12071240
Sample ID:	MW-10-0712	**Lab ID:**	12071240-09
Collection Date:	7/25/2012 09:15 AM	**Matrix:**	WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM
Alkalinity, Total (As CaCO3)	**186**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**637**		**1.00**	**µmhos/cm**	1	7/31/2012 10:30 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**7.18**	H	**0.100**	**pH Units**	1	8/2/2012 09:30 AM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**382**		**10.0**	**mg/L**	1	8/1/2012 08:15 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-3-0712
Lab ID: 12071240-10
Collection Date: 7/25/2012 09:55 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/1/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/1/2012 05:52 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/3/2012**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	8/6/2012 08:20 PM
Arsenic	**0.0152**		**0.00500**	**mg/L**	1	8/6/2012 08:20 PM
Barium	**0.0773**		**0.00500**	**mg/L**	1	8/6/2012 08:20 PM
Boron	**0.209**		**0.0500**	**mg/L**	1	8/7/2012 02:51 PM
Cadmium	ND		0.00200	mg/L	1	8/6/2012 08:20 PM
Calcium	**26.8**		**0.500**	**mg/L**	1	8/6/2012 08:20 PM
Chromium	ND		0.00500	mg/L	1	8/6/2012 08:20 PM
Cobalt	ND		0.00500	mg/L	1	8/6/2012 08:20 PM
Copper	ND		0.00500	mg/L	1	8/6/2012 08:20 PM
Iron	ND		0.200	mg/L	1	8/6/2012 08:20 PM
Lead	ND		0.00500	mg/L	1	8/6/2012 08:20 PM
Magnesium	**2.92**		**0.200**	**mg/L**	1	8/6/2012 08:20 PM
Manganese	ND		0.00500	mg/L	1	8/6/2012 08:20 PM
Molybdenum	ND		0.00500	mg/L	1	8/6/2012 08:20 PM
Nickel	ND		0.00500	mg/L	1	8/6/2012 08:20 PM
Potassium	**2.06**		**0.200**	**mg/L**	1	8/6/2012 08:20 PM
Selenium	ND		0.00500	mg/L	1	8/6/2012 08:20 PM
Silver	ND		0.00500	mg/L	1	8/6/2012 08:20 PM
Sodium	**124**		**0.200**	**mg/L**	1	8/7/2012 02:51 PM
Uranium	ND		0.00500	mg/L	1	8/6/2012 08:20 PM
Zinc	**0.00673**		**0.00500**	**mg/L**	1	8/6/2012 08:20 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/28/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/1/2012 06:26 PM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 06:26 PM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 06:26 PM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/1/2012 06:26 PM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/1/2012 06:26 PM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/1/2012 06:26 PM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
2-Chlorophenol	ND		0.20	µg/L	1	8/1/2012 06:26 PM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
2-Methylphenol	ND		0.20	µg/L	1	8/1/2012 06:26 PM
2-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 06:26 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-3-0712
Lab ID: 12071240-10
Collection Date: 7/25/2012 09:55 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/1/2012 06:26 PM
3&4-Methylphenol	ND		0.20	µg/L	1	8/1/2012 06:26 PM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/1/2012 06:26 PM
3-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 06:26 PM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/1/2012 06:26 PM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 06:26 PM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/1/2012 06:26 PM
4-Chloroaniline	ND		0.20	µg/L	1	8/1/2012 06:26 PM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 06:26 PM
4-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 06:26 PM
4-Nitrophenol	ND		1.0	µg/L	1	8/1/2012 06:26 PM
Acenaphthene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Acenaphthylene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Acetophenone	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Anthracene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Atrazine	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Benz(a)anthracene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Benzaldehyde	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Bis(2-ethylhexyl)phthalate	**0.53**		**0.20**	**µg/L**	1	8/1/2012 06:26 PM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Caprolactam	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Carbazole	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Chrysene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Dibenzofuran	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Diethyl phthalate	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Dimethyl phthalate	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Fluoranthene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Fluorene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Hexachlorobenzene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/1/2012 06:26 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-3-0712 **Lab ID:** 12071240-10
Collection Date: 7/25/2012 09:55 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Hexachloroethane	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Isophorone	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Naphthalene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Nitrobenzene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/1/2012 06:26 PM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Pentachlorophenol	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Phenanthrene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Phenol	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Pyrene	ND		0.20	µg/L	1	8/1/2012 06:26 PM
Surr: 2,4,6-Tribromophenol	*98.8*		*34-129*	*%REC*	1	8/1/2012 06:26 PM
Surr: 2-Fluorobiphenyl	*96.2*		*40-125*	*%REC*	1	8/1/2012 06:26 PM
Surr: 2-Fluorophenol	*70.7*		*20-120*	*%REC*	1	8/1/2012 06:26 PM
Surr: 4-Terphenyl-d14	*92.0*		*40-135*	*%REC*	1	8/1/2012 06:26 PM
Surr: Nitrobenzene-d5	*86.3*		*41-120*	*%REC*	1	8/1/2012 06:26 PM
Surr: Phenol-d6	*82.5*		*20-120*	*%REC*	1	8/1/2012 06:26 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
2-Butanone	ND		0.010	mg/L	1	7/30/2012 06:42 AM
2-Hexanone	ND		0.010	mg/L	1	7/30/2012 06:42 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	7/30/2012 06:42 AM
Acetone	ND		0.010	mg/L	1	7/30/2012 06:42 AM
Benzene	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
Bromodichloromethane	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
Bromoform	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
Bromomethane	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
Carbon disulfide	ND		0.010	mg/L	1	7/30/2012 06:42 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	7/30/2012 06:42 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-3-0712 **Lab ID:** 12071240-10
Collection Date: 7/25/2012 09:55 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
Chloroethane	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
Chloroform	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
Chloromethane	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
Dibromochloromethane	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
Ethylbenzene	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
Isopropylbenzene	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
m,p-Xylene	ND		0.010	mg/L	1	7/30/2012 06:42 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
Methylene chloride	ND		0.010	mg/L	1	7/30/2012 06:42 AM
Naphthalene	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
n-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
n-Propylbenzene	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
o-Xylene	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
Styrene	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
Tetrachloroethene	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
Toluene	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
Trichloroethene	ND		0.0050	mg/L	1	7/30/2012 06:42 AM
Vinyl chloride	ND		0.0020	mg/L	1	7/30/2012 06:42 AM
Xylenes, Total	ND		0.015	mg/L	1	7/30/2012 06:42 AM
Surr: 1,2-Dichloroethane-d4	*119*		*70-125*	*%REC*	1	7/30/2012 06:42 AM
Surr: 4-Bromofluorobenzene	*96.0*		*72-125*	*%REC*	1	7/30/2012 06:42 AM
Surr: Dibromofluoromethane	*111*		*71-125*	*%REC*	1	7/30/2012 06:42 AM
Surr: Toluene-d8	*106*		*75-125*	*%REC*	1	7/30/2012 06:42 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**35.0**		**0.500**	**mg/L**	1	7/31/2012 09:06 PM
Fluoride	**2.70**		**0.100**	**mg/L**	1	7/31/2012 09:06 PM
Sulfate	**81.3**		**0.500**	**mg/L**	1	7/31/2012 09:06 PM
Nitrate/Nitrite (as N)	ND		2.00	mg/L	10	7/30/2012 11:27 PM
Surr: Selenate (surr)	*105*		*85-115*	*%REC*	1	7/31/2012 09:06 PM
Surr: Selenate (surr)	*103*		*85-115*	*%REC*	10	7/30/2012 11:27 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**239**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-3-0712
Lab ID: 12071240-10
Collection Date: 7/25/2012 09:55 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM
Alkalinity, Total (As CaCO3)	**239**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**710**		**1.00**	**µmhos/cm**	1	7/31/2012 11:30 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**7.53**	H	**0.100**	**pH Units**	1	8/2/2012 09:30 AM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**436**		**10.0**	**mg/L**	1	8/1/2012 08:15 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-18-0712
Lab ID: 12071240-11
Collection Date: 7/25/2012 10:40 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/1/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/1/2012 05:58 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/3/2012**	Analyst: **SKS**
Aluminum	**0.0110**		**0.0100**	**mg/L**	1	8/6/2012 08:23 PM
Arsenic	ND		0.00500	mg/L	1	8/6/2012 08:23 PM
Barium	**0.0780**		**0.00500**	**mg/L**	1	8/6/2012 08:23 PM
Boron	**0.230**		**0.0500**	**mg/L**	1	8/7/2012 02:59 PM
Cadmium	ND		0.00200	mg/L	1	8/6/2012 08:23 PM
Calcium	**113**		**0.500**	**mg/L**	1	8/6/2012 08:23 PM
Chromium	ND		0.00500	mg/L	1	8/6/2012 08:23 PM
Cobalt	ND		0.00500	mg/L	1	8/6/2012 08:23 PM
Copper	ND		0.00500	mg/L	1	8/6/2012 08:23 PM
Iron	ND		0.200	mg/L	1	8/6/2012 08:23 PM
Lead	ND		0.00500	mg/L	1	8/6/2012 08:23 PM
Magnesium	**11.1**		**0.200**	**mg/L**	1	8/6/2012 08:23 PM
Manganese	ND		0.00500	mg/L	1	8/6/2012 08:23 PM
Molybdenum	ND		0.00500	mg/L	1	8/6/2012 08:23 PM
Nickel	ND		0.00500	mg/L	1	8/6/2012 08:23 PM
Potassium	**1.93**		**0.200**	**mg/L**	1	8/6/2012 08:23 PM
Selenium	ND		0.00500	mg/L	1	8/6/2012 08:23 PM
Silver	ND		0.00500	mg/L	1	8/6/2012 08:23 PM
Sodium	**52.6**		**0.200**	**mg/L**	1	8/7/2012 02:59 PM
Uranium	ND		0.00500	mg/L	1	8/6/2012 08:23 PM
Zinc	**0.00684**		**0.00500**	**mg/L**	1	8/6/2012 08:23 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/28/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/1/2012 06:46 PM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 06:46 PM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 06:46 PM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/1/2012 06:46 PM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/1/2012 06:46 PM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/1/2012 06:46 PM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
2-Chlorophenol	ND		0.20	µg/L	1	8/1/2012 06:46 PM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
2-Methylphenol	ND		0.20	µg/L	1	8/1/2012 06:46 PM
2-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 06:46 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-18-0712
Lab ID: 12071240-11
Collection Date: 7/25/2012 10:40 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/1/2012 06:46 PM
3&4-Methylphenol	ND		0.20	µg/L	1	8/1/2012 06:46 PM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/1/2012 06:46 PM
3-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 06:46 PM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/1/2012 06:46 PM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 06:46 PM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/1/2012 06:46 PM
4-Chloroaniline	ND		0.20	µg/L	1	8/1/2012 06:46 PM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 06:46 PM
4-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 06:46 PM
4-Nitrophenol	ND		1.0	µg/L	1	8/1/2012 06:46 PM
Acenaphthene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Acenaphthylene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Acetophenone	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Anthracene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Atrazine	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Benz(a)anthracene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Benzaldehyde	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Bis(2-ethylhexyl)phthalate	**0.24**		**0.20**	**µg/L**	1	8/1/2012 06:46 PM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Caprolactam	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Carbazole	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Chrysene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Dibenzofuran	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Diethyl phthalate	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Dimethyl phthalate	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Di-n-octyl phthalate	**0.50**		**0.20**	**µg/L**	1	8/1/2012 06:46 PM
Fluoranthene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Fluorene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Hexachlorobenzene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/1/2012 06:46 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-18-0712 **Lab ID:** 12071240-11
Collection Date: 7/25/2012 10:40 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Hexachloroethane	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Isophorone	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Naphthalene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Nitrobenzene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/1/2012 06:46 PM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Pentachlorophenol	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Phenanthrene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Phenol	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Pyrene	ND		0.20	µg/L	1	8/1/2012 06:46 PM
Surr: 2,4,6-Tribromophenol	*74.8*		*34-129*	*%REC*	1	8/1/2012 06:46 PM
Surr: 2-Fluorobiphenyl	*80.0*		*40-125*	*%REC*	1	8/1/2012 06:46 PM
Surr: 2-Fluorophenol	*71.2*		*20-120*	*%REC*	1	8/1/2012 06:46 PM
Surr: 4-Terphenyl-d14	*102*		*40-135*	*%REC*	1	8/1/2012 06:46 PM
Surr: Nitrobenzene-d5	*82.6*		*41-120*	*%REC*	1	8/1/2012 06:46 PM
Surr: Phenol-d6	*78.8*		*20-120*	*%REC*	1	8/1/2012 06:46 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
2-Butanone	ND		0.010	mg/L	1	7/30/2012 07:08 AM
2-Hexanone	ND		0.010	mg/L	1	7/30/2012 07:08 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	7/30/2012 07:08 AM
Acetone	ND		0.010	mg/L	1	7/30/2012 07:08 AM
Benzene	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
Bromodichloromethane	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
Bromoform	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
Bromomethane	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
Carbon disulfide	ND		0.010	mg/L	1	7/30/2012 07:08 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	7/30/2012 07:08 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-18-0712
Lab ID: 12071240-11
Collection Date: 7/25/2012 10:40 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
Chloroethane	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
Chloroform	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
Chloromethane	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
Dibromochloromethane	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
Ethylbenzene	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
Isopropylbenzene	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
m,p-Xylene	ND		0.010	mg/L	1	7/30/2012 07:08 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
Methylene chloride	ND		0.010	mg/L	1	7/30/2012 07:08 AM
Naphthalene	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
n-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
n-Propylbenzene	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
o-Xylene	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
Styrene	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
Tetrachloroethene	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
Toluene	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
Trichloroethene	ND		0.0050	mg/L	1	7/30/2012 07:08 AM
Vinyl chloride	ND		0.0020	mg/L	1	7/30/2012 07:08 AM
Xylenes, Total	ND		0.015	mg/L	1	7/30/2012 07:08 AM
Surr: 1,2-Dichloroethane-d4	*117*		*70-125*	*%REC*	1	7/30/2012 07:08 AM
Surr: 4-Bromofluorobenzene	*90.6*		*72-125*	*%REC*	1	7/30/2012 07:08 AM
Surr: Dibromofluoromethane	*101*		*71-125*	*%REC*	1	7/30/2012 07:08 AM
Surr: Toluene-d8	*103*		*75-125*	*%REC*	1	7/30/2012 07:08 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**103**		**0.500**	**mg/L**	1	7/31/2012 09:21 PM
Fluoride	**0.753**		**0.100**	**mg/L**	1	7/31/2012 09:21 PM
Sulfate	**63.4**		**0.500**	**mg/L**	1	7/31/2012 09:21 PM
Nitrate/Nitrite (as N)	**2.01**		**2.00**	**mg/L**	10	7/30/2012 11:48 PM
Surr: Selenate (surr)	*103*		*85-115*	*%REC*	1	7/31/2012 09:21 PM
Surr: Selenate (surr)	*102*		*85-115*	*%REC*	10	7/30/2012 11:48 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**267**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client:	Navajo Refining Company		
Project:	Lovington Lea Refinery - SA	**Work Order:**	12071240
Sample ID:	MW-18-0712	**Lab ID:**	12071240-11
Collection Date:	7/25/2012 10:40 AM	**Matrix:**	WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM
Alkalinity, Total (As CaCO3)	**267**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**919**		**1.00**	**µmhos/cm**	1	7/31/2012 11:30 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**6.89**	H	**0.100**	**pH Units**	1	8/2/2012 09:30 AM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**562**		**10.0**	**mg/L**	1	8/1/2012 08:15 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-19-0712
Lab ID: 12071240-12
Collection Date: 7/25/2012 11:45 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/1/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/1/2012 06:00 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/3/2012**	Analyst: **SKS**
Aluminum	**0.0114**		**0.0100**	**mg/L**	1	8/6/2012 08:25 PM
Arsenic	ND		0.00500	mg/L	1	8/6/2012 08:25 PM
Barium	**0.106**		**0.00500**	**mg/L**	1	8/6/2012 08:25 PM
Boron	**0.535**		**0.0500**	**mg/L**	1	8/7/2012 03:01 PM
Cadmium	ND		0.00200	mg/L	1	8/6/2012 08:25 PM
Calcium	**327**		**5.00**	**mg/L**	10	8/7/2012 03:35 PM
Chromium	ND		0.00500	mg/L	1	8/6/2012 08:25 PM
Cobalt	ND		0.00500	mg/L	1	8/6/2012 08:25 PM
Copper	ND		0.00500	mg/L	1	8/6/2012 08:25 PM
Iron	ND		0.200	mg/L	1	8/6/2012 08:25 PM
Lead	ND		0.00500	mg/L	1	8/6/2012 08:25 PM
Magnesium	**32.8**		**0.200**	**mg/L**	1	8/6/2012 08:25 PM
Manganese	**0.00593**		**0.00500**	**mg/L**	1	8/6/2012 08:25 PM
Molybdenum	ND		0.00500	mg/L	1	8/6/2012 08:25 PM
Nickel	**0.00664**		**0.00500**	**mg/L**	1	8/6/2012 08:25 PM
Potassium	**6.95**		**0.200**	**mg/L**	1	8/6/2012 08:25 PM
Selenium	ND		0.00500	mg/L	1	8/6/2012 08:25 PM
Silver	ND		0.00500	mg/L	1	8/6/2012 08:25 PM
Sodium	**345**		**2.00**	**mg/L**	10	8/7/2012 03:35 PM
Uranium	ND		0.00500	mg/L	1	8/6/2012 08:25 PM
Zinc	**0.0714**		**0.00500**	**mg/L**	1	8/6/2012 08:25 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/28/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/1/2012 07:06 PM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 07:06 PM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 07:06 PM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/1/2012 07:06 PM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/1/2012 07:06 PM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/1/2012 07:06 PM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
2-Chlorophenol	ND		0.20	µg/L	1	8/1/2012 07:06 PM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
2-Methylphenol	ND		0.20	µg/L	1	8/1/2012 07:06 PM
2-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 07:06 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-19-0712
Lab ID: 12071240-12
Collection Date: 7/25/2012 11:45 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/1/2012 07:06 PM
3&4-Methylphenol	ND		0.20	µg/L	1	8/1/2012 07:06 PM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/1/2012 07:06 PM
3-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 07:06 PM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/1/2012 07:06 PM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 07:06 PM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/1/2012 07:06 PM
4-Chloroaniline	ND		0.20	µg/L	1	8/1/2012 07:06 PM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 07:06 PM
4-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 07:06 PM
4-Nitrophenol	ND		1.0	µg/L	1	8/1/2012 07:06 PM
Acenaphthene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Acenaphthylene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Acetophenone	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Anthracene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Atrazine	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Benz(a)anthracene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Benzaldehyde	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Bis(2-ethylhexyl)phthalate	**0.49**		**0.20**	**µg/L**	1	8/1/2012 07:06 PM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Caprolactam	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Carbazole	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Chrysene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Dibenzofuran	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Diethyl phthalate	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Dimethyl phthalate	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Di-n-octyl phthalate	**0.29**		**0.20**	**µg/L**	1	8/1/2012 07:06 PM
Fluoranthene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Fluorene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Hexachlorobenzene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/1/2012 07:06 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-19-0712
Lab ID: 12071240-12
Collection Date: 7/25/2012 11:45 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Hexachloroethane	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Isophorone	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Naphthalene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Nitrobenzene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/1/2012 07:06 PM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Pentachlorophenol	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Phenanthrene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Phenol	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Pyrene	ND		0.20	µg/L	1	8/1/2012 07:06 PM
Surr: 2,4,6-Tribromophenol	*88.8*		*34-129*	*%REC*	1	8/1/2012 07:06 PM
Surr: 2-Fluorobiphenyl	*73.3*		*40-125*	*%REC*	1	8/1/2012 07:06 PM
Surr: 2-Fluorophenol	*82.3*		*20-120*	*%REC*	1	8/1/2012 07:06 PM
Surr: 4-Terphenyl-d14	*115*		*40-135*	*%REC*	1	8/1/2012 07:06 PM
Surr: Nitrobenzene-d5	*87.8*		*41-120*	*%REC*	1	8/1/2012 07:06 PM
Surr: Phenol-d6	*82.6*		*20-120*	*%REC*	1	8/1/2012 07:06 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
2-Butanone	ND		0.010	mg/L	1	7/30/2012 07:35 AM
2-Hexanone	ND		0.010	mg/L	1	7/30/2012 07:35 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	7/30/2012 07:35 AM
Acetone	ND		0.010	mg/L	1	7/30/2012 07:35 AM
Benzene	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
Bromodichloromethane	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
Bromoform	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
Bromomethane	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
Carbon disulfide	ND		0.010	mg/L	1	7/30/2012 07:35 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	7/30/2012 07:35 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-19-0712
Lab ID: 12071240-12
Collection Date: 7/25/2012 11:45 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
Chloroethane	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
Chloroform	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
Chloromethane	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
Dibromochloromethane	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
Ethylbenzene	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
Isopropylbenzene	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
m,p-Xylene	ND		0.010	mg/L	1	7/30/2012 07:35 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
Methylene chloride	ND		0.010	mg/L	1	7/30/2012 07:35 AM
Naphthalene	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
n-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
n-Propylbenzene	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
o-Xylene	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
Styrene	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
Tetrachloroethene	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
Toluene	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
Trichloroethene	ND		0.0050	mg/L	1	7/30/2012 07:35 AM
Vinyl chloride	ND		0.0020	mg/L	1	7/30/2012 07:35 AM
Xylenes, Total	ND		0.015	mg/L	1	7/30/2012 07:35 AM
Surr: 1,2-Dichloroethane-d4	*117*		*70-125*	*%REC*	1	7/30/2012 07:35 AM
Surr: 4-Bromofluorobenzene	*97.4*		*72-125*	*%REC*	1	7/30/2012 07:35 AM
Surr: Dibromofluoromethane	*103*		*71-125*	*%REC*	1	7/30/2012 07:35 AM
Surr: Toluene-d8	*107*		*75-125*	*%REC*	1	7/30/2012 07:35 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**1,130**		**25.0**	**mg/L**	50	8/1/2012 09:08 PM
Fluoride	**0.450**		**0.100**	**mg/L**	1	7/31/2012 09:36 PM
Sulfate	**117**		**25.0**	**mg/L**	50	8/1/2012 09:08 PM
Nitrate/Nitrite (as N)	**5.11**		**2.00**	**mg/L**	10	7/31/2012 12:09 AM
Surr: Selenate (surr)	*107*		*85-115*	*%REC*	50	8/1/2012 09:08 PM
Surr: Selenate (surr)	*108*		*85-115*	*%REC*	1	7/31/2012 09:36 PM
Surr: Selenate (surr)	*103*		*85-115*	*%REC*	10	7/31/2012 12:09 AM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**223**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-19-0712
Lab ID: 12071240-12
Collection Date: 7/25/2012 11:45 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM
Alkalinity, Total (As CaCO3)	**223**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**3,770**		**1.00**	**µmhos/cm**	1	7/31/2012 11:30 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**6.81**	H	**0.100**	**pH Units**	1	8/1/2012 12:10 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**3,570**		**10.0**	**mg/L**	1	8/1/2012 08:15 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-20-0712
Lab ID: 12071240-13
Collection Date: 7/25/2012 01:10 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/1/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/1/2012 06:02 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/3/2012**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	8/6/2012 08:28 PM
Arsenic	ND		0.00500	mg/L	1	8/6/2012 08:28 PM
Barium	**0.107**		**0.00500**	**mg/L**	1	8/6/2012 08:28 PM
Boron	**0.217**		**0.0500**	**mg/L**	1	8/7/2012 03:04 PM
Cadmium	ND		0.00200	mg/L	1	8/6/2012 08:28 PM
Calcium	**124**		**0.500**	**mg/L**	1	8/6/2012 08:28 PM
Chromium	ND		0.00500	mg/L	1	8/6/2012 08:28 PM
Cobalt	ND		0.00500	mg/L	1	8/6/2012 08:28 PM
Copper	ND		0.00500	mg/L	1	8/6/2012 08:28 PM
Iron	ND		0.200	mg/L	1	8/6/2012 08:28 PM
Lead	ND		0.00500	mg/L	1	8/6/2012 08:28 PM
Magnesium	**14.6**		**0.200**	**mg/L**	1	8/6/2012 08:28 PM
Manganese	ND		0.00500	mg/L	1	8/6/2012 08:28 PM
Molybdenum	ND		0.00500	mg/L	1	8/6/2012 08:28 PM
Nickel	ND		0.00500	mg/L	1	8/6/2012 08:28 PM
Potassium	**1.79**		**0.200**	**mg/L**	1	8/6/2012 08:28 PM
Selenium	ND		0.00500	mg/L	1	8/6/2012 08:28 PM
Silver	ND		0.00500	mg/L	1	8/6/2012 08:28 PM
Sodium	**38.8**		**0.200**	**mg/L**	1	8/7/2012 03:04 PM
Uranium	ND		0.00500	mg/L	1	8/6/2012 08:28 PM
Zinc	**0.0187**		**0.00500**	**mg/L**	1	8/6/2012 08:28 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/28/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/1/2012 07:27 PM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 07:27 PM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 07:27 PM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/1/2012 07:27 PM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/1/2012 07:27 PM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/1/2012 07:27 PM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
2-Chlorophenol	ND		0.20	µg/L	1	8/1/2012 07:27 PM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
2-Methylphenol	ND		0.20	µg/L	1	8/1/2012 07:27 PM
2-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 07:27 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Sample ID: MW-20-0712
Collection Date: 7/25/2012 01:10 PM

Work Order: 12071240
Lab ID: 12071240-13
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/1/2012 07:27 PM
3&4-Methylphenol	ND		0.20	µg/L	1	8/1/2012 07:27 PM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/1/2012 07:27 PM
3-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 07:27 PM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/1/2012 07:27 PM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 07:27 PM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/1/2012 07:27 PM
4-Chloroaniline	ND		0.20	µg/L	1	8/1/2012 07:27 PM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 07:27 PM
4-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 07:27 PM
4-Nitrophenol	ND		1.0	µg/L	1	8/1/2012 07:27 PM
Acenaphthene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Acenaphthylene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Acetophenone	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Anthracene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Atrazine	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Benz(a)anthracene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Benzaldehyde	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Bis(2-ethylhexyl)phthalate	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Caprolactam	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Carbazole	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Chrysene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Dibenzofuran	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Diethyl phthalate	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Dimethyl phthalate	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Fluoranthene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Fluorene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Hexachlorobenzene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/1/2012 07:27 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-20-0712 **Lab ID:** 12071240-13
Collection Date: 7/25/2012 01:10 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Hexachloroethane	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Isophorone	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Naphthalene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Nitrobenzene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/1/2012 07:27 PM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Pentachlorophenol	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Phenanthrene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Phenol	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Pyrene	ND		0.20	µg/L	1	8/1/2012 07:27 PM
Surr: 2,4,6-Tribromophenol	*77.0*		*34-129*	*%REC*	1	8/1/2012 07:27 PM
Surr: 2-Fluorobiphenyl	*69.3*		*40-125*	*%REC*	1	8/1/2012 07:27 PM
Surr: 2-Fluorophenol	*76.7*		*20-120*	*%REC*	1	8/1/2012 07:27 PM
Surr: 4-Terphenyl-d14	*95.1*		*40-135*	*%REC*	1	8/1/2012 07:27 PM
Surr: Nitrobenzene-d5	*94.0*		*41-120*	*%REC*	1	8/1/2012 07:27 PM
Surr: Phenol-d6	*83.9*		*20-120*	*%REC*	1	8/1/2012 07:27 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
2-Butanone	ND		0.010	mg/L	1	7/30/2012 08:01 AM
2-Hexanone	ND		0.010	mg/L	1	7/30/2012 08:01 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	7/30/2012 08:01 AM
Acetone	ND		0.010	mg/L	1	7/30/2012 08:01 AM
Benzene	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
Bromodichloromethane	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
Bromoform	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
Bromomethane	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
Carbon disulfide	ND		0.010	mg/L	1	7/30/2012 08:01 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	7/30/2012 08:01 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-20-0712 **Lab ID:** 12071240-13
Collection Date: 7/25/2012 01:10 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
Chloroethane	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
Chloroform	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
Chloromethane	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
Dibromochloromethane	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
Ethylbenzene	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
Isopropylbenzene	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
m,p-Xylene	ND		0.010	mg/L	1	7/30/2012 08:01 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
Methylene chloride	ND		0.010	mg/L	1	7/30/2012 08:01 AM
Naphthalene	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
n-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
n-Propylbenzene	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
o-Xylene	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
Styrene	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
Tetrachloroethene	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
Toluene	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
Trichloroethene	ND		0.0050	mg/L	1	7/30/2012 08:01 AM
Vinyl chloride	ND		0.0020	mg/L	1	7/30/2012 08:01 AM
Xylenes, Total	ND		0.015	mg/L	1	7/30/2012 08:01 AM
Surr: 1,2-Dichloroethane-d4	*115*		*70-125*	*%REC*	1	7/30/2012 08:01 AM
Surr: 4-Bromofluorobenzene	*93.5*		*72-125*	*%REC*	1	7/30/2012 08:01 AM
Surr: Dibromofluoromethane	*100*		*71-125*	*%REC*	1	7/30/2012 08:01 AM
Surr: Toluene-d8	*105*		*75-125*	*%REC*	1	7/30/2012 08:01 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**189**		**5.00**	**mg/L**	10	8/1/2012 09:23 PM
Fluoride	**0.742**		**0.100**	**mg/L**	1	7/31/2012 09:50 PM
Sulfate	**56.0**		**0.500**	**mg/L**	1	7/31/2012 09:50 PM
Nitrate/Nitrite (as N)	**2.24**		**2.00**	**mg/L**	10	7/31/2012 12:30 AM
Surr: Selenate (surr)	*110*		*85-115*	*%REC*	10	8/1/2012 09:23 PM
Surr: Selenate (surr)	*107*		*85-115*	*%REC*	1	7/31/2012 09:50 PM
Surr: Selenate (surr)	*104*		*85-115*	*%REC*	10	7/31/2012 12:30 AM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**190**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-20-0712
Lab ID: 12071240-13
Collection Date: 7/25/2012 01:10 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM
Alkalinity, Total (As CaCO3)	**190**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**1,040**		**1.00**	**µmhos/cm**	1	7/31/2012 11:30 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**7.22**	H	**0.100**	**pH Units**	1	8/1/2012 12:10 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**848**		**10.0**	**mg/L**	1	8/1/2012 08:15 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-14-0712
Lab ID: 12071240-14
Collection Date: 7/25/2012 01:50 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/1/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/1/2012 06:04 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/3/2012**	Analyst: **SKS**
Aluminum	**0.0116**		**0.0100**	**mg/L**	1	8/6/2012 08:30 PM
Arsenic	ND		0.00500	mg/L	1	8/6/2012 08:30 PM
Barium	**0.0905**		**0.00500**	**mg/L**	1	8/6/2012 08:30 PM
Boron	**0.216**		**0.0500**	**mg/L**	1	8/7/2012 03:07 PM
Cadmium	ND		0.00200	mg/L	1	8/6/2012 08:30 PM
Calcium	**95.5**		**0.500**	**mg/L**	1	8/6/2012 08:30 PM
Chromium	ND		0.00500	mg/L	1	8/6/2012 08:30 PM
Cobalt	ND		0.00500	mg/L	1	8/6/2012 08:30 PM
Copper	ND		0.00500	mg/L	1	8/6/2012 08:30 PM
Iron	ND		0.200	mg/L	1	8/6/2012 08:30 PM
Lead	ND		0.00500	mg/L	1	8/6/2012 08:30 PM
Magnesium	**11.3**		**0.200**	**mg/L**	1	8/6/2012 08:30 PM
Manganese	**0.0321**		**0.00500**	**mg/L**	1	8/6/2012 08:30 PM
Molybdenum	ND		0.00500	mg/L	1	8/6/2012 08:30 PM
Nickel	**0.0240**		**0.00500**	**mg/L**	1	8/6/2012 08:30 PM
Potassium	**2.74**		**0.200**	**mg/L**	1	8/6/2012 08:30 PM
Selenium	ND		0.00500	mg/L	1	8/6/2012 08:30 PM
Silver	ND		0.00500	mg/L	1	8/6/2012 08:30 PM
Sodium	**27.8**		**0.200**	**mg/L**	1	8/7/2012 03:07 PM
Uranium	ND		0.00500	mg/L	1	8/6/2012 08:30 PM
Zinc	**0.0448**		**0.00500**	**mg/L**	1	8/6/2012 08:30 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/28/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/1/2012 07:47 PM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 07:47 PM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 07:47 PM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/1/2012 07:47 PM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/1/2012 07:47 PM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/1/2012 07:47 PM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
2-Chlorophenol	ND		0.20	µg/L	1	8/1/2012 07:47 PM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
2-Methylphenol	ND		0.20	µg/L	1	8/1/2012 07:47 PM
2-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 07:47 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-14-0712
Lab ID: 12071240-14
Collection Date: 7/25/2012 01:50 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/1/2012 07:47 PM
3&4-Methylphenol	ND		0.20	µg/L	1	8/1/2012 07:47 PM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/1/2012 07:47 PM
3-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 07:47 PM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/1/2012 07:47 PM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 07:47 PM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/1/2012 07:47 PM
4-Chloroaniline	ND		0.20	µg/L	1	8/1/2012 07:47 PM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 07:47 PM
4-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 07:47 PM
4-Nitrophenol	ND		1.0	µg/L	1	8/1/2012 07:47 PM
Acenaphthene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Acenaphthylene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Acetophenone	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Anthracene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Atrazine	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Benz(a)anthracene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Benzaldehyde	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Bis(2-ethylhexyl)phthalate	**18**		**0.80**	**µg/L**	4	8/1/2012 08:28 PM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Caprolactam	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Carbazole	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Chrysene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Dibenzofuran	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Diethyl phthalate	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Dimethyl phthalate	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Fluoranthene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Fluorene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Hexachlorobenzene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/1/2012 07:47 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-14-0712 **Lab ID:** 12071240-14
Collection Date: 7/25/2012 01:50 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Hexachloroethane	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Isophorone	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Naphthalene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Nitrobenzene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/1/2012 07:47 PM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Pentachlorophenol	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Phenanthrene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Phenol	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Pyrene	ND		0.20	µg/L	1	8/1/2012 07:47 PM
Surr: 2,4,6-Tribromophenol	*87.2*		*34-129*	*%REC*	4	8/1/2012 08:28 PM
Surr: 2,4,6-Tribromophenol	*81.5*		*34-129*	*%REC*	1	8/1/2012 07:47 PM
Surr: 2-Fluorobiphenyl	*74.5*		*40-125*	*%REC*	1	8/1/2012 07:47 PM
Surr: 2-Fluorobiphenyl	*82.5*		*40-125*	*%REC*	4	8/1/2012 08:28 PM
Surr: 2-Fluorophenol	*64.8*		*20-120*	*%REC*	1	8/1/2012 07:47 PM
Surr: 2-Fluorophenol	*57.4*		*20-120*	*%REC*	4	8/1/2012 08:28 PM
Surr: 4-Terphenyl-d14	*102*		*40-135*	*%REC*	1	8/1/2012 07:47 PM
Surr: 4-Terphenyl-d14	*82.6*		*40-135*	*%REC*	4	8/1/2012 08:28 PM
Surr: Nitrobenzene-d5	*82.8*		*41-120*	*%REC*	4	8/1/2012 08:28 PM
Surr: Nitrobenzene-d5	*88.9*		*41-120*	*%REC*	1	8/1/2012 07:47 PM
Surr: Phenol-d6	*71.4*		*20-120*	*%REC*	1	8/1/2012 07:47 PM
Surr: Phenol-d6	*71.7*		*20-120*	*%REC*	4	8/1/2012 08:28 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
2-Butanone	ND		0.010	mg/L	1	7/30/2012 08:28 AM
2-Hexanone	ND		0.010	mg/L	1	7/30/2012 08:28 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	7/30/2012 08:28 AM
Acetone	ND		0.010	mg/L	1	7/30/2012 08:28 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-14-0712
Lab ID: 12071240-14
Collection Date: 7/25/2012 01:50 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzene	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
Bromodichloromethane	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
Bromoform	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
Bromomethane	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
Carbon disulfide	ND		0.010	mg/L	1	7/30/2012 08:28 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
Chlorobenzene	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
Chloroethane	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
Chloroform	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
Chloromethane	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
Dibromochloromethane	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
Ethylbenzene	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
Isopropylbenzene	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
m,p-Xylene	ND		0.010	mg/L	1	7/30/2012 08:28 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
Methylene chloride	ND		0.010	mg/L	1	7/30/2012 08:28 AM
Naphthalene	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
n-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
n-Propylbenzene	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
o-Xylene	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
Styrene	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
Tetrachloroethene	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
Toluene	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
Trichloroethene	ND		0.0050	mg/L	1	7/30/2012 08:28 AM
Vinyl chloride	ND		0.0020	mg/L	1	7/30/2012 08:28 AM
Xylenes, Total	ND		0.015	mg/L	1	7/30/2012 08:28 AM
Surr: 1,2-Dichloroethane-d4	*112*		*70-125*	*%REC*	1	7/30/2012 08:28 AM
Surr: 4-Bromofluorobenzene	*90.2*		*72-125*	*%REC*	1	7/30/2012 08:28 AM
Surr: Dibromofluoromethane	*99.8*		*71-125*	*%REC*	1	7/30/2012 08:28 AM
Surr: Toluene-d8	*106*		*75-125*	*%REC*	1	7/30/2012 08:28 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**69.3**		**0.500**	**mg/L**	1	7/31/2012 10:34 PM
Fluoride	**1.03**		**0.100**	**mg/L**	1	7/31/2012 10:34 PM
Sulfate	**54.8**		**0.500**	**mg/L**	1	7/31/2012 10:34 PM
Nitrate/Nitrite (as N)	ND		2.00	mg/L	10	7/31/2012 12:51 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-14-0712
Lab ID: 12071240-14
Collection Date: 7/25/2012 01:50 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Selenate (surr)	*102*		*85-115*	*%REC*	10	7/31/2012 12:51 AM
Surr: Selenate (surr)	*109*		*85-115*	*%REC*	1	7/31/2012 10:34 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**61.8**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM
Alkalinity, Total (As CaCO3)	**61.8**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**718**		**1.00**	**µmhos/cm**	1	7/31/2012 11:30 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**7.38**	H	**0.100**	**pH Units**	1	8/2/2012 09:30 AM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**446**		**10.0**	**mg/L**	1	8/1/2012 08:15 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-5-0712
Lab ID: 12071240-15
Collection Date: 7/25/2012 02:35 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/1/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/1/2012 06:06 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/3/2012**	Analyst: **SKS**
Aluminum	**0.0205**		**0.0100**	**mg/L**	1	8/6/2012 08:38 PM
Arsenic	ND		0.00500	mg/L	1	8/6/2012 08:38 PM
Barium	**0.0931**		**0.00500**	**mg/L**	1	8/6/2012 08:38 PM
Boron	**0.134**		**0.0500**	**mg/L**	1	8/7/2012 03:09 PM
Cadmium	ND		0.00200	mg/L	1	8/6/2012 08:38 PM
Calcium	**84.2**		**0.500**	**mg/L**	1	8/6/2012 08:38 PM
Chromium	ND		0.00500	mg/L	1	8/6/2012 08:38 PM
Cobalt	ND		0.00500	mg/L	1	8/6/2012 08:38 PM
Copper	ND		0.00500	mg/L	1	8/6/2012 08:38 PM
Iron	ND		0.200	mg/L	1	8/6/2012 08:38 PM
Lead	ND		0.00500	mg/L	1	8/6/2012 08:38 PM
Magnesium	**10.6**		**0.200**	**mg/L**	1	8/6/2012 08:38 PM
Manganese	ND		0.00500	mg/L	1	8/6/2012 08:38 PM
Molybdenum	ND		0.00500	mg/L	1	8/6/2012 08:38 PM
Nickel	ND		0.00500	mg/L	1	8/6/2012 08:38 PM
Potassium	**1.90**		**0.200**	**mg/L**	1	8/6/2012 08:38 PM
Selenium	ND		0.00500	mg/L	1	8/6/2012 08:38 PM
Silver	ND		0.00500	mg/L	1	8/6/2012 08:38 PM
Sodium	**40.6**		**0.200**	**mg/L**	1	8/7/2012 03:09 PM
Uranium	ND		0.00500	mg/L	1	8/6/2012 08:38 PM
Zinc	**0.0562**		**0.00500**	**mg/L**	1	8/6/2012 08:38 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/28/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/1/2012 08:08 PM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 08:08 PM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/1/2012 08:08 PM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/1/2012 08:08 PM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/1/2012 08:08 PM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/1/2012 08:08 PM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
2-Chlorophenol	ND		0.20	µg/L	1	8/1/2012 08:08 PM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
2-Methylphenol	ND		0.20	µg/L	1	8/1/2012 08:08 PM
2-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 08:08 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Work Order: 12071240
Sample ID: MW-5-0712
Lab ID: 12071240-15
Collection Date: 7/25/2012 02:35 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/1/2012 08:08 PM
3&4-Methylphenol	ND		0.20	µg/L	1	8/1/2012 08:08 PM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/1/2012 08:08 PM
3-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 08:08 PM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/1/2012 08:08 PM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 08:08 PM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/1/2012 08:08 PM
4-Chloroaniline	ND		0.20	µg/L	1	8/1/2012 08:08 PM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/1/2012 08:08 PM
4-Nitroaniline	ND		0.20	µg/L	1	8/1/2012 08:08 PM
4-Nitrophenol	ND		1.0	µg/L	1	8/1/2012 08:08 PM
Acenaphthene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Acenaphthylene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Acetophenone	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Anthracene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Atrazine	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Benz(a)anthracene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Benzaldehyde	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Bis(2-ethylhexyl)phthalate	**2.3**		**0.20**	**µg/L**	1	8/1/2012 08:08 PM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Caprolactam	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Carbazole	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Chrysene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Dibenzofuran	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Diethyl phthalate	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Dimethyl phthalate	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Fluoranthene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Fluorene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Hexachlorobenzene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/1/2012 08:08 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-5-0712 **Lab ID:** 12071240-15
Collection Date: 7/25/2012 02:35 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Hexachloroethane	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Isophorone	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Naphthalene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Nitrobenzene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/1/2012 08:08 PM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Pentachlorophenol	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Phenanthrene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Phenol	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Pyrene	ND		0.20	µg/L	1	8/1/2012 08:08 PM
Surr: 2,4,6-Tribromophenol	*107*		*34-129*	*%REC*	1	8/1/2012 08:08 PM
Surr: 2-Fluorobiphenyl	*92.2*		*40-125*	*%REC*	1	8/1/2012 08:08 PM
Surr: 2-Fluorophenol	*77.5*		*20-120*	*%REC*	1	8/1/2012 08:08 PM
Surr: 4-Terphenyl-d14	*87.9*		*40-135*	*%REC*	1	8/1/2012 08:08 PM
Surr: Nitrobenzene-d5	*105*		*41-120*	*%REC*	1	8/1/2012 08:08 PM
Surr: Phenol-d6	*90.4*		*20-120*	*%REC*	1	8/1/2012 08:08 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
2-Butanone	ND		0.010	mg/L	1	7/30/2012 08:54 AM
2-Hexanone	ND		0.010	mg/L	1	7/30/2012 08:54 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	7/30/2012 08:54 AM
Acetone	ND		0.010	mg/L	1	7/30/2012 08:54 AM
Benzene	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
Bromodichloromethane	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
Bromoform	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
Bromomethane	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
Carbon disulfide	ND		0.010	mg/L	1	7/30/2012 08:54 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	7/30/2012 08:54 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA **Work Order:** 12071240
Sample ID: MW-5-0712 **Lab ID:** 12071240-15
Collection Date: 7/25/2012 02:35 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
Chloroethane	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
Chloroform	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
Chloromethane	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
Dibromochloromethane	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
Ethylbenzene	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
Isopropylbenzene	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
m,p-Xylene	ND		0.010	mg/L	1	7/30/2012 08:54 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
Methylene chloride	ND		0.010	mg/L	1	7/30/2012 08:54 AM
Naphthalene	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
n-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
n-Propylbenzene	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
o-Xylene	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
Styrene	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
Tetrachloroethene	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
Toluene	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
Trichloroethene	ND		0.0050	mg/L	1	7/30/2012 08:54 AM
Vinyl chloride	ND		0.0020	mg/L	1	7/30/2012 08:54 AM
Xylenes, Total	ND		0.015	mg/L	1	7/30/2012 08:54 AM
Surr: 1,2-Dichloroethane-d4	*122*		*70-125*	*%REC*	1	7/30/2012 08:54 AM
Surr: 4-Bromofluorobenzene	*94.6*		*72-125*	*%REC*	1	7/30/2012 08:54 AM
Surr: Dibromofluoromethane	*107*		*71-125*	*%REC*	1	7/30/2012 08:54 AM
Surr: Toluene-d8	*103*		*75-125*	*%REC*	1	7/30/2012 08:54 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**15.9**		**0.500**	**mg/L**	1	7/31/2012 10:48 PM
Fluoride	**1.10**		**0.100**	**mg/L**	1	7/31/2012 10:48 PM
Sulfate	**50.1**		**0.500**	**mg/L**	1	7/31/2012 10:48 PM
Nitrate/Nitrite (as N)	**2.22**		**2.00**	**mg/L**	10	7/31/2012 01:12 AM
Surr: Selenate (surr)	*101*		*85-115*	*%REC*	1	7/31/2012 10:48 PM
Surr: Selenate (surr)	*100*		*85-115*	*%REC*	10	7/31/2012 01:12 AM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**228**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Sample ID: MW-5-0712
Collection Date: 7/25/2012 02:35 PM

Work Order: 12071240
Lab ID: 12071240-15
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/3/2012 02:00 PM
Alkalinity, Total (As CaCO3)	**228**		**5.00**	**mg/L**	1	8/3/2012 02:00 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**680**		**1.00**	**µmhos/cm**	1	7/31/2012 11:30 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**7.14**	H	**0.100**	**pH Units**	1	8/2/2012 09:30 AM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**434**		**10.0**	**mg/L**	1	8/1/2012 08:15 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Sample ID: Trip Blank 070912-47
Collection Date: 7/25/2012

Work Order: 12071240
Lab ID: 12071240-16
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
2-Butanone	ND		0.010	mg/L	1	7/30/2012 09:21 AM
2-Hexanone	ND		0.010	mg/L	1	7/30/2012 09:21 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	7/30/2012 09:21 AM
Acetone	ND		0.010	mg/L	1	7/30/2012 09:21 AM
Benzene	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
Bromodichloromethane	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
Bromoform	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
Bromomethane	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
Carbon disulfide	ND		0.010	mg/L	1	7/30/2012 09:21 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
Chlorobenzene	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
Chloroethane	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
Chloroform	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
Chloromethane	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
Dibromochloromethane	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
Ethylbenzene	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
Isopropylbenzene	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
m,p-Xylene	ND		0.010	mg/L	1	7/30/2012 09:21 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
Methylene chloride	ND		0.010	mg/L	1	7/30/2012 09:21 AM
Naphthalene	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
n-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
n-Propylbenzene	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
o-Xylene	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
Styrene	ND		0.0050	mg/L	1	7/30/2012 09:21 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *16-Aug-12*

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
Sample ID: Trip Blank 070912-47
Collection Date: 7/25/2012

Work Order: 12071240
Lab ID: 12071240-16
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
Toluene	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
Trichloroethene	ND		0.0050	mg/L	1	7/30/2012 09:21 AM
Vinyl chloride	ND		0.0020	mg/L	1	7/30/2012 09:21 AM
Xylenes, Total	ND		0.015	mg/L	1	7/30/2012 09:21 AM
Surr: 1,2-Dichloroethane-d4	*122*		*70-125*	*%REC*	1	7/30/2012 09:21 AM
Surr: 4-Bromofluorobenzene	*92.8*		*72-125*	*%REC*	1	7/30/2012 09:21 AM
Surr: Dibromofluoromethane	*103*		*71-125*	*%REC*	1	7/30/2012 09:21 AM
Surr: Toluene-d8	*106*		*75-125*	*%REC*	1	7/30/2012 09:21 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **63077** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW5-080112-63077** Units: **mg/L** Analysis Date: **8/1/2012 05:10 PM**

Client ID: Run ID: **MERCURY_120801A** SeqNo: **2884765** Prep Date: **8/1/2012** 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: **GLCSW5-080112-63077** Units: **mg/L** Analysis Date: **8/1/2012 05:12 PM**

Client ID: Run ID: **MERCURY_120801A** SeqNo: **2884767** Prep Date: **8/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00467	0.00020	0.005	0	93.4	85-115	0			

MS Sample ID: **12071409-01CMS** Units: **mg/L** Analysis Date: **8/1/2012 05:18 PM**

Client ID: Run ID: **MERCURY_120801A** SeqNo: **2884770** Prep Date: **8/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00449	0.00020	0.005	-0.000046	90.7	85-115	0			

MSD Sample ID: **12071409-01CMSD** Units: **mg/L** Analysis Date: **8/1/2012 05:20 PM**

Client ID: Run ID: **MERCURY_120801A** SeqNo: **2884771** Prep Date: **8/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00482	0.00020	0.005	-0.000046	97.3	85-115	0.00449	7.09	20	

DUP Sample ID: **12071409-01CDUP** Units: **mg/L** Analysis Date: **8/1/2012 05:16 PM**

Client ID: Run ID: **MERCURY_120801A** SeqNo: **2884769** Prep Date: **8/1/2012** 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	-0.000046	0	20	

The following samples were analyzed in this batch:

12071240-01B	12071240-02B	12071240-03B
12071240-04B	12071240-05B	12071240-06B
12071240-07B	12071240-08B	12071240-09B
12071240-10B	12071240-11B	12071240-12B
12071240-13B	12071240-14B	12071240-15B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **63164** Instrument ID **ICPMS05** Method: **SW6020** **(Dissolve)**

MBLK Sample ID: **MBLKW6-080312-63164** Units: **mg/L** Analysis Date: **8/6/2012 07:44 PM**

Client ID: Run ID: **ICPMS05_120806A** SeqNo: **2891848** Prep Date: **8/3/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.004833	0.010								J
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Cadmium	ND	0.0020								
Calcium	ND	0.50								
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Copper	ND	0.0050								
Iron	ND	0.20								
Lead	ND	0.0050								
Magnesium	ND	0.20								
Manganese	ND	0.0050								
Molybdenum	ND	0.0050								
Nickel	ND	0.0050								
Potassium	ND	0.20								
Selenium	ND	0.0050								
Silver	ND	0.0050								
Uranium	ND	0.0050								
Zinc	ND	0.0050								

MBLK Sample ID: **MBLKW6-080312-63164** Units: **mg/L** Analysis Date: **8/7/2012 02:15 PM**

Client ID: Run ID: **ICPMS05_120807A** SeqNo: **2892565** Prep Date: **8/3/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.02388	0.050								J
Sodium	ND	0.20								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **63164** Instrument ID **ICPMS05** Method: **SW6020** **(Dissolve)**

LCS Sample ID: **MLCSW6-080312-63164** Units: **mg/L** Analysis Date: **8/6/2012 07:47 PM**

Client ID: Run ID: **ICPMS05_120806A** SeqNo: **2891849** Prep Date: **8/3/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04748	0.0050	0.05	0	95	80-120	0			
Barium	0.05083	0.0050	0.05	0	102	80-120	0			
Cadmium	0.04907	0.0020	0.05	0	98.1	80-120	0			
Calcium	4.49	0.50	5	0	89.8	80-120	0			
Chromium	0.04932	0.0050	0.05	0	98.6	80-120	0			
Cobalt	0.04983	0.0050	0.05	0	99.7	80-120	0			
Copper	0.04843	0.0050	0.05	0	96.9	80-120	0			
Iron	4.89	0.20	5	0	97.8	80-120	0			
Lead	0.0499	0.0050	0.05	0	99.8	80-120	0			
Magnesium	4.92	0.20	5	0	98.4	80-120	0			
Manganese	0.0495	0.0050	0.05	0	99	80-120	0			
Molybdenum	0.04899	0.0050	0.05	0	98	80-120	0			
Nickel	0.04859	0.0050	0.05	0	97.2	80-120	0			
Potassium	4.601	0.20	5	0	92	80-120	0			
Selenium	0.04885	0.0050	0.05	0	97.7	80-120	0			
Silver	0.05005	0.0050	0.05	0	100	80-120	0			
Zinc	0.05093	0.0050	0.05	0	102	80-120	0			

LCS Sample ID: **MLCSW6-080312-63164** Units: **mg/L** Analysis Date: **8/7/2012 02:17 PM**

Client ID: Run ID: **ICPMS05_120807A** SeqNo: **2892568** Prep Date: **8/3/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.147	0.010	0.15	0	98	80-120	0			
Boron	0.565	0.050	0.5	0	113	80-120	0			
Sodium	5.031	0.20	5	0	101	80-120	0			
Uranium	0.09524	0.0050	0.1	0	95.2	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **63164** Instrument ID **ICPMS05** Method: **SW6020** **(Dissolve)**

MS Sample ID: **12071275-01CMS** Units: **mg/L** Analysis Date: **8/6/2012 08:46 PM**

Client ID: Run ID: **ICPMS05_120806A** SeqNo: **2891873** Prep Date: **8/3/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04907	0.0050	0.05	0.00032	97.5	75-125	0			
Barium	0.09642	0.0050	0.05	0.04539	102	75-125	0			
Cadmium	0.04755	0.0020	0.05	-0.000008	95.1	75-125	0			
Calcium	106.5	0.50	5	102	91.7	75-125	0			O
Chromium	0.04852	0.0050	0.05	0.000738	95.6	75-125	0			
Cobalt	0.04765	0.0050	0.05	0.000126	95	75-125	0			
Copper	0.05806	0.0050	0.05	0.01135	93.4	75-125	0			
Iron	5.117	0.20	5	0.5196	92	75-125	0			
Lead	0.05006	0.0050	0.05	0.001351	97.4	75-125	0			
Magnesium	32.14	0.20	5	27.87	85.4	75-125	0			O
Manganese	0.3458	0.0050	0.05	0.2914	109	75-125	0			O
Molybdenum	0.04798	0.0050	0.05	0.000049	95.9	75-125	0			
Nickel	0.04671	0.0050	0.05	0.000506	92.4	75-125	0			
Potassium	7.375	0.20	5	2.467	98.2	75-125	0			
Selenium	0.04749	0.0050	0.05	-0.000732	96.4	75-125	0			
Silver	0.04796	0.0050	0.05	0.000007	95.9	75-125	0			
Zinc	0.06623	0.0050	0.05	0.02226	87.9	75-125	0			

MS Sample ID: **12071275-01CMS** Units: **mg/L** Analysis Date: **8/7/2012 03:17 PM**

Client ID: Run ID: **ICPMS05_120807A** SeqNo: **2892630** Prep Date: **8/3/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1229	0.010	0.15	0.006227	77.8	75-125	0			
Boron	0.694	0.050	0.5	0.09644	120	75-125	0			
Sodium	22.98	0.20	5	15.3	154	75-125	0			S
Uranium	0.09524	0.0050	0.1	0.000264	95	75-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **63164** Instrument ID **ICPMS05** Method: **SW6020** **(Dissolve)**

MSD Sample ID: **12071275-01CMSD** Units: **mg/L** Analysis Date: **8/6/2012 08:48 PM**

Client ID: Run ID: **ICPMS05_120806A** SeqNo: **2891874** Prep Date: **8/3/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04875	0.0050	0.05	0.00032	96.9	75-125	0.04907	0.654	25	
Barium	0.09357	0.0050	0.05	0.04539	96.4	75-125	0.09642	2.99	25	
Cadmium	0.04669	0.0020	0.05	-0.000008	93.4	75-125	0.04755	1.82	25	
Calcium	99.87	0.50	5	102	-41.8	75-125	106.5	6.47	25	SO
Chromium	0.04739	0.0050	0.05	0.000738	93.3	75-125	0.04852	2.36	25	
Cobalt	0.04689	0.0050	0.05	0.000126	93.5	75-125	0.04765	1.6	25	
Copper	0.056	0.0050	0.05	0.01135	89.3	75-125	0.05806	3.62	25	
Iron	5.042	0.20	5	0.5196	90.4	75-125	5.117	1.49	25	
Lead	0.04928	0.0050	0.05	0.001351	95.8	75-125	0.05006	1.58	25	
Magnesium	30.31	0.20	5	27.87	48.8	75-125	32.14	5.87	25	SO
Manganese	0.3193	0.0050	0.05	0.2914	55.9	75-125	0.3458	7.95	25	SO
Molybdenum	0.04671	0.0050	0.05	0.000049	93.3	75-125	0.04798	2.68	25	
Nickel	0.04689	0.0050	0.05	0.000506	92.8	75-125	0.04671	0.382	25	
Potassium	7.106	0.20	5	2.467	92.8	75-125	7.375	3.72	25	
Selenium	0.04583	0.0050	0.05	-0.000732	93.1	75-125	0.04749	3.57	25	
Silver	0.0473	0.0050	0.05	0.000007	94.6	75-125	0.04796	1.38	25	
Zinc	0.06263	0.0050	0.05	0.02226	80.7	75-125	0.06623	5.58	25	

MSD Sample ID: **12071275-01CMSD** Units: **mg/L** Analysis Date: **8/7/2012 03:19 PM**

Client ID: Run ID: **ICPMS05_120807A** SeqNo: **2892633** Prep Date: **8/3/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1276	0.010	0.15	0.006227	80.9	75-125	0.1229	3.8	25	
Boron	0.7345	0.050	0.5	0.09644	128	75-125	0.694	5.67	25	S
Sodium	23.29	0.20	5	15.3	160	75-125	22.98	1.32	25	S
Uranium	0.09439	0.0050	0.1	0.000264	94.1	75-125	0.09524	0.893	25	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **63164** Instrument ID **ICPMS05** Method: **SW6020** **(Dissolve)**

DUP Sample ID: **12071275-01CDUP** Units: **mg/L** Analysis Date: **8/6/2012 08:43 PM**

Client ID: Run ID: **ICPMS05_120806A** SeqNo: **2891872** Prep Date: **8/3/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.01107	0.010	0	0	0	0-0	0.007189	42.5	25	R
Arsenic	ND	0.0050	0	0	0	0-0	0.00032	0	25	
Barium	0.04683	0.0050	0	0	0	0-0	0.04539	3.13	25	
Cadmium	ND	0.0020	0	0	0	0-0	-0.000008	0	25	
Calcium	102.6	0.50	0	0	0	0-0	102	0.609	25	
Chromium	ND	0.0050	0	0	0	0-0	0.000738	0	25	
Cobalt	ND	0.0050	0	0	0	0-0	0.000126	0	25	
Copper	0.01195	0.0050	0	0	0	0-0	0.01135	5.2	25	
Iron	0.5343	0.20	0	0	0	0-0	0.5196	2.8	25	
Lead	0.001664	0.0050	0	0	0	0-0	0.001351	0	25	J
Magnesium	28.11	0.20	0	0	0	0-0	27.87	0.854	25	
Manganese	0.2972	0.0050	0	0	0	0-0	0.2914	1.99	25	
Molybdenum	ND	0.0050	0	0	0	0-0	0.000049	0	25	
Nickel	ND	0.0050	0	0	0	0-0	0.000506	0	25	
Potassium	2.535	0.20	0	0	0	0-0	2.467	2.69	25	
Selenium	ND	0.0050	0	0	0	0-0	-0.000732	0	25	
Silver	ND	0.0050	0	0	0	0-0	0.000007	0	25	
Uranium	ND	0.0050	0	0	0		0.000262	0	25	
Zinc	0.02052	0.0050	0	0	0	0-0	0.02226	8.12	25	

DUP Sample ID: **12071275-01CDUP** Units: **mg/L** Analysis Date: **8/7/2012 03:14 PM**

Client ID: Run ID: **ICPMS05_120807A** SeqNo: **2892627** Prep Date: **8/3/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.1024	0.050	0	0	0	0-0	0.09644	6.03	25	
Sodium	15.39	0.20	0	0	0	0-0	15.3	0.565	25	

The following samples were analyzed in this batch:

12071240-01C	12071240-02C	12071240-03C
12071240-04C	12071240-05C	12071240-06C
12071240-07C	12071240-08C	12071240-09C
12071240-10C	12071240-11C	12071240-12C
12071240-13C	12071240-14C	12071240-15C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **62997** Instrument ID **SV-4** Method: **SW8270**

MBLK Sample ID: **SBLKW1-120728-62997** Units: **µg/L** Analysis Date: **7/30/2012 01:30 PM**

Client ID: Run ID: **SV-4_120730B** SeqNo: **2884660** Prep Date: **7/28/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	ND	0.20								
1-Methylnaphthalene	ND	0.20								
2,4,5-Trichlorophenol	ND	0.20								
2,4,6-Trichlorophenol	ND	0.20								
2,4-Dichlorophenol	ND	0.20								
2,4-Dimethylphenol	ND	0.20								
2,4-Dinitrophenol	ND	1.0								
2,4-Dinitrotoluene	ND	0.20								
2,6-Dinitrotoluene	ND	0.20								
2-Chloronaphthalene	ND	0.20								
2-Chlorophenol	ND	0.20								
2-Methylnaphthalene	ND	0.20								
2-Methylphenol	ND	0.20								
2-Nitroaniline	ND	0.20								
2-Nitrophenol	ND	0.20								
3&4-Methylphenol	ND	0.20								
3,3´-Dichlorobenzidine	ND	0.20								
3-Nitroaniline	ND	0.20								
4,6-Dinitro-2-methylphenol	ND	0.20								
4-Bromophenyl phenyl ether	ND	0.20								
4-Chloro-3-methylphenol	ND	0.20								
4-Chloroaniline	ND	0.20								
4-Chlorophenyl phenyl ether	ND	0.20								
4-Nitroaniline	ND	0.20								
4-Nitrophenol	ND	1.0								
Acenaphthene	ND	0.20								
Acenaphthylene	ND	0.20								
Acetophenone	ND	0.20								
Anthracene	ND	0.20								
Atrazine	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzaldehyde	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								
Bis(2-chloroethoxy)methane	ND	0.20								
Bis(2-chloroethyl)ether	ND	0.20								
Bis(2-chloroisopropyl)ether	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.20								
Butyl benzyl phthalate	ND	0.20								
Caprolactam	ND	0.20								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **62997** Instrument ID **SV-4** Method: **SW8270**

Carbazole	ND	0.20					
Chrysene	ND	0.20					
Dibenz(a,h)anthracene	ND	0.20					
Dibenzofuran	ND	0.20					
Diethyl phthalate	ND	0.20					
Dimethyl phthalate	ND	0.20					
Di-n-butyl phthalate	ND	0.20					
Di-n-octyl phthalate	ND	0.20					
Fluoranthene	ND	0.20					
Fluorene	ND	0.20					
Hexachlorobenzene	ND	0.20					
Hexachlorobutadiene	ND	0.20					
Hexachlorocyclopentadiene	ND	0.20					
Hexachloroethane	ND	0.20					
Indeno(1,2,3-cd)pyrene	ND	0.20					
Isophorone	ND	0.20					
Naphthalene	ND	0.20					
Nitrobenzene	ND	0.20					
N-Nitrosodi-n-propylamine	ND	0.20					
N-Nitrosodiphenylamine	ND	0.20					
Pentachlorophenol	ND	0.20					
Phenanthrene	ND	0.20					
Phenol	ND	0.20					
Pyrene	ND	0.20					
Surr: 2,4,6-Tribromophenol	*4.19*	0.20	*5*	0	*83.8*	*34-129*	0
Surr: 2-Fluorobiphenyl	*4.42*	0.20	*5*	0	*88.4*	*40-125*	0
Surr: 2-Fluorophenol	*3.418*	0.20	*5*	0	*68.4*	*20-120*	0
Surr: 4-Terphenyl-d14	*4.123*	0.20	*5*	0	*82.5*	*40-135*	0
Surr: Nitrobenzene-d5	*4.39*	0.20	*5*	0	*87.8*	*41-120*	0
Surr: Phenol-d6	*3.681*	0.20	*5*	0	*73.6*	*20-120*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **62997** Instrument ID **SV-4** Method: **SW8270**

LCS Sample ID: **SLCSW1-120728-62997** Units: **µg/L** Analysis Date: **7/30/2012 01:51 PM**

Client ID: Run ID: **SV-4_120730B** SeqNo: **2884661** Prep Date: **7/28/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	4.094	0.20	5	0	81.9	45-125	0			
1-Methylnaphthalene	3.792	0.20	5	0	75.8	45-120	0			
2,4,5-Trichlorophenol	3.965	0.20	5	0	79.3	46-120	0			
2,4,6-Trichlorophenol	4.176	0.20	5	0	83.5	42-120	0			
2,4-Dichlorophenol	4.024	0.20	5	0	80.5	49-120	0			
2,4-Dimethylphenol	3.175	0.20	5	0	63.5	35-120	0			
2,4-Dinitrophenol	3.018	1.0	5	0	60.4	15-120	0			
2,4-Dinitrotoluene	4.261	0.20	5	0	85.2	50-122	0			
2,6-Dinitrotoluene	4.002	0.20	5	0	80	50-120	0			
2-Chloronaphthalene	3.545	0.20	5	0	70.9	50-120	0			
2-Chlorophenol	4.358	0.20	5	0	87.2	40-120	0			
2-Methylnaphthalene	3.509	0.20	5	0	70.2	50-120	0			
2-Methylphenol	4.628	0.20	5	0	92.6	45-120	0			
2-Nitroaniline	5.142	0.20	5	0	103	28-139	0			
2-Nitrophenol	3.983	0.20	5	0	79.7	40-120	0			
3&4-Methylphenol	4.791	0.20	5	0	95.8	35-120	0			
3,3´-Dichlorobenzidine	4.225	0.20	5	0	84.5	15-120	0			
3-Nitroaniline	4.074	0.20	5	0	81.5	30-120	0			
4,6-Dinitro-2-methylphenol	3.585	0.20	5	0	71.7	25-121	0			
4-Bromophenyl phenyl ether	4.173	0.20	5	0	83.5	45-120	0			
4-Chloro-3-methylphenol	4.182	0.20	5	0	83.6	47-120	0			
4-Chloroaniline	3.96	0.20	5	0	79.2	20-120	0			
4-Chlorophenyl phenyl ether	4.352	0.20	5	0	87	50-120	0			
4-Nitroaniline	4.081	0.20	5	0	81.6	30-133	0			
4-Nitrophenol	4.661	1.0	5	0	93.2	30-130	0			
Acenaphthene	3.805	0.20	5	0	76.1	45-120	0			
Acenaphthylene	4.233	0.20	5	0	84.7	47-120	0			
Acetophenone	3.885	0.20	5	0	77.7	40-120	0			
Anthracene	4.123	0.20	5	0	82.5	45-120	0			
Atrazine	3.98	0.20	5	0	79.6	40-130	0			
Benz(a)anthracene	3.538	0.20	5	0	70.8	40-120	0			
Benzaldehyde	1.23	0.20	5	0	24.6	15-120	0			
Benzo(a)pyrene	4.049	0.20	5	0	81	45-120	0			
Benzo(b)fluoranthene	3.402	0.20	5	0	68	50-120	0			
Benzo(g,h,i)perylene	4.074	0.20	5	0	81.5	42-127	0			
Benzo(k)fluoranthene	4.665	0.20	5	0	93.3	45-127	0			
Bis(2-chloroethoxy)methane	3.475	0.20	5	0	69.5	45-120	0			
Bis(2-chloroethyl)ether	4.656	0.20	5	0	93.1	37-121	0			
Bis(2-chloroisopropyl)ether	5.327	0.20	5	0	107	40-120	0			
Bis(2-ethylhexyl)phthalate	4.187	0.20	5	0	83.7	40-139	0			
Butyl benzyl phthalate	4.207	0.20	5	0	84.1	47-123	0			
Caprolactam	4.342	0.20	5	0	86.8	35-134	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **62997** Instrument ID **SV-4** Method: **SW8270**

Carbazole	4.28	0.20	5	0	85.6	42-128	0
Chrysene	4.537	0.20	5	0	90.7	43-120	0
Dibenz(a,h)anthracene	3.749	0.20	5	0	75	45-125	0
Dibenzofuran	4.286	0.20	5	0	85.7	50-120	0
Diethyl phthalate	4.374	0.20	5	0	87.5	41-120	0
Dimethyl phthalate	4.32	0.20	5	0	86.4	40-122	0
Di-n-butyl phthalate	4.847	0.20	5	0	96.9	45-123	0
Di-n-octyl phthalate	4.339	0.20	5	0	86.8	45-129	0
Fluoranthene	4.387	0.20	5	0	87.7	45-125	0
Fluorene	4.286	0.20	5	0	85.7	49-120	0
Hexachlorobenzene	4.154	0.20	5	0	83.1	48-120	0
Hexachlorobutadiene	4.309	0.20	5	0	86.2	40-120	0
Hexachlorocyclopentadiene	3.951	0.20	5	0	79	34-136	0
Hexachloroethane	4.875	0.20	5	0	97.5	40-120	0
Indeno(1,2,3-cd)pyrene	3.779	0.20	5	0	75.6	41-128	0
Isophorone	3.926	0.20	5	0	78.5	40-121	0
Naphthalene	4.035	0.20	5	0	80.7	45-120	0
Nitrobenzene	4.112	0.20	5	0	82.2	44-120	0
N-Nitrosodi-n-propylamine	4.931	0.20	5	0	98.6	40-120	0
N-Nitrosodiphenylamine	4.051	0.20	5	0	81	40-125	0
Pentachlorophenol	2.892	0.20	5	0	57.8	19-121	0
Phenanthrene	4.243	0.20	5	0	84.9	45-121	0
Phenol	4.229	0.20	5	0	84.6	20-124	0
Pyrene	4.359	0.20	5	0	87.2	40-130	0
Surr: 2,4,6-Tribromophenol	*4.269*	0.20	*5*	0	*85.4*	*34-129*	0
Surr: 2-Fluorobiphenyl	*4.206*	0.20	*5*	0	*84.1*	*40-125*	0
Surr: 2-Fluorophenol	*4.125*	0.20	*5*	0	*82.5*	*20-120*	0
Surr: 4-Terphenyl-d14	*4.88*	0.20	*5*	0	*97.6*	*40-135*	0
Surr: Nitrobenzene-d5	*4.115*	0.20	*5*	0	*82.3*	*41-120*	0
Surr: Phenol-d6	*4.44*	0.20	*5*	0	*88.8*	*20-120*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **62997** Instrument ID **SV-4** Method: **SW8270**

LCSD Sample ID: **SLCSDW1-120728-62997** Units: **µg/L** Analysis Date: **7/30/2012 02:11 PM**

Client ID: Run ID: **SV-4_120730B** SeqNo: **2884662** Prep Date: **7/28/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	3.752	0.20	5	0	75	45-125	4.094	8.72	20	
1-Methylnaphthalene	4.434	0.20	5	0	88.7	45-120	3.792	15.6	20	
2,4,5-Trichlorophenol	3.806	0.20	5	0	76.1	46-120	3.965	4.1	20	
2,4,6-Trichlorophenol	3.832	0.20	5	0	76.6	42-120	4.176	8.6	20	
2,4-Dichlorophenol	4.017	0.20	5	0	80.3	49-120	4.024	0.184	20	
2,4-Dimethylphenol	3.844	0.20	5	0	76.9	35-120	3.175	19.1	20	
2,4-Dinitrophenol	3.768	1.0	5	0	75.4	15-120	3.018	22.1	20	R
2,4-Dinitrotoluene	4.975	0.20	5	0	99.5	50-122	4.261	15.5	20	
2,6-Dinitrotoluene	3.96	0.20	5	0	79.2	50-120	4.002	1.07	20	
2-Chloronaphthalene	3.634	0.20	5	0	72.7	50-120	3.545	2.46	20	
2-Chlorophenol	4.163	0.20	5	0	83.3	40-120	4.358	4.58	20	
2-Methylnaphthalene	4.323	0.20	5	0	86.5	50-120	3.509	20.8	20	R
2-Methylphenol	4.395	0.20	5	0	87.9	45-120	4.628	5.17	20	
2-Nitroaniline	4.726	0.20	5	0	94.5	28-139	5.142	8.44	20	
2-Nitrophenol	4.182	0.20	5	0	83.6	40-120	3.983	4.89	20	
3&4-Methylphenol	4.339	0.20	5	0	86.8	35-120	4.791	9.91	20	
3,3´-Dichlorobenzidine	4.423	0.20	5	0	88.5	15-120	4.225	4.59	20	
3-Nitroaniline	4.225	0.20	5	0	84.5	30-120	4.074	3.63	20	
4,6-Dinitro-2-methylphenol	4.32	0.20	5	0	86.4	25-121	3.585	18.6	20	
4-Bromophenyl phenyl ether	4.681	0.20	5	0	93.6	45-120	4.173	11.5	20	
4-Chloro-3-methylphenol	4.222	0.20	5	0	84.4	47-120	4.182	0.951	20	
4-Chloroaniline	3.94	0.20	5	0	78.8	20-120	3.96	0.521	20	
4-Chlorophenyl phenyl ether	4.899	0.20	5	0	98	50-120	4.352	11.8	20	
4-Nitroaniline	4.52	0.20	5	0	90.4	30-133	4.081	10.2	20	
4-Nitrophenol	5.494	1.0	5	0	110	30-130	4.661	16.4	20	
Acenaphthene	4.137	0.20	5	0	82.7	45-120	3.805	8.34	20	
Acenaphthylene	4.133	0.20	5	0	82.7	47-120	4.233	2.38	20	
Acetophenone	5.052	0.20	5	0	101	40-120	3.885	26.1	20	R
Anthracene	4.098	0.20	5	0	82	45-120	4.123	0.622	20	
Atrazine	3.844	0.20	5	0	76.9	40-130	3.98	3.46	20	
Benz(a)anthracene	3.798	0.20	5	0	76	40-120	3.538	7.09	20	
Benzaldehyde	1.292	0.20	5	0	25.8	15-120	1.23	4.93	30	
Benzo(a)pyrene	3.988	0.20	5	0	79.8	45-120	4.049	1.54	20	
Benzo(b)fluoranthene	3.676	0.20	5	0	73.5	50-120	3.402	7.74	20	
Benzo(g,h,i)perylene	4.222	0.20	5	0	84.4	42-127	4.074	3.57	20	
Benzo(k)fluoranthene	4.898	0.20	5	0	98	45-127	4.665	4.86	20	
Bis(2-chloroethoxy)methane	3.833	0.20	5	0	76.7	45-120	3.475	9.8	20	
Bis(2-chloroethyl)ether	4.315	0.20	5	0	86.3	37-121	4.656	7.61	20	
Bis(2-chloroisopropyl)ether	4.834	0.20	5	0	96.7	40-120	5.327	9.71	20	
Bis(2-ethylhexyl)phthalate	4.378	0.20	5	0	87.6	40-139	4.187	4.46	20	
Butyl benzyl phthalate	4.259	0.20	5	0	85.2	47-123	4.207	1.23	20	
Caprolactam	4.643	0.20	5	0	92.9	35-134	4.342	6.7	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **62997** Instrument ID **SV-4** Method: **SW8270**

Carbazole	4.171	0.20	5	0	83.4	42-128	4.28	2.59	20	
Chrysene	4.616	0.20	5	0	92.3	43-120	4.537	1.72	20	
Dibenz(a,h)anthracene	4.194	0.20	5	0	83.9	45-125	3.749	11.2	20	
Dibenzofuran	4.855	0.20	5	0	97.1	50-120	4.286	12.5	20	
Diethyl phthalate	5.001	0.20	5	0	100	41-120	4.374	13.4	20	
Dimethyl phthalate	3.94	0.20	5	0	78.8	40-122	4.32	9.22	20	
Di-n-butyl phthalate	4.584	0.20	5	0	91.7	45-123	4.847	5.56	20	
Di-n-octyl phthalate	4.131	0.20	5	0	82.6	45-129	4.339	4.92	20	
Fluoranthene	5.283	0.20	5	0	106	45-125	4.387	18.5	20	
Fluorene	4.726	0.20	5	0	94.5	49-120	4.286	9.76	20	
Hexachlorobenzene	4.816	0.20	5	0	96.3	48-120	4.154	14.8	20	
Hexachlorobutadiene	4.402	0.20	5	0	88	40-120	4.309	2.13	20	
Hexachlorocyclopentadiene	3.845	0.20	5	0	76.9	34-136	3.951	2.72	20	
Hexachloroethane	4.624	0.20	5	0	92.5	40-120	4.875	5.29	20	
Indeno(1,2,3-cd)pyrene	3.952	0.20	5	0	79	41-128	3.779	4.46	20	
Isophorone	4.823	0.20	5	0	96.5	40-121	3.926	20.5	20	R
Naphthalene	4.484	0.20	5	0	89.7	45-120	4.035	10.6	20	
Nitrobenzene	5.084	0.20	5	0	102	44-120	4.112	21.1	20	R
N-Nitrosodi-n-propylamine	4.495	0.20	5	0	89.9	40-120	4.931	9.26	20	
N-Nitrosodiphenylamine	5.212	0.20	5	0	104	40-125	4.051	25.1	20	R
Pentachlorophenol	2.965	0.20	5	0	59.3	19-121	2.892	2.49	20	
Phenanthrene	4.342	0.20	5	0	86.8	45-121	4.243	2.3	20	
Phenol	4.05	0.20	5	0	81	20-124	4.229	4.33	20	
Pyrene	4.915	0.20	5	0	98.3	40-130	4.359	12	20	
Surr: 2,4,6-Tribromophenol	*4.954*	0.20	*5*	0	*99.1*	*34-129*	4.269	*14.9*	*0*	
Surr: 2-Fluorobiphenyl	*3.857*	0.20	*5*	0	*77.1*	*40-125*	4.206	*8.66*	*0*	
Surr: 2-Fluorophenol	*3.795*	0.20	*5*	0	*75.9*	*20-120*	4.125	*8.33*	*0*	
Surr: 4-Terphenyl-d14	*5.409*	0.20	*5*	0	*108*	*40-135*	4.88	*10.3*	*0*	
Surr: Nitrobenzene-d5	*5.18*	0.20	*5*	0	*104*	*41-120*	4.115	*22.9*	*0*	
Surr: Phenol-d6	*4.173*	0.20	*5*	0	*83.5*	*20-120*	4.44	*6.18*	*0*	

The following samples were analyzed in this batch:

12071240-01F	12071240-02F	12071240-03F
12071240-04F	12071240-05F	12071240-06F
12071240-07F	12071240-08F	12071240-09F
12071240-10F	12071240-11F	12071240-12F
12071240-13F	12071240-14F	12071240-15F

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **R132091** Instrument ID **VOA6** Method: **SW8260**

MBLK Sample ID: **VBLKW-072912-R132091** Units: **µg/L** Analysis Date: **7/30/2012 12:24 AM**

Client ID: Run ID: **VOA6_120729B** SeqNo: **2880081** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
2-Butanone	ND	10								
2-Hexanone	ND	10								
4-Isopropyltoluene	ND	5.0								
4-Methyl-2-pentanone	ND	10								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	10								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								
Ethylbenzene	ND	5.0								
Isopropylbenzene	ND	5.0								
m,p-Xylene	ND	10								
Methyl tert-butyl ether	ND	5.0								
Methylene chloride	ND	10								
Naphthalene	ND	5.0								
n-Butylbenzene	ND	5.0								
n-Propylbenzene	ND	5.0								
o-Xylene	ND	5.0								
sec-Butylbenzene	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
trans-1,2-Dichloroethene	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R132091** Instrument ID **VOA6** Method: **SW8260**

trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Vinyl chloride	ND	2.0					
Xylenes, Total	ND	15					
Surr: 1,2-Dichloroethane-d4	*57.26*	5.0	*50*	0	*115*	*70-125*	0
Surr: 4-Bromofluorobenzene	*47.76*	5.0	*50*	0	*95.5*	*72-125*	0
Surr: Dibromofluoromethane	*49.13*	5.0	*50*	0	*98.3*	*71-125*	0
Surr: Toluene-d8	*52.28*	5.0	*50*	0	*105*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **R132091** Instrument ID **VOA6** Method: **SW8260**

LCS Sample ID: **VLCSW-072912-R132091** Units: **µg/L** Analysis Date: **7/29/2012 11:31 PM**

Client ID: Run ID: **VOA6_120729B** SeqNo: **2880080** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	48.52	5.0	50	0	97	80-120	0			
1,1,2,2-Tetrachloroethane	51.97	5.0	50	0	104	72-120	0			
1,1,2-Trichloroethane	49.79	5.0	50	0	99.6	80-120	0			
1,1-Dichloroethane	55.51	5.0	50	0	111	76-120	0			
1,1-Dichloroethene	48.86	5.0	50	0	97.7	73-124	0			
1,2,4-Trimethylbenzene	49.49	5.0	50	0	99	68-123	0			
1,2-Dibromoethane	48.16	5.0	50	0	96.3	80-120	0			
1,2-Dichloroethane	46.55	5.0	50	0	93.1	78-120	0			
1,2-Dichloropropane	51.74	5.0	50	0	103	80-120	0			
1,3,5-Trimethylbenzene	48.38	5.0	50	0	96.8	80-120	0			
2-Butanone	101.9	10	100	0	102	58-132	0			
2-Hexanone	103.2	10	100	0	103	61-130	0			
4-Isopropyltoluene	46.2	5.0	50	0	92.4	79-120	0			
4-Methyl-2-pentanone	106.2	10	100	0	106	65-127	0			
Acetone	115	10	100	0	115	59-137	0			
Benzene	49.48	5.0	50	0	99	73-121	0			
Bromodichloromethane	48.24	5.0	50	0	96.5	80-120	0			
Bromoform	44.75	5.0	50	0	89.5	79-120	0			
Bromomethane	54.48	5.0	50	0	109	66-137	0			
Carbon disulfide	95.99	10	100	0	96	68-141	0			
Carbon tetrachloride	44.13	5.0	50	0	88.3	75-124	0			
Chlorobenzene	47.23	5.0	50	0	94.5	80-120	0			
Chloroethane	59.52	5.0	50	0	119	76-121	0			
Chloroform	49.1	5.0	50	0	98.2	80-120	0			
Chloromethane	51.88	5.0	50	0	104	67-123	0			
cis-1,2-Dichloroethene	48.42	5.0	50	0	96.8	78-120	0			
cis-1,3-Dichloropropene	49.16	5.0	50	0	98.3	80-120	0			
Dibromochloromethane	46.98	5.0	50	0	94	80-120	0			
Ethylbenzene	46.27	5.0	50	0	92.5	80-120	0			
Isopropylbenzene	47.13	5.0	50	0	94.3	80-120	0			
m,p-Xylene	95.01	10	100	0	95	78-121	0			
Methyl tert-butyl ether	52.55	5.0	50	0	105	73-121	0			
Methylene chloride	49.82	10	50	0	99.6	65-133	0			
Naphthalene	49.88	5.0	50	0	99.8	65-135	0			
n-Butylbenzene	51.85	5.0	50	0	104	77-120	0			
n-Propylbenzene	48.19	5.0	50	0	96.4	78-120	0			
o-Xylene	46.88	5.0	50	0	93.8	80-120	0			
sec-Butylbenzene	52.64	5.0	50	0	105	78-120	0			
Styrene	48.31	5.0	50	0	96.6	80-120	0			
Tetrachloroethene	42.09	5.0	50	0	84.2	79-120	0			
Toluene	48.56	5.0	50	0	97.1	80-120	0			
trans-1,2-Dichloroethene	48.53	5.0	50	0	97.1	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R132091** Instrument ID **VOA6** Method: **SW8260**

trans-1,3-Dichloropropene	49.16	5.0	50	0	98.3	80-120	0
Trichloroethene	42.56	5.0	50	0	85.1	80-120	0
Vinyl chloride	53.89	2.0	50	0	108	70-127	0
Xylenes, Total	141.9	15	150	0	94.6	80-120	0
Surr: 1,2-Dichloroethane-d4	*55.26*	5.0	*50*	0	*111*	*70-125*	0
Surr: 4-Bromofluorobenzene	*49.38*	5.0	*50*	0	*98.8*	*72-125*	0
Surr: Dibromofluoromethane	*51.71*	5.0	*50*	0	*103*	*71-125*	0
Surr: Toluene-d8	*51.15*	5.0	*50*	0	*102*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **R132091** Instrument ID **VOA6** Method: **SW8260**

MS Sample ID: **12071123-09AMS** Units: **µg/L** Analysis Date: **7/30/2012 01:17 AM**

Client ID: Run ID: **VOA6_120729B** SeqNo: **2880083** Prep Date: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	251.6	25	250	0	101	80-120	0			
1,1,2,2-Tetrachloroethane	276.2	25	250	0	110	72-120	0			
1,1,2-Trichloroethane	260.5	25	250	0	104	80-120	0			
1,1-Dichloroethane	272.8	25	250	0	109	76-120	0			
1,1-Dichloroethene	244	25	250	0	97.6	73-124	0			
1,2,4-Trimethylbenzene	248.4	25	250	0	99.4	68-123	0			
1,2-Dibromoethane	252.7	25	250	0	101	80-120	0			
1,2-Dichloroethane	261.7	25	250	0	105	78-120	0			
1,2-Dichloropropane	269.6	25	250	0	108	80-120	0			
1,3,5-Trimethylbenzene	245.3	25	250	0	98.1	80-120	0			
2-Butanone	517.7	50	500	0	104	58-132	0			
2-Hexanone	537.2	50	500	0	107	61-130	0			
4-Isopropyltoluene	231.2	25	250	0	92.5	79-120	0			
4-Methyl-2-pentanone	550.7	50	500	0	110	65-127	0			
Acetone	626.7	50	500	0	125	59-137	0			
Benzene	255.4	25	250	0	102	73-121	0			
Bromodichloromethane	254.7	25	250	0	102	80-120	0			
Bromoform	238.9	25	250	0	95.6	79-120	0			
Bromomethane	275	25	250	0	110	66-137	0			
Carbon disulfide	460	50	500	0	92	68-141	0			
Carbon tetrachloride	223.9	25	250	0	89.5	75-124	0			
Chlorobenzene	240.3	25	250	0	96.1	80-120	0			
Chloroethane	281.7	25	250	0	113	76-121	0			
Chloroform	260.9	25	250	0	104	80-120	0			
Chloromethane	269.2	25	250	0	108	67-123	0			
cis-1,2-Dichloroethene	436.4	25	250	198.2	95.2	78-120	0			
cis-1,3-Dichloropropene	258.7	25	250	0	103	80-120	0			
Dibromochloromethane	248.4	25	250	0	99.4	80-120	0			
Ethylbenzene	245.8	25	250	0	98.3	80-120	0			
Isopropylbenzene	237.4	25	250	0	94.9	80-120	0			
m,p-Xylene	482	50	500	0	96.4	78-121	0			
Methyl tert-butyl ether	247.3	25	250	0	98.9	73-121	0			
Methylene chloride	266	50	250	6.812	104	65-133	0			
Naphthalene	244.8	25	250	0	97.9	65-135	0			
n-Butylbenzene	259.2	25	250	0	104	77-120	0			
n-Propylbenzene	250.2	25	250	0	100	78-120	0			
o-Xylene	239.5	25	250	0	95.8	80-120	0			
sec-Butylbenzene	243.5	25	250	0	97.4	78-120	0			
Styrene	244.7	25	250	0	97.9	80-120	0			
Tetrachloroethene	211.3	25	250	0	84.5	79-120	0			
Toluene	244.3	25	250	0	97.7	80-120	0			
trans-1,2-Dichloroethene	245.1	25	250	0	98	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R132091** Instrument ID **VOA6** Method: **SW8260**

trans-1,3-Dichloropropene	258.7	25	250	0	103	80-120	0
Trichloroethene	213.5	25	250	0	85.4	80-120	0
Vinyl chloride	276.2	10	250	18.35	103	70-127	0
Xylenes, Total	721.4	75	750	0	96.2	80-120	0
Surr: 1,2-Dichloroethane-d4	*287.4*	25	*250*	0	*115*	*70-125*	0
Surr: 4-Bromofluorobenzene	*245.7*	25	*250*	0	*98.3*	*72-125*	0
Surr: Dibromofluoromethane	*251.8*	25	*250*	0	*101*	*71-125*	0
Surr: Toluene-d8	*253.4*	25	*250*	0	*101*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **R132091** Instrument ID **VOA6** Method: **SW8260**

MSD Sample ID: **12071123-09AMSD** Units: **µg/L** Analysis Date: **7/30/2012 01:44 AM**

Client ID: Run ID: **VOA6_120729B** SeqNo: **2880084** Prep Date: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	240	25	250	0	96	80-120	251.6	4.74	20	
1,1,2,2-Tetrachloroethane	253.1	25	250	0	101	72-120	276.2	8.71	20	
1,1,2-Trichloroethane	237.8	25	250	0	95.1	80-120	260.5	9.09	20	
1,1-Dichloroethane	269.8	25	250	0	108	76-120	272.8	1.13	20	
1,1-Dichloroethene	233	25	250	0	93.2	73-124	244	4.61	20	
1,2,4-Trimethylbenzene	235.1	25	250	0	94	68-123	248.4	5.52	20	
1,2-Dibromoethane	237.5	25	250	0	95	80-120	252.7	6.22	20	
1,2-Dichloroethane	230.5	25	250	0	92.2	78-120	261.7	12.7	20	
1,2-Dichloropropane	257.5	25	250	0	103	80-120	269.6	4.57	20	
1,3,5-Trimethylbenzene	236	25	250	0	94.4	80-120	245.3	3.89	20	
2-Butanone	483.7	50	500	0	96.7	58-132	517.7	6.78	20	
2-Hexanone	504.6	50	500	0	101	61-130	537.2	6.27	20	
4-Isopropyltoluene	222.3	25	250	0	88.9	79-120	231.2	3.93	20	
4-Methyl-2-pentanone	524	50	500	0	105	65-127	550.7	4.96	20	
Acetone	561	50	500	0	112	59-137	626.7	11.1	20	
Benzene	240.9	25	250	0	96.4	73-121	255.4	5.83	20	
Bromodichloromethane	235.4	25	250	0	94.2	80-120	254.7	7.88	20	
Bromoform	220.3	25	250	0	88.1	79-120	238.9	8.1	20	
Bromomethane	261.7	25	250	0	105	66-137	275	4.94	20	
Carbon disulfide	453.4	50	500	0	90.7	68-141	460	1.45	20	
Carbon tetrachloride	215.4	25	250	0	86.2	75-124	223.9	3.86	20	
Chlorobenzene	229.5	25	250	0	91.8	80-120	240.3	4.61	20	
Chloroethane	277.7	25	250	0	111	76-121	281.7	1.43	20	
Chloroform	249.4	25	250	0	99.8	80-120	260.9	4.52	20	
Chloromethane	264.5	25	250	0	106	67-123	269.2	1.75	20	
cis-1,2-Dichloroethene	422.6	25	250	198.2	89.8	78-120	436.4	3.19	20	
cis-1,3-Dichloropropene	240.5	25	250	0	96.2	80-120	258.7	7.3	20	
Dibromochloromethane	222.9	25	250	0	89.2	80-120	248.4	10.8	20	
Ethylbenzene	234.3	25	250	0	93.7	80-120	245.8	4.75	20	
Isopropylbenzene	232.4	25	250	0	92.9	80-120	237.4	2.13	20	
m,p-Xylene	452.7	50	500	0	90.5	78-121	482	6.27	20	
Methyl tert-butyl ether	246.5	25	250	0	98.6	73-121	247.3	0.327	20	
Methylene chloride	247.3	50	250	6.812	96.2	65-133	266	7.31	20	
Naphthalene	233.8	25	250	0	93.5	65-135	244.8	4.59	20	
n-Butylbenzene	240	25	250	0	96	77-120	259.2	7.68	20	
n-Propylbenzene	239.8	25	250	0	95.9	78-120	250.2	4.24	20	
o-Xylene	227.9	25	250	0	91.2	80-120	239.5	4.94	20	
sec-Butylbenzene	239.5	25	250	0	95.8	78-120	243.5	1.69	20	
Styrene	234.6	25	250	0	93.8	80-120	244.7	4.22	20	
Tetrachloroethene	203.5	25	250	0	81.4	79-120	211.3	3.77	20	
Toluene	233.9	25	250	0	93.6	80-120	244.3	4.34	20	
trans-1,2-Dichloroethene	238.6	25	250	0	95.5	78-120	245.1	2.68	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R132091** Instrument ID **VOA6** Method: **SW8260**

trans-1,3-Dichloropropene	240.5	25	250	0	96.2	80-120	258.7	7.3	20
Trichloroethene	217.5	25	250	0	87	80-120	213.5	1.86	20
Vinyl chloride	283.5	10	250	18.35	106	70-127	276.2	2.63	20
Xylenes, Total	680.6	75	750	0	90.7	80-120	721.4	5.83	20
Surr: 1,2-Dichloroethane-d4	*263*	25	*250*	0	*105*	*70-125*	287.4	*8.86*	*20*
Surr: 4-Bromofluorobenzene	*251.3*	25	*250*	0	*101*	*72-125*	245.7	*2.27*	*20*
Surr: Dibromofluoromethane	*254.2*	25	*250*	0	*102*	*71-125*	251.8	*0.957*	*20*
Surr: Toluene-d8	*250.1*	25	*250*	0	*100*	*75-125*	253.4	*1.32*	*20*

The following samples were analyzed in this batch:

12071240-01A	12071240-02A	12071240-03A
12071240-04A	12071240-05A	12071240-06A
12071240-07A	12071240-08A	12071240-09A
12071240-10A	12071240-11A	12071240-12A
12071240-13A	12071240-14A	12071240-15A
12071240-16A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **R132138** Instrument ID **ICS3000** Method: **E300** **(Dissolve)**

MBLK Sample ID: **WBLKW1-R132138** Units: **mg/L** Analysis Date: **7/30/2012 03:59 PM**
Client ID: Run ID: **ICS3000_120730A** SeqNo: **2880983** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	ND	0.20								
Surr: Selenate (surr)	*4.682*	0.10	*5*	0	*93.6*	*85-115*	0			

LCS Sample ID: **WLCSW1-R132138** Units: **mg/L** Analysis Date: **7/30/2012 04:20 PM**
Client ID: Run ID: **ICS3000_120730A** SeqNo: **2880984** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	7.42	0.20	8	0	92.8	90-110	0			
Surr: Selenate (surr)	*4.846*	0.10	*5*	0	*96.9*	*85-115*	0			

MS Sample ID: **1207396-01NMS** Units: **mg/L** Analysis Date: **7/30/2012 05:02 PM**
Client ID: Run ID: **ICS3000_120730A** SeqNo: **2880986** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	3.788	0.20	4	0.616	79.3	80-120	0			S
Surr: Selenate (surr)	*4.268*	0.10	*5*	0	*85.4*	*85-115*	0			

MSD Sample ID: **1207396-01NMSD** Units: **mg/L** Analysis Date: **7/30/2012 05:23 PM**
Client ID: Run ID: **ICS3000_120730A** SeqNo: **2880987** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	3.7	0.20	4	0.616	77.1	80-120	3.788	2.35	20	S
Surr: Selenate (surr)	*4.279*	0.10	*5*	0	*85.6*	*85-115*	4.268	*0.257*	*20*	

The following samples were analyzed in this batch:

12071240-01D	12071240-02D	12071240-03D
12071240-04D	12071240-05D	12071240-06D
12071240-07D	12071240-08D	12071240-09D
12071240-10D	12071240-11D	12071240-12D
12071240-13D	12071240-14D	12071240-15D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **R132181** Instrument ID **Balance1** Method: **M2540C** **(Dissolve)**

MBLK Sample ID: **WBLK-073012-R132181** Units: **mg/L** Analysis Date: **7/30/2012 11:45 AM**
Client ID: Run ID: **BALANCE1_120730D** SeqNo: **2882218** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	ND	10								

LCS Sample ID: **WLCS-073012-R132181** Units: **mg/L** Analysis Date: **7/30/2012 11:45 AM**
Client ID: Run ID: **BALANCE1_120730D** SeqNo: **2882219** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	1002	10	1000	0	100	85-115	0			

DUP Sample ID: **12071054-01GDUP** Units: **mg/L** Analysis Date: **7/30/2012 11:45 AM**
Client ID: Run ID: **BALANCE1_120730D** SeqNo: **2882197** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	438	10	0	0	0	0-0	436	0.458	20	

DUP Sample ID: **12071240-04EDUP** Units: **mg/L** Analysis Date: **7/30/2012 11:45 AM**
Client ID: **MW-15-0712** Run ID: **BALANCE1_120730D** SeqNo: **2882211** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	1086	10	0	0	0	0-0	1058	2.61	20	

The following samples were analyzed in this batch:

12071240-01E	12071240-02E	12071240-04E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **R132188** Instrument ID **WetChem** Method: **M2510 B** **(Dissolve)**

MBLK Sample ID: **WBLKW1-073112-R132188** Units: **µmhos/cm** Analysis Date: **7/31/2012 11:30 AM**

Client ID: Run ID: **WETCHEM_120731C** SeqNo: **2882322** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	ND	1.0								

LCS Sample ID: **WLCSW1-073112-R132188** Units: **µmhos/cm** Analysis Date: **7/31/2012 11:30 AM**

Client ID: Run ID: **WETCHEM_120731C** SeqNo: **2882323** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	1360	1.0	1413	0	96.2	80-120	0			

DUP Sample ID: **12071240-10EDUP** Units: **µmhos/cm** Analysis Date: **7/31/2012 11:30 AM**

Client ID: **MW-3-0712** Run ID: **WETCHEM_120731C** SeqNo: **2882357** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	706	1.0	0	0	0		710	0.565	20	

The following samples were analyzed in this batch:

12071240-10E	12071240-11E	12071240-12E
12071240-13E	12071240-14E	12071240-15E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **R132232** Instrument ID **WetChem** Method: **M2510 B** **(Dissolve)**

MBLK Sample ID: **WBLKW1-073112-R132232** Units: **µmhos/cm** Analysis Date: **7/31/2012 10:30 AM**

Client ID: Run ID: **WETCHEM_120731Q** SeqNo: **2883154** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	ND	1.0								

LCS Sample ID: **WLCSW1-073112-R132232** Units: **µmhos/cm** Analysis Date: **7/31/2012 10:30 AM**

Client ID: Run ID: **WETCHEM_120731Q** SeqNo: **2883155** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	1360	1.0	1413	0	96.2	80-120	0			

DUP Sample ID: **1207910-01FDUP** Units: **µmhos/cm** Analysis Date: **7/31/2012 10:30 AM**

Client ID: Run ID: **WETCHEM_120731Q** SeqNo: **2883172** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	437	1.0	0	0	0		431	1.38	20	

The following samples were analyzed in this batch:

12071240-01E	12071240-02E	12071240-03E
12071240-04E	12071240-05E	12071240-06E
12071240-07E	12071240-08E	12071240-09E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **R132271** Instrument ID **WetChem** Method: **SM4500H+ B** **(Dissolve)**

LCS Sample ID: **WLCSW1-080112-R132271** Units: **pH Units** Analysis Date: **8/1/2012 12:10 PM**

Client ID: Run ID: **WETCHEM_120801E** SeqNo: **2884016** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.04	0.10	6	0	101	90-110	0			

DUP Sample ID: **12071303-01HDUP** Units: **pH Units** Analysis Date: **8/1/2012 12:10 PM**

Client ID: Run ID: **WETCHEM_120801E** SeqNo: **2884030** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.95	0.10	0	0	0	0-0	8.03	1	20	H

The following samples were analyzed in this batch:

12071240-01E	12071240-02E	12071240-03E
12071240-04E	12071240-05E	12071240-06E
12071240-07E	12071240-12E	12071240-13E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **R132272** Instrument ID **Balance1** Method: **M2540C** **(Dissolve)**

MBLK Sample ID: **WBLK-073112-R132272** Units: **mg/L** Analysis Date: **7/31/2012 10:45 AM**
Client ID: Run ID: **BALANCE1_120731D** SeqNo: **2884057** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	ND	10								

LCS Sample ID: **WLCS-073112-R132272** Units: **mg/L** Analysis Date: **7/31/2012 10:45 AM**
Client ID: Run ID: **BALANCE1_120731D** SeqNo: **2884058** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	1036	10	1000	0	104	85-115	0			

DUP Sample ID: **12071143-01GDUP** Units: **mg/L** Analysis Date: **7/31/2012 10:45 AM**
Client ID: Run ID: **BALANCE1_120731D** SeqNo: **2884043** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	120	10	0	0	0	0-0	118	1.68	20	

DUP Sample ID: **12071240-07EDUP** Units: **mg/L** Analysis Date: **7/31/2012 10:45 AM**
Client ID: **MW-6-0712** Run ID: **BALANCE1_120731D** SeqNo: **2884056** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	676	10	0	0	0	0-0	690	2.05	20	

The following samples were analyzed in this batch:

12071240-03E	12071240-05E	12071240-06E
12071240-07E		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **R132294** Instrument ID **ICS2100** Method: **E300** **(Dissolve)**

MBLK Sample ID: **WBLKW1-R132294** Units: **mg/L** Analysis Date: **7/31/2012 04:45 PM**
Client ID: Run ID: **ICS2100_120731C** SeqNo: **2884342** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Fluoride	ND	0.10								
Sulfate	ND	0.50								
Surr: Selenate (surr)	*5.651*	0.10	*5*	0	*113*	*85-115*	0			

LCS Sample ID: **WLCSW1-R132294** Units: **mg/L** Analysis Date: **7/31/2012 04:59 PM**
Client ID: Run ID: **ICS2100_120731C** SeqNo: **2884343** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.38	0.50	20	0	107	90-110	0			
Fluoride	4.194	0.10	4	0	105	90-110	0			
Sulfate	21.06	0.50	20	0	105	90-110	0			
Surr: Selenate (surr)	*5.652*	0.10	*5*	0	*113*	*85-115*	0			

MS Sample ID: **12071240-15EMS** Units: **mg/L** Analysis Date: **7/31/2012 11:03 PM**
Client ID: **MW-5-0712** Run ID: **ICS2100_120731C** SeqNo: **2884368** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	26.62	0.50	10	15.86	108	80-120	0			
Fluoride	3.155	0.10	2	1.104	103	80-120	0			
Sulfate	60.83	0.50	10	50.14	107	80-120	0			O
Surr: Selenate (surr)	*5.579*	0.10	*5*	0	*112*	*85-115*	0			

MSD Sample ID: **12071240-15EMSD** Units: **mg/L** Analysis Date: **7/31/2012 11:17 PM**
Client ID: **MW-5-0712** Run ID: **ICS2100_120731C** SeqNo: **2884369** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	25.76	0.50	10	15.86	99	80-120	26.62	3.29	20	
Fluoride	3.087	0.10	2	1.104	99.2	80-120	3.155	2.18	20	
Sulfate	59.6	0.50	10	50.14	94.6	80-120	60.83	2.04	20	O
Surr: Selenate (surr)	*5.409*	0.10	*5*	0	*108*	*85-115*	5.579	*3.09*	*20*	

The following samples were analyzed in this batch:

12071240-01E	12071240-02E	12071240-03E
12071240-04E	12071240-05E	12071240-06E
12071240-07E	12071240-08E	12071240-09E
12071240-10E	12071240-11E	12071240-12E
12071240-13E	12071240-14E	12071240-15E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **R132316** Instrument ID **ICS2100** Method: **E300** **(Dissolve)**

MBLK Sample ID: **WBLKW1-R132316** Units: **mg/L** Analysis Date: **8/1/2012 07:12 PM**
Client ID: Run ID: **ICS2100_120801B** SeqNo: **2884995** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								
Surr: Selenate (surr)	*3.745*	0.10	*4*	0	*93.6*	*85-115*	0			

LCS Sample ID: **WLCSW1-R132316** Units: **mg/L** Analysis Date: **8/1/2012 07:27 PM**
Client ID: Run ID: **ICS2100_120801B** SeqNo: **2884996** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.31	0.50	20	0	102	90-110	0			
Sulfate	20.04	0.50	20	0	100	90-110	0			
Surr: Selenate (surr)	*3.726*	0.10	*4*	0	*93.2*	*85-115*	0			

MS Sample ID: **12071350-01GMS** Units: **mg/L** Analysis Date: **8/2/2012 12:47 AM**
Client ID: Run ID: **ICS2100_120801B** SeqNo: **2885018** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	336.2	5.0	100	230.7	105	80-120	0			
Sulfate	10.32	5.0	100	1.048	9.28	80-120	0			S
Surr: Selenate (surr)	*54.17*	1.0	*50*	0	*108*	*85-115*	0			

MSD Sample ID: **12071350-01GMSD** Units: **mg/L** Analysis Date: **8/2/2012 01:01 AM**
Client ID: Run ID: **ICS2100_120801B** SeqNo: **2885019** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	337.8	5.0	100	230.7	107	80-120	336.2	0.487	20	
Sulfate	108.5	5.0	100	1.048	107	80-120	10.32	165	20	R
Surr: Selenate (surr)	*54.5*	1.0	*50*	0	*109*	*85-115*	54.17	*0.607*	*20*	

The following samples were analyzed in this batch:

12071240-01E	12071240-02E	12071240-04E
12071240-12E	12071240-13E	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **R132357** Instrument ID **WetChem** Method: **SM4500H+ B** **(Dissolve)**

LCS Sample ID: **WLCSW1-080212-R132357** Units: **pH Units** Analysis Date: **8/2/2012 09:30 AM**

Client ID: Run ID: **WETCHEM_120802C** SeqNo: **2885587** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.05	0.10	6	0	101	90-110	0			

DUP Sample ID: **12071240-08EDUP** Units: **pH Units** Analysis Date: **8/2/2012 09:30 AM**

Client ID: **MW-9-0712** Run ID: **WETCHEM_120802C** SeqNo: **2885604** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.59	0.10	0	0	0	0-0	7.66	0.918	20	H

The following samples were analyzed in this batch:

12071240-08E	12071240-09E	12071240-10E
12071240-11E	12071240-14E	12071240-15E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **R132392** Instrument ID **Balance1** Method: **M2540C** **(Dissolve)**

MBLK Sample ID: **WBLK-080112-R132392** Units: **mg/L** Analysis Date: **8/1/2012 08:15 AM**
Client ID: Run ID: **BALANCE1_120801I** SeqNo: **2886440** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	ND	10								

LCS Sample ID: **WLCS-080112-R132392** Units: **mg/L** Analysis Date: **8/1/2012 08:15 AM**
Client ID: Run ID: **BALANCE1_120801I** SeqNo: **2886441** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	1004	10	1000	0	100	85-115	0			

DUP Sample ID: **12071209-01GDUP** Units: **mg/L** Analysis Date: **8/1/2012 08:15 AM**
Client ID: Run ID: **BALANCE1_120801I** SeqNo: **2886413** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	260	10	0	0	0	0-0	260	1E-10	20	

DUP Sample ID: **12071275-01GDUP** Units: **mg/L** Analysis Date: **8/1/2012 08:15 AM**
Client ID: Run ID: **BALANCE1_120801I** SeqNo: **2886437** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	484	10	0	0	0	0-0	448	7.73	20	

The following samples were analyzed in this batch:

12071240-08E	12071240-09E	12071240-10E
12071240-11E	12071240-12E	12071240-13E
12071240-14E	12071240-15E	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071240
Project: Lovington Lea Refinery - SA

QC BATCH REPORT

Batch ID: **R132541** Instrument ID **WetChem** Method: **SM2320B** **(Dissolve)**

MBLK Sample ID: **WBLKW1-080312-R132541** Units: **mg/L** Analysis Date: **8/3/2012 02:00 PM**

Client ID: Run ID: **WETCHEM_120803M** SeqNo: **2889606** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.0								
Alkalinity, Carbonate (As CaCO3)	ND	5.0								
Alkalinity, Hydroxide (As CaCO3)	ND	5.0								
Alkalinity, Total (As CaCO3)	ND	5.0								

LCS Sample ID: **WLCSW1-080312-R132541** Units: **mg/L** Analysis Date: **8/3/2012 02:00 PM**

Client ID: Run ID: **WETCHEM_120803M** SeqNo: **2889607** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1015	5.0	1000	0	102	80-120	0			

DUP Sample ID: **12071284-01FDUP** Units: **mg/L** Analysis Date: **8/3/2012 02:00 PM**

Client ID: Run ID: **WETCHEM_120803M** SeqNo: **2889633** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	246.8	5.0	0	0	0	0-0	254.4	3.02	20	
Alkalinity, Carbonate (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	246.8	5.0	0	0	0	0-0	254.4	3.02	20	

The following samples were analyzed in this batch:

12071240-01E	12071240-02E	12071240-03E
12071240-04E	12071240-05E	12071240-06E
12071240-07E	12071240-08E	12071240-09E
12071240-10E	12071240-11E	12071240-12E
12071240-13E	12071240-14E	12071240-15E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refinery - SA
WorkOrder: **12071240**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter
µmhos/cm	
mg/L	Milligrams per Liter
pH Units	

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **26-Jul-12 09:05**

Work Order: **12071240** Received by: **RNG**

Checklist completed by Raymond N Gamboa (eSignature) 26-Jul-12 (Date) Reviewed by: Patricia L. Lynch (eSignature) 30-Jul-12 (Date)

Matrices: 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):	1.7c, 0.4c,, 0.8c, 2.2c, 1.2c, 0.9c	003	
Cooler(s)/Kit(s):	4602, 2750, 4254, 5044, 2635, 2677		
Date/Time sample(s) sent to storage:	7/26/2012 16:45		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

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Chain of Custody Form

Page 1 of 4

COC ID: 67002

12071240

NAVAJO REFINING: Navajo Refining Company

Project: Lovington Lea Refinery - SA

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Lovington Lea Refining - SA	A	VOCs (8260) - Select List
Work Order		Project Number		B	LL SVOCs (8270) - TCL + 1-methylnaphthalene
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (7470) - Hg
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange	D	Dissolved Metals (6020/7000) - Select List
Address	501 East Main	Address	501 East Main	E	Anions (300) -Cl,F,SO4
				F	Alkalinity
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	pH
Phone	(575) 703-5057	Phone	(575) 703-5057	H	Specific Conductivity
Fax	(575) 746-5421	Fax	(575) 746-5421	I	TDS
e-Mail Address		e-Mail Address		J	Nitrate/Nitrite (300) - H2SO4

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-29-0712	07/24	0908	H2O	2,3,8	6		X	X	X	X	X	X	X	X	X	
2	MW-2-0712	07/24	0950	H2O	2,3,8	6											
3	MW-28-0712	07/24	1040	H2O	2,3,8	6											
4	MW-15-0712	07/24	1130	H2O	2,3,8	6											
5	MW-16-0712	07/24	1245	H2O	2,3,8	6											
6	MW-4-0712	07/24	1335	H2O	2,3,8	6											
7	MW-6-0712	07/24	1425	H2O	2,3,8	6											
8	MW-9-0712	07/25	0830	H2O	2,3,8	6											
9	MW-10-0712	07/25	0915	H2O	2,3,8	6											
10	MW-3-0712	07/25	0955	H2O	2,3,8	6		X	X	X	X	X	X	X	X	X	

Sampler(s) Please Print & Sign: SOSA JERRY

Shipment Method: FED X

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

Results Due Date:

Relinquished by: Date: 07/25/12 Time: 1600 Received by:

Relinquished by: Date: Time: Received by (Laboratory): 7/26/12 09:05

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

Notes: 10 Day 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 / EDD
☐ 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 Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental 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.

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Chain of Custody Form

COC ID: 67001

ALS Project Manager: | ALS Work Order #: 1251240

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Lovington Lea Refining - SA	A	VOCs (8260) - Select List
Work Order		Project Number		B	LL SVOCs (8270) - TCL + 1-methylnaphthalene
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (7470) - Hg
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange	D	Dissolved Metals (6020/7000) - Select List
Address	501 East Main	Address	501 East Main	E	Anions (300) -Cl,F,SO4
				F	Alkalinity
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	pH
Phone	(575) 703-5057	Phone	(575) 703-5057	H	Specific Conductivity
Fax	(575) 746-5421	Fax	(575) 746-5421	I	TDS
e-Mail Address		e-Mail Address		J	Nitrate/Nitrite (300) - H2SO4

115 of 120

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	mw-18-0712	07/25	1040	H2O	2,3,8	6		X	X	X	X	X	X	X	X	X	
2	mw-19-0712	07/25	1145	H2O	2,3,8	6		"	"	"	"	"	"	"	"	"	
3	mw-20-0712	07/25	1310	H2O	2,3,8	6		"	"	"	"	"	"	"	"	"	
4	mw-14-0712	07/25	1350	H2O	2,3,8	6		"	"	"	"	"	"	"	"	"	
5	mw-5-0712	07/25	1435	H2O	2,3,8	6		X	X	X	X	X	X	X	X	X	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Sosa Jerry Sosa Jerry

Shipment Method: FED X

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

Results Due Date:

Relinquished by: Sosa Jerry Sosa Jerry Date: 07/25/12 Time: 1600 Received by:

Relinquished by: Date: Time: Received by (Laboratory): 7/26/12 0915

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

Notes: 10 Day TAT.

Cooler ID	Cooler Temp.

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

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 Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental 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.

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Salt Lake City, UT +1 801 266 7700
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Chain of Custody Form

COC ID: 66994

ALS Project Manager:

ALS Work Order #: 1207246

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Lovington Lea Refining - SA	A	VOCs (8260) - Select List
Work Order		Project Number		B	LL SVOCs (8270) - TCL + 1-methylnaphthalene
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (7470) - Hg
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange	D	Dissolved Metals (6020/7000) - Select List
Address	501 East Main	Address	501 East Main	E	Anions (300) -Cl,F,SO4
				F	Alkalinity
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	pH
Phone	(575) 703-5057	Phone	(575) 703-5057	H	Specific Conductivity
Fax	(575) 746-5421	Fax	(575) 746-5421	I	TDS
e-Mail Address		e-Mail Address		J	Nitrate/Nitrite (300) - H2SO4

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-29-0712	07/24	0908	H2O	HCl	3	X										
2	MW-2-0712	07/24	0950			3	X										
3	MW-28-0712	07/24	1040			3	X										
4	MW-15-0712	07/24	1130			3	X										
5	MW-16-0712	07/24	1245			3	X										
6	MW-4-0712	07/24	1335			3	X										
7	MW-6-0712	07/24	1425			3	X										
8	MW-9-0712	07/25	0830			3	X										
9	MW-10-0712	07/25	0915			3	X										
10	MW-3-0712	07/25	0955	H2O	HCl	3	X										

Sampler(s) Please Print & Sign: Josh Jary Josh Jary

Shipment Method: FED X

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

Results Due Date:

Relinquished by: Josh Jary Date: 07/25 Time: 1600

Relinquished by: Date: Time:

Received by:

Received by (Laboratory): 7/26/12 09:15

Logged by (Laboratory): Date: Time:

Checked by (Laboratory):

Notes: 10 Day 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 / EDD
☐ 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 Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental 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.

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Spring City, PA +1 610 948 4903
South Charleston, WV +1 304 356 3168
Middletown, PA +1 717 944 5541
Salt Lake City, UT +1 801 266 7700
York, PA +1 717 505 5280

ALS Environmental

Chain of Custody Form

COC ID: 67000

ALS Project Manager: | ALS Work Order #: 1207146

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Lovington Lea Refining - SA	A	VOCs (8260) - Select List
Work Order		Project Number		B	LL SVOCs (8270) - TCL + 1-methylnaphthalene
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (7470) - Hg
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange	D	Dissolved Metals (6020/7000) - Select List
Address	501 East Main	Address	501 East Main	E	Anions (300) -Cl,F,SO4
				F	Alkalinity
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	pH
Phone	(575) 703-5057	Phone	(575) 703-5057	H	Specific Conductivity
Fax	(575) 746-5421	Fax	(575) 746-5421	I	TDS
e-Mail Address		e-Mail Address		J	Nitrate/Nitrite (300) - H2SO4

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-18-0712	07/25	1040	H2O	1,8	3	X										
2	MW-19-0712	07/25	1145	H2O	1,8	3	X										
3	MW-20-0712	07/25	1310	H2O	1,8	3	X										
4	MW-14-0712	07/25	1350	H2O	1,8	3	X										
5	MW-5-0712	07/25	1435	H2O	1,8	3	X										
6	Trip Blank 070912-47	07/25	1600	H2O	1,8	2	X										
7																	
8																	
9																	
10																	

117 of 120

Sampler(s) Please Print & Sign: Sean Jeffery Sean Jeffery

Shipment Method: FED X

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

Results Due Date:

Relinquished by: Sean Jeffery | Date: 07/25/12 | Time: 1600 | Received by:

Relinquished by: | Date: | Time: | Received by (Laboratory): 7/26/12 09:05

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

Notes: 10 Day TAT.

Cooler ID	Cooler Temp.

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

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 Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental 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.

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W.O.# 1207240

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

CUSTODY SEAL 4254
Date: 07/25/12 Time: 1600
Name: Sosa
Company: SESI
Seal Broken By: RNG
Date: 7/26/12

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

CUSTODY SEAL 4254
Date: 07/25/12 Time: 1600
Name: Sosa
Company: SESI
Seal Broken By: RNG
Date: 7/26/12

This portion can be removed for Recipient's records.
Date 07/25/12 FedEx Tracking Number 899670161325
Sender's Name Sosa, Jerry Phone 575-397-0519
Company Safety & Environmental Solutions
Address 703 E Clinton Dept./Floor/Suite/Room
Hobbs State NM ZIP 88240
Your Internal Billing Reference 5044

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

Date: 07/25/12
Name: Sosa
Company: SESI

CUSTODY SEAL 5044
Date: 07/25/12 Time: 1600
Name: Sosa
Company: SESI
Seal Broken By: RNG
Date: 7/26/12

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

CUSTODY SEAL 5044
Date: 07/25/12 Time: 1600
Name: Sosa
Company: SESI
Seal Broken By: RNG
Date: 7/26/12

This portion can be removed for Recipient's records.
Date 07/25/12 FedEx Tracking Number 899670161358
Sender's Name Sosa, Jerry Phone 575 397-0510
Company Safety & Environmental Solutions
Address 703 E. Clinton Dept./Floor/Suite/Room
Hobbs State N.M ZIP 88240
Your Internal Billing Reference 2635

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

CUSTODY SEAL 4255
Date: 07/25/12 Time: 1600
Name: Sosa
Company: SESI
Seal Broken By: RNG
Date: 7/26/12

W.O.# 1207240

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e 07/25/12 FedEx Tracking Number 899670161370

der's ne Sosa, Jerry Phone 575 397-0510

Company Safety & Environmental Solutions

Address 703 E. Clinton Dept/Floor/Suite/Room

Hobbs State N.M. ZIP 88240

r Internal Billing Reference 462

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

CUSTODY SEAL 462
Date: 07/25/12 Time: 1600
Name: Sosa Jerry
Company:
Broken By: RNG
Date: 7/26/12

This portion can be removed for Recipient's records.

e 07/25/12 FedEx Tracking Number 899670161347

der's ne Sosa, Jerry Phone 575 397-0510

Company Safety & Environmental Solutions

Address 703 E Clinton Dept/Floor/Suite/Room

Hobbs State N.M. ZIP 88240

r Internal Billing Reference 2750

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

CUSTODY SEAL 2750
Date: 07/25/12 Time: 1600
Name: Sosa Jerry
Company:
Broken By: RNG
Date: 7/26/12

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

CUSTODY SEAL 2750
Date: 07/25/12 Time: 1600
Name: Sosa Jerry
Company:
Broken By: RNG
Date: 7/26/12

This portion can be removed for Recipient's records.

e 07/25/12 FedEx Tracking Number 899670161

der's ne Sosa, Jerry Phone 575 397-0510

Company Safety & Environmental Solutions

Address 703 E. Clinton Dept/Floor/Suite/Room

Hobbs State N.M. ZIP 88240

r Internal Billing Reference 4254

W.O.# 12071240

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

Date:
Name:
Comp

CUSTODY SEAL 485
Time: 1600
Broken By: RVB
Date: 7/26/12

This portion can be removed for Recipient's records.

Date 07/25/12 FedEx Tracking Number 899670161336

Sender's Name Sosa, Jerry Phone 575 397-0510

Company Safety & Environmental Solutions

Address 703 E. Clinton

Dept/Room/Suite/Room

Hobbs State NM ZIP 88240

Your Internal Billing Reference 2077

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

CUSTODY SEAL
Date: 07/25/12 Time: 1600
Name: Sosa SESI
Broken By: RVB
Date: 7/26/12

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

Date: 07
Name:
Company:

CUSTODY SEAL
12/5/12 Time: 1600
Sosa SESI
Broken By: RVB
Date: 7/26/12

17-Aug-2012

Aaron Strange
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 748-6733
Fax: (575) 746-5421

Re: Navajo Lea Refinery Semi-Annual Work Order: **12071372**

Dear Aaron,

ALS Environmental received 13 samples on 28-Jul-2012 09:25 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental 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 Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 111.

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

Sincerely,

Patricia L. Lynch

Electronically approved by: Jumoke M. Lawal

Patricia L. Lynch
Project Manager

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 17-Aug-12

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: **12071372**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
12071372-01	MW - 21 - 0712	Water		7/26/2012 09:10	7/28/2012 09:25	☐
12071372-02	MW - 22 - 0712	Water		7/26/2012 09:55	7/28/2012 09:25	☐
12071372-03	MW - 23 - 0712	Water		7/26/2012 10:35	7/28/2012 09:25	☐
12071372-04	MW - 25 - 0712	Water		7/26/2012 11:20	7/28/2012 09:25	☐
12071372-05	MW - 26 - 0712	Water		7/26/2012 12:10	7/28/2012 09:25	☐
12071372-06	MW - 13 - 0712	Water		7/26/2012 13:35	7/28/2012 09:25	☐
12071372-07	MW - 27 - 0712	Water		7/26/2012 14:20	7/28/2012 09:25	☐
12071372-08	MW - 11 - 0712	Water		7/27/2012 09:15	7/28/2012 09:25	☐
12071372-09	MW - 8 - 0712	Water		7/27/2012 10:45	7/28/2012 09:25	☐
12071372-10	MW - 1 - 0712	Water		7/27/2012 12:00	7/28/2012 09:25	☐
12071372-11	MW - 7 - 0712	Water		7/27/2012 13:20	7/28/2012 09:25	☐
12071372-12	RW - 1 - 0712	Water		7/27/2012 14:20	7/28/2012 09:25	☐
12071372-13	TRIP BLANK 071912-83	Water		7/27/2012 16:00	7/28/2012 09:25	☐

Client:	Navajo Refining Company
Project:	Navajo Lea Refinery Semi-Annual
Work Order:	12071372

Case Narrative

The samples were received outside method holding time for pH which is "immediate" per 40CFR136. Therefore, the results are flagged with H.

Batch 632094, Metals, Sample RW-1-0712: MS/MSD recoveries and duplicate RPD for aluminum are outside the control limits. Also, the MS recovery for calcium and MSD recovery for sodium are above the control limits due to the sample matrix. These results are flagged with O. All LCS recoveries and MS/MSD RPDs are in control.

Batch 63036, Semivolatile Organics: Several LCS/LCSD RPDs are above the control limits, but all recoveries are in control. Insufficient sample was available for MS/MSD. The LCS/LCSD was used for batch quality control.

Batch R132370, Volatile Organics, Sample 12071426-01: MSD recoveries and MS/MSD RPDs are for an unrelated sample.

Batch R132621, Nitrate, Sample 1208080-01: MS/MSD recoveries are for an unrelated sample.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 21 - 0712
Lab ID: 12071372-01
Collection Date: 7/26/2012 09:10 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/3/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/3/2012 03:17 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/6/2012**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	8/8/2012 09:03 PM
Arsenic	ND		0.00500	mg/L	1	8/8/2012 09:03 PM
Barium	**0.244**		**0.00500**	**mg/L**	1	8/8/2012 09:03 PM
Boron	**0.261**		**0.0200**	**mg/L**	1	8/8/2012 09:03 PM
Cadmium	ND		0.00200	mg/L	1	8/8/2012 09:03 PM
Calcium	**242**		**5.00**	**mg/L**	10	8/9/2012 02:57 PM
Chromium	ND		0.00500	mg/L	1	8/8/2012 09:03 PM
Cobalt	ND		0.00500	mg/L	1	8/8/2012 09:03 PM
Copper	ND		0.00500	mg/L	1	8/8/2012 09:03 PM
Iron	ND		0.200	mg/L	1	8/8/2012 09:03 PM
Lead	ND		0.00500	mg/L	1	8/8/2012 09:03 PM
Magnesium	**25.0**		**0.200**	**mg/L**	1	8/8/2012 09:03 PM
Manganese	**0.0380**		**0.00500**	**mg/L**	1	8/8/2012 09:03 PM
Molybdenum	ND		0.00500	mg/L	1	8/8/2012 09:03 PM
Nickel	**0.00827**		**0.00500**	**mg/L**	1	8/8/2012 09:03 PM
Potassium	**3.10**		**0.200**	**mg/L**	1	8/8/2012 09:03 PM
Selenium	ND		0.00500	mg/L	1	8/8/2012 09:03 PM
Silver	ND		0.00500	mg/L	1	8/8/2012 09:03 PM
Sodium	**60.2**		**0.200**	**mg/L**	1	8/8/2012 09:03 PM
Uranium	**0.00862**		**0.00500**	**mg/L**	1	8/8/2012 09:03 PM
Zinc	**0.0163**		**0.00500**	**mg/L**	1	8/8/2012 09:03 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/31/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/3/2012 09:44 PM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/3/2012 09:44 PM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/3/2012 09:44 PM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/3/2012 09:44 PM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/3/2012 09:44 PM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/3/2012 09:44 PM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
2-Chlorophenol	ND		0.20	µg/L	1	8/3/2012 09:44 PM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
2-Methylphenol	ND		0.20	µg/L	1	8/3/2012 09:44 PM
2-Nitroaniline	ND		0.20	µg/L	1	8/3/2012 09:44 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 21 - 0712
Lab ID: 12071372-01
Collection Date: 7/26/2012 09:10 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/3/2012 09:44 PM
3&4-Methylphenol	ND		0.20	µg/L	1	8/3/2012 09:44 PM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/3/2012 09:44 PM
3-Nitroaniline	ND		0.20	µg/L	1	8/3/2012 09:44 PM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/3/2012 09:44 PM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/3/2012 09:44 PM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/3/2012 09:44 PM
4-Chloroaniline	ND		0.20	µg/L	1	8/3/2012 09:44 PM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/3/2012 09:44 PM
4-Nitroaniline	ND		0.20	µg/L	1	8/3/2012 09:44 PM
4-Nitrophenol	ND		1.0	µg/L	1	8/3/2012 09:44 PM
Acenaphthene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Acenaphthylene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Acetophenone	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Anthracene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Atrazine	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Benz(a)anthracene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Benzaldehyde	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Bis(2-ethylhexyl)phthalate	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Caprolactam	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Carbazole	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Chrysene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Dibenzofuran	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Diethyl phthalate	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Dimethyl phthalate	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Fluoranthene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Fluorene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Hexachlorobenzene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/3/2012 09:44 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071372
Sample ID: MW - 21 - 0712 **Lab ID:** 12071372-01
Collection Date: 7/26/2012 09:10 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Hexachloroethane	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Isophorone	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Naphthalene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Nitrobenzene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/3/2012 09:44 PM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Pentachlorophenol	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Phenanthrene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Phenol	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Pyrene	ND		0.20	µg/L	1	8/3/2012 09:44 PM
Surr: 2,4,6-Tribromophenol	*58.0*		*34-129*	*%REC*	1	8/3/2012 09:44 PM
Surr: 2-Fluorobiphenyl	*54.2*		*40-125*	*%REC*	1	8/3/2012 09:44 PM
Surr: 2-Fluorophenol	*50.0*		*20-120*	*%REC*	1	8/3/2012 09:44 PM
Surr: 4-Terphenyl-d14	*69.9*		*40-135*	*%REC*	1	8/3/2012 09:44 PM
Surr: Nitrobenzene-d5	*58.6*		*41-120*	*%REC*	1	8/3/2012 09:44 PM
Surr: Phenol-d6	*46.3*		*20-120*	*%REC*	1	8/3/2012 09:44 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
2-Butanone	ND		0.010	mg/L	1	8/1/2012 07:56 AM
2-Hexanone	ND		0.010	mg/L	1	8/1/2012 07:56 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	8/1/2012 07:56 AM
Acetone	ND		0.010	mg/L	1	8/1/2012 07:56 AM
Benzene	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
Bromodichloromethane	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
Bromoform	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
Bromomethane	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
Carbon disulfide	ND		0.010	mg/L	1	8/1/2012 07:56 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	8/1/2012 07:56 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 21 - 0712
Lab ID: 12071372-01
Collection Date: 7/26/2012 09:10 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
Chloroethane	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
Chloroform	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
Chloromethane	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
Dibromochloromethane	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
Ethylbenzene	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
Isopropylbenzene	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
m,p-Xylene	ND		0.010	mg/L	1	8/1/2012 07:56 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
Methylene chloride	ND		0.010	mg/L	1	8/1/2012 07:56 AM
Naphthalene	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
n-Butylbenzene	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
n-Propylbenzene	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
o-Xylene	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
Styrene	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
Tetrachloroethene	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
Toluene	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
Trichloroethene	ND		0.0050	mg/L	1	8/1/2012 07:56 AM
Vinyl chloride	ND		0.0020	mg/L	1	8/1/2012 07:56 AM
Xylenes, Total	ND		0.015	mg/L	1	8/1/2012 07:56 AM
Surr: 1,2-Dichloroethane-d4	*99.7*		*70-125*	*%REC*	1	8/1/2012 07:56 AM
Surr: 4-Bromofluorobenzene	*101*		*72-125*	*%REC*	1	8/1/2012 07:56 AM
Surr: Dibromofluoromethane	*101*		*71-125*	*%REC*	1	8/1/2012 07:56 AM
Surr: Toluene-d8	*103*		*75-125*	*%REC*	1	8/1/2012 07:56 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**186**		**5.00**	**mg/L**	10	8/2/2012 09:14 PM
Fluoride	**0.306**		**0.100**	**mg/L**	1	8/1/2012 08:06 PM
Sulfate	**60.4**		**0.500**	**mg/L**	1	8/1/2012 08:06 PM
Nitrate/Nitrite (as N)	**2.64**		**2.00**	**mg/L**	10	8/3/2012 05:54 PM
Surr: Selenate (surr)	*99.0*		*85-115*	*%REC*	10	8/3/2012 05:54 PM
Surr: Selenate (surr)	*106*		*85-115*	*%REC*	10	8/2/2012 09:14 PM
Surr: Selenate (surr)	*96.0*		*85-115*	*%REC*	1	8/1/2012 08:06 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**507**		**5.00**	**mg/L**	1	8/6/2012 03:20 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 21 - 0712
Lab ID: 12071372-01
Collection Date: 7/26/2012 09:10 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 03:20 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 03:20 PM
Alkalinity, Total (As CaCO3)	**507**		**5.00**	**mg/L**	1	8/6/2012 03:20 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**1,470**		**1.00**	**µmhos/cm**	1	8/1/2012 10:00 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**6.34**	H	**0.100**	**pH Units**	1	8/1/2012 06:50 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**1,130**		**10.0**	**mg/L**	1	8/2/2012 08:15 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 22 - 0712
Lab ID: 12071372-02
Collection Date: 7/26/2012 09:55 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/3/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/3/2012 03:19 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/6/2012**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	8/8/2012 09:06 PM
Arsenic	ND		0.00500	mg/L	1	8/8/2012 09:06 PM
Barium	**0.143**		**0.00500**	**mg/L**	1	8/8/2012 09:06 PM
Boron	**0.196**		**0.0200**	**mg/L**	1	8/8/2012 09:06 PM
Cadmium	ND		0.00200	mg/L	1	8/8/2012 09:06 PM
Calcium	**166**		**0.500**	**mg/L**	1	8/8/2012 09:06 PM
Chromium	ND		0.00500	mg/L	1	8/8/2012 09:06 PM
Cobalt	ND		0.00500	mg/L	1	8/8/2012 09:06 PM
Copper	ND		0.00500	mg/L	1	8/8/2012 09:06 PM
Iron	ND		0.200	mg/L	1	8/8/2012 09:06 PM
Lead	ND		0.00500	mg/L	1	8/8/2012 09:06 PM
Magnesium	**20.5**		**0.200**	**mg/L**	1	8/8/2012 09:06 PM
Manganese	**0.00949**		**0.00500**	**mg/L**	1	8/8/2012 09:06 PM
Molybdenum	ND		0.00500	mg/L	1	8/8/2012 09:06 PM
Nickel	**0.00839**		**0.00500**	**mg/L**	1	8/8/2012 09:06 PM
Potassium	**3.02**		**0.200**	**mg/L**	1	8/8/2012 09:06 PM
Selenium	ND		0.00500	mg/L	1	8/8/2012 09:06 PM
Silver	ND		0.00500	mg/L	1	8/8/2012 09:06 PM
Sodium	**59.8**		**0.200**	**mg/L**	1	8/8/2012 09:06 PM
Uranium	**0.00564**		**0.00500**	**mg/L**	1	8/8/2012 09:06 PM
Zinc	**0.00680**		**0.00500**	**mg/L**	1	8/8/2012 09:06 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/31/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/3/2012 10:04 PM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/3/2012 10:04 PM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/3/2012 10:04 PM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/3/2012 10:04 PM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/3/2012 10:04 PM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/3/2012 10:04 PM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
2-Chlorophenol	ND		0.20	µg/L	1	8/3/2012 10:04 PM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
2-Methylphenol	ND		0.20	µg/L	1	8/3/2012 10:04 PM
2-Nitroaniline	ND		0.20	µg/L	1	8/3/2012 10:04 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 22 - 0712
Lab ID: 12071372-02
Collection Date: 7/26/2012 09:55 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/3/2012 10:04 PM
3&4-Methylphenol	ND		0.20	µg/L	1	8/3/2012 10:04 PM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/3/2012 10:04 PM
3-Nitroaniline	ND		0.20	µg/L	1	8/3/2012 10:04 PM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/3/2012 10:04 PM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/3/2012 10:04 PM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/3/2012 10:04 PM
4-Chloroaniline	ND		0.20	µg/L	1	8/3/2012 10:04 PM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/3/2012 10:04 PM
4-Nitroaniline	ND		0.20	µg/L	1	8/3/2012 10:04 PM
4-Nitrophenol	ND		1.0	µg/L	1	8/3/2012 10:04 PM
Acenaphthene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Acenaphthylene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Acetophenone	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Anthracene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Atrazine	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Benz(a)anthracene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Benzaldehyde	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Bis(2-ethylhexyl)phthalate	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Caprolactam	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Carbazole	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Chrysene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Dibenzofuran	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Diethyl phthalate	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Dimethyl phthalate	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Fluoranthene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Fluorene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Hexachlorobenzene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/3/2012 10:04 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071372
Sample ID: MW - 22 - 0712 **Lab ID:** 12071372-02
Collection Date: 7/26/2012 09:55 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Hexachloroethane	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Isophorone	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Naphthalene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Nitrobenzene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/3/2012 10:04 PM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Pentachlorophenol	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Phenanthrene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Phenol	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Pyrene	ND		0.20	µg/L	1	8/3/2012 10:04 PM
Surr: 2,4,6-Tribromophenol	*66.4*		*34-129*	*%REC*	1	8/3/2012 10:04 PM
Surr: 2-Fluorobiphenyl	*65.0*		*40-125*	*%REC*	1	8/3/2012 10:04 PM
Surr: 2-Fluorophenol	*51.8*		*20-120*	*%REC*	1	8/3/2012 10:04 PM
Surr: 4-Terphenyl-d14	*69.6*		*40-135*	*%REC*	1	8/3/2012 10:04 PM
Surr: Nitrobenzene-d5	*69.0*		*41-120*	*%REC*	1	8/3/2012 10:04 PM
Surr: Phenol-d6	*46.9*		*20-120*	*%REC*	1	8/3/2012 10:04 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
2-Butanone	ND		0.010	mg/L	1	8/1/2012 08:22 AM
2-Hexanone	ND		0.010	mg/L	1	8/1/2012 08:22 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	8/1/2012 08:22 AM
Acetone	ND		0.010	mg/L	1	8/1/2012 08:22 AM
Benzene	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
Bromodichloromethane	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
Bromoform	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
Bromomethane	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
Carbon disulfide	ND		0.010	mg/L	1	8/1/2012 08:22 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	8/1/2012 08:22 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 22 - 0712
Lab ID: 12071372-02
Collection Date: 7/26/2012 09:55 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
Chloroethane	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
Chloroform	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
Chloromethane	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
Dibromochloromethane	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
Ethylbenzene	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
Isopropylbenzene	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
m,p-Xylene	ND		0.010	mg/L	1	8/1/2012 08:22 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
Methylene chloride	ND		0.010	mg/L	1	8/1/2012 08:22 AM
Naphthalene	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
n-Butylbenzene	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
n-Propylbenzene	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
o-Xylene	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
Styrene	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
Tetrachloroethene	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
Toluene	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
Trichloroethene	ND		0.0050	mg/L	1	8/1/2012 08:22 AM
Vinyl chloride	ND		0.0020	mg/L	1	8/1/2012 08:22 AM
Xylenes, Total	ND		0.015	mg/L	1	8/1/2012 08:22 AM
Surr: 1,2-Dichloroethane-d4	*104*		*70-125*	*%REC*	1	8/1/2012 08:22 AM
Surr: 4-Bromofluorobenzene	*92.1*		*72-125*	*%REC*	1	8/1/2012 08:22 AM
Surr: Dibromofluoromethane	*102*		*71-125*	*%REC*	1	8/1/2012 08:22 AM
Surr: Toluene-d8	*97.7*		*75-125*	*%REC*	1	8/1/2012 08:22 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**149**		**5.00**	**mg/L**	10	8/2/2012 09:36 PM
Fluoride	**0.628**		**0.100**	**mg/L**	1	8/1/2012 08:27 PM
Sulfate	**68.3**		**0.500**	**mg/L**	1	8/1/2012 08:27 PM
Nitrate/Nitrite (as N)	**2.09**		**2.00**	**mg/L**	10	8/3/2012 06:15 PM
Surr: Selenate (surr)	*98.6*		*85-115*	*%REC*	10	8/3/2012 06:15 PM
Surr: Selenate (surr)	*106*		*85-115*	*%REC*	10	8/2/2012 09:36 PM
Surr: Selenate (surr)	*91.7*		*85-115*	*%REC*	1	8/1/2012 08:27 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**359**		**5.00**	**mg/L**	1	8/6/2012 03:30 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 22 - 0712
Lab ID: 12071372-02
Collection Date: 7/26/2012 09:55 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 03:30 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 03:30 PM
Alkalinity, Total (As CaCO3)	**359**		**5.00**	**mg/L**	1	8/6/2012 03:30 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**1,160**		**1.00**	**µmhos/cm**	1	8/1/2012 10:00 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**6.69**	H	**0.100**	**pH Units**	1	8/1/2012 06:50 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**830**		**10.0**	**mg/L**	1	8/2/2012 08:15 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 23 - 0712
Lab ID: 12071372-03
Collection Date: 7/26/2012 10:35 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/3/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/3/2012 03:21 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/6/2012**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	8/8/2012 09:09 PM
Arsenic	ND		0.00500	mg/L	1	8/8/2012 09:09 PM
Barium	**0.252**		**0.00500**	**mg/L**	1	8/8/2012 09:09 PM
Boron	**0.198**		**0.0200**	**mg/L**	1	8/8/2012 09:09 PM
Cadmium	ND		0.00200	mg/L	1	8/8/2012 09:09 PM
Calcium	**419**		**5.00**	**mg/L**	10	8/9/2012 02:59 PM
Chromium	ND		0.00500	mg/L	1	8/8/2012 09:09 PM
Cobalt	ND		0.00500	mg/L	1	8/8/2012 09:09 PM
Copper	ND		0.00500	mg/L	1	8/8/2012 09:09 PM
Iron	ND		0.200	mg/L	1	8/8/2012 09:09 PM
Lead	ND		0.00500	mg/L	1	8/8/2012 09:09 PM
Magnesium	**46.6**		**0.200**	**mg/L**	1	8/8/2012 09:09 PM
Manganese	ND		0.00500	mg/L	1	8/8/2012 09:09 PM
Molybdenum	ND		0.00500	mg/L	1	8/8/2012 09:09 PM
Nickel	ND		0.00500	mg/L	1	8/8/2012 09:09 PM
Potassium	**6.17**		**0.200**	**mg/L**	1	8/8/2012 09:09 PM
Selenium	ND		0.00500	mg/L	1	8/8/2012 09:09 PM
Silver	ND		0.00500	mg/L	1	8/8/2012 09:09 PM
Sodium	**112**		**0.200**	**mg/L**	1	8/8/2012 09:09 PM
Uranium	ND		0.00500	mg/L	1	8/8/2012 09:09 PM
Zinc	**0.0101**		**0.00500**	**mg/L**	1	8/8/2012 09:09 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/31/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/3/2012 10:24 PM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/3/2012 10:24 PM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/3/2012 10:24 PM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/3/2012 10:24 PM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/3/2012 10:24 PM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/3/2012 10:24 PM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
2-Chlorophenol	ND		0.20	µg/L	1	8/3/2012 10:24 PM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
2-Methylphenol	ND		0.20	µg/L	1	8/3/2012 10:24 PM
2-Nitroaniline	ND		0.20	µg/L	1	8/3/2012 10:24 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 23 - 0712
Lab ID: 12071372-03
Collection Date: 7/26/2012 10:35 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/3/2012 10:24 PM
3&4-Methylphenol	ND		0.20	µg/L	1	8/3/2012 10:24 PM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/3/2012 10:24 PM
3-Nitroaniline	ND		0.20	µg/L	1	8/3/2012 10:24 PM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/3/2012 10:24 PM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/3/2012 10:24 PM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/3/2012 10:24 PM
4-Chloroaniline	ND		0.20	µg/L	1	8/3/2012 10:24 PM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/3/2012 10:24 PM
4-Nitroaniline	ND		0.20	µg/L	1	8/3/2012 10:24 PM
4-Nitrophenol	ND		1.0	µg/L	1	8/3/2012 10:24 PM
Acenaphthene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Acenaphthylene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Acetophenone	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Anthracene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Atrazine	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Benz(a)anthracene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Benzaldehyde	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Bis(2-ethylhexyl)phthalate	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Caprolactam	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Carbazole	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Chrysene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Dibenzofuran	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Diethyl phthalate	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Dimethyl phthalate	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Fluoranthene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Fluorene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Hexachlorobenzene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/3/2012 10:24 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071372
Sample ID: MW - 23 - 0712 **Lab ID:** 12071372-03
Collection Date: 7/26/2012 10:35 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Hexachloroethane	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Isophorone	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Naphthalene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Nitrobenzene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/3/2012 10:24 PM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Pentachlorophenol	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Phenanthrene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Phenol	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Pyrene	ND		0.20	µg/L	1	8/3/2012 10:24 PM
Surr: 2,4,6-Tribromophenol	*76.9*		*34-129*	*%REC*	1	8/3/2012 10:24 PM
Surr: 2-Fluorobiphenyl	*51.1*		*40-125*	*%REC*	1	8/3/2012 10:24 PM
Surr: 2-Fluorophenol	*45.0*		*20-120*	*%REC*	1	8/3/2012 10:24 PM
Surr: 4-Terphenyl-d14	*72.2*		*40-135*	*%REC*	1	8/3/2012 10:24 PM
Surr: Nitrobenzene-d5	*71.2*		*41-120*	*%REC*	1	8/3/2012 10:24 PM
Surr: Phenol-d6	*39.1*		*20-120*	*%REC*	1	8/3/2012 10:24 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
2-Butanone	ND		0.010	mg/L	1	8/1/2012 08:48 AM
2-Hexanone	ND		0.010	mg/L	1	8/1/2012 08:48 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	8/1/2012 08:48 AM
Acetone	ND		0.010	mg/L	1	8/1/2012 08:48 AM
Benzene	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
Bromodichloromethane	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
Bromoform	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
Bromomethane	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
Carbon disulfide	ND		0.010	mg/L	1	8/1/2012 08:48 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	8/1/2012 08:48 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071372
Sample ID: MW - 23 - 0712 **Lab ID:** 12071372-03
Collection Date: 7/26/2012 10:35 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
Chloroethane	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
Chloroform	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
Chloromethane	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
Dibromochloromethane	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
Ethylbenzene	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
Isopropylbenzene	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
m,p-Xylene	ND		0.010	mg/L	1	8/1/2012 08:48 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
Methylene chloride	ND		0.010	mg/L	1	8/1/2012 08:48 AM
Naphthalene	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
n-Butylbenzene	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
n-Propylbenzene	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
o-Xylene	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
Styrene	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
Tetrachloroethene	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
Toluene	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
Trichloroethene	ND		0.0050	mg/L	1	8/1/2012 08:48 AM
Vinyl chloride	ND		0.0020	mg/L	1	8/1/2012 08:48 AM
Xylenes, Total	ND		0.015	mg/L	1	8/1/2012 08:48 AM
Surr: 1,2-Dichloroethane-d4	*103*		*70-125*	*%REC*	1	8/1/2012 08:48 AM
Surr: 4-Bromofluorobenzene	*98.1*		*72-125*	*%REC*	1	8/1/2012 08:48 AM
Surr: Dibromofluoromethane	*106*		*71-125*	*%REC*	1	8/1/2012 08:48 AM
Surr: Toluene-d8	*106*		*75-125*	*%REC*	1	8/1/2012 08:48 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**774**		**5.00**	**mg/L**	10	8/2/2012 09:58 PM
Fluoride	**0.750**		**0.100**	**mg/L**	1	8/1/2012 08:48 PM
Sulfate	**100**		**0.500**	**mg/L**	1	8/1/2012 08:48 PM
Nitrate/Nitrite (as N)	**3.45**		**2.00**	**mg/L**	10	8/3/2012 06:36 PM
Surr: Selenate (surr)	*98.8*		*85-115*	*%REC*	10	8/3/2012 06:36 PM
Surr: Selenate (surr)	*105*		*85-115*	*%REC*	10	8/2/2012 09:58 PM
Surr: Selenate (surr)	*90.2*		*85-115*	*%REC*	1	8/1/2012 08:48 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**224**		**5.00**	**mg/L**	1	8/6/2012 03:35 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 23 - 0712
Lab ID: 12071372-03
Collection Date: 7/26/2012 10:35 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 03:35 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 03:35 PM
Alkalinity, Total (As CaCO3)	**224**		**5.00**	**mg/L**	1	8/6/2012 03:35 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**2,810**		**1.00**	**µmhos/cm**	1	8/1/2012 10:00 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**6.66**	H	**0.100**	**pH Units**	1	8/1/2012 06:50 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**3,060**		**10.0**	**mg/L**	1	8/2/2012 08:15 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 25 - 0712
Lab ID: 12071372-04
Collection Date: 7/26/2012 11:20 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/3/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/3/2012 03:23 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/6/2012**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	8/8/2012 09:11 PM
Arsenic	ND		0.00500	mg/L	1	8/8/2012 09:11 PM
Barium	**0.178**		**0.00500**	**mg/L**	1	8/8/2012 09:11 PM
Boron	**0.220**		**0.0200**	**mg/L**	1	8/8/2012 09:11 PM
Cadmium	ND		0.00200	mg/L	1	8/8/2012 09:11 PM
Calcium	**185**		**5.00**	**mg/L**	10	8/9/2012 03:02 PM
Chromium	**0.00961**		**0.00500**	**mg/L**	1	8/8/2012 09:11 PM
Cobalt	ND		0.00500	mg/L	1	8/8/2012 09:11 PM
Copper	ND		0.00500	mg/L	1	8/8/2012 09:11 PM
Iron	ND		0.200	mg/L	1	8/8/2012 09:11 PM
Lead	ND		0.00500	mg/L	1	8/8/2012 09:11 PM
Magnesium	**23.0**		**0.200**	**mg/L**	1	8/8/2012 09:11 PM
Manganese	ND		0.00500	mg/L	1	8/8/2012 09:11 PM
Molybdenum	ND		0.00500	mg/L	1	8/8/2012 09:11 PM
Nickel	ND		0.00500	mg/L	1	8/8/2012 09:11 PM
Potassium	**4.27**		**0.200**	**mg/L**	1	8/8/2012 09:11 PM
Selenium	ND		0.00500	mg/L	1	8/8/2012 09:11 PM
Silver	ND		0.00500	mg/L	1	8/8/2012 09:11 PM
Sodium	**76.8**		**0.200**	**mg/L**	1	8/8/2012 09:11 PM
Uranium	ND		0.00500	mg/L	1	8/8/2012 09:11 PM
Zinc	**0.0102**		**0.00500**	**mg/L**	1	8/8/2012 09:11 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/31/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/3/2012 10:44 PM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/3/2012 10:44 PM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/3/2012 10:44 PM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/3/2012 10:44 PM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/3/2012 10:44 PM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/3/2012 10:44 PM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
2-Chlorophenol	ND		0.20	µg/L	1	8/3/2012 10:44 PM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
2-Methylphenol	ND		0.20	µg/L	1	8/3/2012 10:44 PM
2-Nitroaniline	ND		0.20	µg/L	1	8/3/2012 10:44 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 25 - 0712
Lab ID: 12071372-04
Collection Date: 7/26/2012 11:20 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/3/2012 10:44 PM
3&4-Methylphenol	ND		0.20	µg/L	1	8/3/2012 10:44 PM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/3/2012 10:44 PM
3-Nitroaniline	ND		0.20	µg/L	1	8/3/2012 10:44 PM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/3/2012 10:44 PM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/3/2012 10:44 PM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/3/2012 10:44 PM
4-Chloroaniline	ND		0.20	µg/L	1	8/3/2012 10:44 PM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/3/2012 10:44 PM
4-Nitroaniline	ND		0.20	µg/L	1	8/3/2012 10:44 PM
4-Nitrophenol	ND		1.0	µg/L	1	8/3/2012 10:44 PM
Acenaphthene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Acenaphthylene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Acetophenone	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Anthracene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Atrazine	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Benz(a)anthracene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Benzaldehyde	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Bis(2-ethylhexyl)phthalate	**0.22**		**0.20**	**µg/L**	1	8/3/2012 10:44 PM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Caprolactam	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Carbazole	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Chrysene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Dibenzofuran	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Diethyl phthalate	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Dimethyl phthalate	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Fluoranthene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Fluorene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Hexachlorobenzene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/3/2012 10:44 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071372
Sample ID: MW - 25 - 0712 **Lab ID:** 12071372-04
Collection Date: 7/26/2012 11:20 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Hexachloroethane	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Isophorone	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Naphthalene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Nitrobenzene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/3/2012 10:44 PM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Pentachlorophenol	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Phenanthrene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Phenol	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Pyrene	ND		0.20	µg/L	1	8/3/2012 10:44 PM
Surr: 2,4,6-Tribromophenol	*67.0*		*34-129*	*%REC*	1	8/3/2012 10:44 PM
Surr: 2-Fluorobiphenyl	*62.2*		*40-125*	*%REC*	1	8/3/2012 10:44 PM
Surr: 2-Fluorophenol	*59.4*		*20-120*	*%REC*	1	8/3/2012 10:44 PM
Surr: 4-Terphenyl-d14	*72.2*		*40-135*	*%REC*	1	8/3/2012 10:44 PM
Surr: Nitrobenzene-d5	*71.2*		*41-120*	*%REC*	1	8/3/2012 10:44 PM
Surr: Phenol-d6	*61.1*		*20-120*	*%REC*	1	8/3/2012 10:44 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
2-Butanone	ND		0.010	mg/L	1	8/1/2012 09:13 AM
2-Hexanone	ND		0.010	mg/L	1	8/1/2012 09:13 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	8/1/2012 09:13 AM
Acetone	ND		0.010	mg/L	1	8/1/2012 09:13 AM
Benzene	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
Bromodichloromethane	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
Bromoform	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
Bromomethane	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
Carbon disulfide	ND		0.010	mg/L	1	8/1/2012 09:13 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	8/1/2012 09:13 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071372
Sample ID: MW - 25 - 0712 **Lab ID:** 12071372-04
Collection Date: 7/26/2012 11:20 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
Chloroethane	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
Chloroform	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
Chloromethane	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
Dibromochloromethane	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
Ethylbenzene	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
Isopropylbenzene	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
m,p-Xylene	ND		0.010	mg/L	1	8/1/2012 09:13 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
Methylene chloride	ND		0.010	mg/L	1	8/1/2012 09:13 AM
Naphthalene	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
n-Butylbenzene	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
n-Propylbenzene	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
o-Xylene	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
Styrene	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
Tetrachloroethene	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
Toluene	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
Trichloroethene	ND		0.0050	mg/L	1	8/1/2012 09:13 AM
Vinyl chloride	ND		0.0020	mg/L	1	8/1/2012 09:13 AM
Xylenes, Total	ND		0.015	mg/L	1	8/1/2012 09:13 AM
Surr: 1,2-Dichloroethane-d4	*99.0*		*70-125*	*%REC*	1	8/1/2012 09:13 AM
Surr: 4-Bromofluorobenzene	*96.3*		*72-125*	*%REC*	1	8/1/2012 09:13 AM
Surr: Dibromofluoromethane	*102*		*71-125*	*%REC*	1	8/1/2012 09:13 AM
Surr: Toluene-d8	*99.3*		*75-125*	*%REC*	1	8/1/2012 09:13 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**133**		**5.00**	**mg/L**	10	8/2/2012 10:19 PM
Fluoride	**0.892**		**0.100**	**mg/L**	1	8/1/2012 09:09 PM
Sulfate	**144**		**5.00**	**mg/L**	10	8/2/2012 10:19 PM
Nitrate/Nitrite (as N)	**37.1**		**2.00**	**mg/L**	10	8/3/2012 06:57 PM
Surr: Selenate (surr)	*99.8*		*85-115*	*%REC*	10	8/3/2012 06:57 PM
Surr: Selenate (surr)	*104*		*85-115*	*%REC*	10	8/2/2012 10:19 PM
Surr: Selenate (surr)	*94.7*		*85-115*	*%REC*	1	8/1/2012 09:09 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**255**		**5.00**	**mg/L**	1	8/6/2012 03:41 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 25 - 0712
Lab ID: 12071372-04
Collection Date: 7/26/2012 11:20 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 03:41 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 03:41 PM
Alkalinity, Total (As CaCO3)	**255**		**5.00**	**mg/L**	1	8/6/2012 03:41 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**1,360**		**1.00**	**µmhos/cm**	1	8/1/2012 10:00 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**6.96**	H	**0.100**	**pH Units**	1	8/1/2012 06:50 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**1,110**		**10.0**	**mg/L**	1	8/2/2012 08:15 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 26 - 0712
Lab ID: 12071372-05
Collection Date: 7/26/2012 12:10 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/3/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/3/2012 03:25 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/6/2012**	Analyst: **SKS**
Aluminum	**0.0121**		**0.0100**	**mg/L**	1	8/8/2012 09:14 PM
Arsenic	ND		0.00500	mg/L	1	8/8/2012 09:14 PM
Barium	**0.0966**		**0.00500**	**mg/L**	1	8/8/2012 09:14 PM
Boron	**0.214**		**0.0200**	**mg/L**	1	8/8/2012 09:14 PM
Cadmium	ND		0.00200	mg/L	1	8/8/2012 09:14 PM
Calcium	**176**		**0.500**	**mg/L**	1	8/8/2012 09:14 PM
Chromium	ND		0.00500	mg/L	1	8/8/2012 09:14 PM
Cobalt	ND		0.00500	mg/L	1	8/8/2012 09:14 PM
Copper	ND		0.00500	mg/L	1	8/8/2012 09:14 PM
Iron	ND		0.200	mg/L	1	8/8/2012 09:14 PM
Lead	ND		0.00500	mg/L	1	8/8/2012 09:14 PM
Magnesium	**23.4**		**0.200**	**mg/L**	1	8/8/2012 09:14 PM
Manganese	**0.00694**		**0.00500**	**mg/L**	1	8/8/2012 09:14 PM
Molybdenum	ND		0.00500	mg/L	1	8/8/2012 09:14 PM
Nickel	**0.00568**		**0.00500**	**mg/L**	1	8/8/2012 09:14 PM
Potassium	**3.09**		**0.200**	**mg/L**	1	8/8/2012 09:14 PM
Selenium	ND		0.00500	mg/L	1	8/8/2012 09:14 PM
Silver	ND		0.00500	mg/L	1	8/8/2012 09:14 PM
Sodium	**74.4**		**0.200**	**mg/L**	1	8/8/2012 09:14 PM
Uranium	**0.00559**		**0.00500**	**mg/L**	1	8/8/2012 09:14 PM
Zinc	**0.0117**		**0.00500**	**mg/L**	1	8/8/2012 09:14 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/31/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/3/2012 11:04 PM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/3/2012 11:04 PM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/3/2012 11:04 PM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/3/2012 11:04 PM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/3/2012 11:04 PM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/3/2012 11:04 PM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
2-Chlorophenol	ND		0.20	µg/L	1	8/3/2012 11:04 PM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
2-Methylphenol	ND		0.20	µg/L	1	8/3/2012 11:04 PM
2-Nitroaniline	ND		0.20	µg/L	1	8/3/2012 11:04 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 26 - 0712
Lab ID: 12071372-05
Collection Date: 7/26/2012 12:10 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/3/2012 11:04 PM
3&4-Methylphenol	ND		0.20	µg/L	1	8/3/2012 11:04 PM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/3/2012 11:04 PM
3-Nitroaniline	ND		0.20	µg/L	1	8/3/2012 11:04 PM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/3/2012 11:04 PM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/3/2012 11:04 PM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/3/2012 11:04 PM
4-Chloroaniline	ND		0.20	µg/L	1	8/3/2012 11:04 PM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/3/2012 11:04 PM
4-Nitroaniline	ND		0.20	µg/L	1	8/3/2012 11:04 PM
4-Nitrophenol	ND		1.0	µg/L	1	8/3/2012 11:04 PM
Acenaphthene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Acenaphthylene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Acetophenone	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Anthracene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Atrazine	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Benz(a)anthracene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Benzaldehyde	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Bis(2-ethylhexyl)phthalate	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Caprolactam	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Carbazole	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Chrysene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Dibenzofuran	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Diethyl phthalate	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Dimethyl phthalate	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Fluoranthene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Fluorene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Hexachlorobenzene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/3/2012 11:04 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071372
Sample ID: MW - 26 - 0712 **Lab ID:** 12071372-05
Collection Date: 7/26/2012 12:10 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Hexachloroethane	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Isophorone	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Naphthalene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Nitrobenzene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/3/2012 11:04 PM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Pentachlorophenol	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Phenanthrene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Phenol	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Pyrene	ND		0.20	µg/L	1	8/3/2012 11:04 PM
Surr: 2,4,6-Tribromophenol	*61.4*		*34-129*	*%REC*	1	8/3/2012 11:04 PM
Surr: 2-Fluorobiphenyl	*56.1*		*40-125*	*%REC*	1	8/3/2012 11:04 PM
Surr: 2-Fluorophenol	*52.2*		*20-120*	*%REC*	1	8/3/2012 11:04 PM
Surr: 4-Terphenyl-d14	*76.8*		*40-135*	*%REC*	1	8/3/2012 11:04 PM
Surr: Nitrobenzene-d5	*60.0*		*41-120*	*%REC*	1	8/3/2012 11:04 PM
Surr: Phenol-d6	*53.4*		*20-120*	*%REC*	1	8/3/2012 11:04 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
2-Butanone	ND		0.010	mg/L	1	8/1/2012 09:39 AM
2-Hexanone	ND		0.010	mg/L	1	8/1/2012 09:39 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	8/1/2012 09:39 AM
Acetone	**0.011**		**0.010**	**mg/L**	1	8/1/2012 09:39 AM
Benzene	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
Bromodichloromethane	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
Bromoform	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
Bromomethane	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
Carbon disulfide	ND		0.010	mg/L	1	8/1/2012 09:39 AM
Carbon tetrachloride	ND		0.0050	mg/L	1	8/1/2012 09:39 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071372
Sample ID: MW - 26 - 0712 **Lab ID:** 12071372-05
Collection Date: 7/26/2012 12:10 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
Chloroethane	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
Chloroform	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
Chloromethane	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
Dibromochloromethane	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
Ethylbenzene	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
Isopropylbenzene	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
m,p-Xylene	ND		0.010	mg/L	1	8/1/2012 09:39 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
Methylene chloride	ND		0.010	mg/L	1	8/1/2012 09:39 AM
Naphthalene	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
n-Butylbenzene	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
n-Propylbenzene	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
o-Xylene	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
Styrene	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
Tetrachloroethene	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
Toluene	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
Trichloroethene	ND		0.0050	mg/L	1	8/1/2012 09:39 AM
Vinyl chloride	ND		0.0020	mg/L	1	8/1/2012 09:39 AM
Xylenes, Total	ND		0.015	mg/L	1	8/1/2012 09:39 AM
Surr: 1,2-Dichloroethane-d4	*99.4*		*70-125*	*%REC*	1	8/1/2012 09:39 AM
Surr: 4-Bromofluorobenzene	*103*		*72-125*	*%REC*	1	8/1/2012 09:39 AM
Surr: Dibromofluoromethane	*102*		*71-125*	*%REC*	1	8/1/2012 09:39 AM
Surr: Toluene-d8	*101*		*75-125*	*%REC*	1	8/1/2012 09:39 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**179**		**5.00**	**mg/L**	10	8/2/2012 10:41 PM
Fluoride	**0.647**		**0.100**	**mg/L**	1	8/1/2012 09:30 PM
Sulfate	**121**		**5.00**	**mg/L**	10	8/2/2012 10:41 PM
Nitrate/Nitrite (as N)	**3.11**		**2.00**	**mg/L**	10	8/3/2012 07:18 PM
Surr: Selenate (surr)	*98.1*		*85-115*	*%REC*	10	8/3/2012 07:18 PM
Surr: Selenate (surr)	*105*		*85-115*	*%REC*	10	8/2/2012 10:41 PM
Surr: Selenate (surr)	*99.5*		*85-115*	*%REC*	1	8/1/2012 09:30 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**316**		**5.00**	**mg/L**	1	8/6/2012 03:46 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 26 - 0712
Lab ID: 12071372-05
Collection Date: 7/26/2012 12:10 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 03:46 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 03:46 PM
Alkalinity, Total (As CaCO3)	**316**		**5.00**	**mg/L**	1	8/6/2012 03:46 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**1,290**		**1.00**	**µmhos/cm**	1	8/1/2012 10:00 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**6.84**	H	**0.100**	**pH Units**	1	8/1/2012 06:50 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**940**		**10.0**	**mg/L**	1	8/2/2012 08:15 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 13 - 0712
Lab ID: 12071372-06
Collection Date: 7/26/2012 01:35 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/3/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/3/2012 03:27 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/6/2012**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	8/8/2012 09:16 PM
Arsenic	ND		0.00500	mg/L	1	8/8/2012 09:16 PM
Barium	**0.112**		**0.00500**	**mg/L**	1	8/8/2012 09:16 PM
Boron	**0.284**		**0.0200**	**mg/L**	1	8/8/2012 09:16 PM
Cadmium	ND		0.00200	mg/L	1	8/8/2012 09:16 PM
Calcium	**328**		**5.00**	**mg/L**	10	8/9/2012 03:04 PM
Chromium	ND		0.00500	mg/L	1	8/8/2012 09:16 PM
Cobalt	**0.00644**		**0.00500**	**mg/L**	1	8/8/2012 09:16 PM
Copper	ND		0.00500	mg/L	1	8/8/2012 09:16 PM
Iron	ND		0.200	mg/L	1	8/8/2012 09:16 PM
Lead	ND		0.00500	mg/L	1	8/8/2012 09:16 PM
Magnesium	**39.4**		**0.200**	**mg/L**	1	8/8/2012 09:16 PM
Manganese	**0.459**		**0.00500**	**mg/L**	1	8/8/2012 09:16 PM
Molybdenum	ND		0.00500	mg/L	1	8/8/2012 09:16 PM
Nickel	**0.0108**		**0.00500**	**mg/L**	1	8/8/2012 09:16 PM
Potassium	**5.77**		**0.200**	**mg/L**	1	8/8/2012 09:16 PM
Selenium	ND		0.00500	mg/L	1	8/8/2012 09:16 PM
Silver	ND		0.00500	mg/L	1	8/8/2012 09:16 PM
Sodium	**121**		**0.200**	**mg/L**	1	8/8/2012 09:16 PM
Uranium	**0.0158**		**0.00500**	**mg/L**	1	8/8/2012 09:16 PM
Zinc	**0.0361**		**0.00500**	**mg/L**	1	8/8/2012 09:16 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/31/2012**	Analyst: **ACN**
1,1´-Biphenyl	**1.5**		**0.20**	**µg/L**	1	8/3/2012 11:24 PM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/3/2012 11:24 PM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/3/2012 11:24 PM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/3/2012 11:24 PM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/3/2012 11:24 PM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/3/2012 11:24 PM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
2-Chlorophenol	ND		0.20	µg/L	1	8/3/2012 11:24 PM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
2-Methylphenol	ND		0.20	µg/L	1	8/3/2012 11:24 PM
2-Nitroaniline	ND		0.20	µg/L	1	8/3/2012 11:24 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 13 - 0712
Lab ID: 12071372-06
Collection Date: 7/26/2012 01:35 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/3/2012 11:24 PM
3&4-Methylphenol	ND		0.20	µg/L	1	8/3/2012 11:24 PM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/3/2012 11:24 PM
3-Nitroaniline	ND		0.20	µg/L	1	8/3/2012 11:24 PM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/3/2012 11:24 PM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/3/2012 11:24 PM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/3/2012 11:24 PM
4-Chloroaniline	ND		0.20	µg/L	1	8/3/2012 11:24 PM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/3/2012 11:24 PM
4-Nitroaniline	ND		0.20	µg/L	1	8/3/2012 11:24 PM
4-Nitrophenol	ND		1.0	µg/L	1	8/3/2012 11:24 PM
Acenaphthene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Acenaphthylene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Acetophenone	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Anthracene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Atrazine	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Benz(a)anthracene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Benzaldehyde	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Bis(2-ethylhexyl)phthalate	**1.1**		**0.20**	**µg/L**	1	8/3/2012 11:24 PM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Caprolactam	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Carbazole	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Chrysene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Dibenzofuran	**0.25**		**0.20**	**µg/L**	1	8/3/2012 11:24 PM
Diethyl phthalate	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Dimethyl phthalate	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Fluoranthene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Fluorene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Hexachlorobenzene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/3/2012 11:24 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071372
Sample ID: MW - 13 - 0712 **Lab ID:** 12071372-06
Collection Date: 7/26/2012 01:35 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Hexachloroethane	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Isophorone	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Naphthalene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Nitrobenzene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/3/2012 11:24 PM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Pentachlorophenol	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Phenanthrene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Phenol	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Pyrene	ND		0.20	µg/L	1	8/3/2012 11:24 PM
Surr: 2,4,6-Tribromophenol	*62.3*		*34-129*	*%REC*	1	8/3/2012 11:24 PM
Surr: 2-Fluorobiphenyl	*54.0*		*40-125*	*%REC*	1	8/3/2012 11:24 PM
Surr: 2-Fluorophenol	*43.9*		*20-120*	*%REC*	1	8/3/2012 11:24 PM
Surr: 4-Terphenyl-d14	*67.1*		*40-135*	*%REC*	1	8/3/2012 11:24 PM
Surr: Nitrobenzene-d5	*46.2*		*41-120*	*%REC*	1	8/3/2012 11:24 PM
Surr: Phenol-d6	*47.5*		*20-120*	*%REC*	1	8/3/2012 11:24 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
2-Butanone	ND		0.010	mg/L	1	8/2/2012 07:06 PM
2-Hexanone	ND		0.010	mg/L	1	8/2/2012 07:06 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	8/2/2012 07:06 PM
Acetone	ND		0.010	mg/L	1	8/2/2012 07:06 PM
Benzene	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
Bromodichloromethane	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
Bromoform	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
Bromomethane	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
Carbon disulfide	ND		0.010	mg/L	1	8/2/2012 07:06 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	8/2/2012 07:06 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071372
Sample ID: MW - 13 - 0712 **Lab ID:** 12071372-06
Collection Date: 7/26/2012 01:35 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
Chloroethane	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
Chloroform	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
Chloromethane	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
Dibromochloromethane	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
Ethylbenzene	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
Isopropylbenzene	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
m,p-Xylene	ND		0.010	mg/L	1	8/2/2012 07:06 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
Methylene chloride	ND		0.010	mg/L	1	8/2/2012 07:06 PM
Naphthalene	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
n-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
n-Propylbenzene	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
o-Xylene	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
Styrene	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
Tetrachloroethene	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
Toluene	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
Trichloroethene	ND		0.0050	mg/L	1	8/2/2012 07:06 PM
Vinyl chloride	ND		0.0020	mg/L	1	8/2/2012 07:06 PM
Xylenes, Total	ND		0.015	mg/L	1	8/2/2012 07:06 PM
Surr: 1,2-Dichloroethane-d4	*108*		*70-125*	*%REC*	1	8/2/2012 07:06 PM
Surr: 4-Bromofluorobenzene	*102*		*72-125*	*%REC*	1	8/2/2012 07:06 PM
Surr: Dibromofluoromethane	*110*		*71-125*	*%REC*	1	8/2/2012 07:06 PM
Surr: Toluene-d8	*102*		*75-125*	*%REC*	1	8/2/2012 07:06 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**462**		**5.00**	**mg/L**	10	8/2/2012 11:03 PM
Fluoride	**0.422**		**0.100**	**mg/L**	1	8/1/2012 09:51 PM
Sulfate	**123**		**5.00**	**mg/L**	10	8/2/2012 11:03 PM
Nitrate/Nitrite (as N)	ND		2.00	mg/L	10	8/3/2012 07:39 PM
Surr: Selenate (surr)	*98.1*		*85-115*	*%REC*	10	8/3/2012 07:39 PM
Surr: Selenate (surr)	*105*		*85-115*	*%REC*	10	8/2/2012 11:03 PM
Surr: Selenate (surr)	*90.9*		*85-115*	*%REC*	1	8/1/2012 09:51 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**469**		**5.00**	**mg/L**	1	8/6/2012 03:52 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 13 - 0712
Lab ID: 12071372-06
Collection Date: 7/26/2012 01:35 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 03:52 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 03:52 PM
Alkalinity, Total (As CaCO3)	**469**		**5.00**	**mg/L**	1	8/6/2012 03:52 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**2,290**		**1.00**	**µmhos/cm**	1	8/1/2012 10:00 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**6.46**	H	**0.100**	**pH Units**	1	8/1/2012 06:50 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**2,150**		**10.0**	**mg/L**	1	8/2/2012 08:15 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 27 - 0712
Lab ID: 12071372-07
Collection Date: 7/26/2012 02:20 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/3/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/3/2012 03:29 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/6/2012**	Analyst: **SKS**
Aluminum	**0.0155**		**0.0100**	**mg/L**	1	8/8/2012 09:19 PM
Arsenic	ND		0.00500	mg/L	1	8/8/2012 09:19 PM
Barium	**0.118**		**0.00500**	**mg/L**	1	8/8/2012 09:19 PM
Boron	**0.172**		**0.0200**	**mg/L**	1	8/8/2012 09:19 PM
Cadmium	ND		0.00200	mg/L	1	8/8/2012 09:19 PM
Calcium	**143**		**0.500**	**mg/L**	1	8/8/2012 09:19 PM
Chromium	ND		0.00500	mg/L	1	8/8/2012 09:19 PM
Cobalt	ND		0.00500	mg/L	1	8/8/2012 09:19 PM
Copper	ND		0.00500	mg/L	1	8/8/2012 09:19 PM
Iron	ND		0.200	mg/L	1	8/8/2012 09:19 PM
Lead	ND		0.00500	mg/L	1	8/8/2012 09:19 PM
Magnesium	**19.7**		**0.200**	**mg/L**	1	8/8/2012 09:19 PM
Manganese	**0.00587**		**0.00500**	**mg/L**	1	8/8/2012 09:19 PM
Molybdenum	ND		0.00500	mg/L	1	8/8/2012 09:19 PM
Nickel	**0.00737**		**0.00500**	**mg/L**	1	8/8/2012 09:19 PM
Potassium	**3.04**		**0.200**	**mg/L**	1	8/8/2012 09:19 PM
Selenium	ND		0.00500	mg/L	1	8/8/2012 09:19 PM
Silver	ND		0.00500	mg/L	1	8/8/2012 09:19 PM
Sodium	**85.7**		**0.200**	**mg/L**	1	8/8/2012 09:19 PM
Uranium	ND		0.00500	mg/L	1	8/8/2012 09:19 PM
Zinc	**0.0117**		**0.00500**	**mg/L**	1	8/8/2012 09:19 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/31/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/3/2012 11:44 PM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/3/2012 11:44 PM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/3/2012 11:44 PM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/3/2012 11:44 PM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/3/2012 11:44 PM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/3/2012 11:44 PM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
2-Chlorophenol	ND		0.20	µg/L	1	8/3/2012 11:44 PM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
2-Methylphenol	ND		0.20	µg/L	1	8/3/2012 11:44 PM
2-Nitroaniline	ND		0.20	µg/L	1	8/3/2012 11:44 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 27 - 0712
Lab ID: 12071372-07
Collection Date: 7/26/2012 02:20 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/3/2012 11:44 PM
3&4-Methylphenol	ND		0.20	µg/L	1	8/3/2012 11:44 PM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/3/2012 11:44 PM
3-Nitroaniline	ND		0.20	µg/L	1	8/3/2012 11:44 PM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/3/2012 11:44 PM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/3/2012 11:44 PM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/3/2012 11:44 PM
4-Chloroaniline	ND		0.20	µg/L	1	8/3/2012 11:44 PM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/3/2012 11:44 PM
4-Nitroaniline	ND		0.20	µg/L	1	8/3/2012 11:44 PM
4-Nitrophenol	ND		1.0	µg/L	1	8/3/2012 11:44 PM
Acenaphthene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Acenaphthylene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Acetophenone	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Anthracene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Atrazine	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Benz(a)anthracene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Benzaldehyde	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Bis(2-ethylhexyl)phthalate	**0.57**		**0.20**	**µg/L**	1	8/3/2012 11:44 PM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Caprolactam	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Carbazole	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Chrysene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Dibenzofuran	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Diethyl phthalate	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Dimethyl phthalate	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Di-n-octyl phthalate	**0.61**		**0.20**	**µg/L**	1	8/3/2012 11:44 PM
Fluoranthene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Fluorene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Hexachlorobenzene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/3/2012 11:44 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071372
Sample ID: MW - 27 - 0712 **Lab ID:** 12071372-07
Collection Date: 7/26/2012 02:20 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Hexachloroethane	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Isophorone	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Naphthalene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Nitrobenzene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/3/2012 11:44 PM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Pentachlorophenol	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Phenanthrene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Phenol	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Pyrene	ND		0.20	µg/L	1	8/3/2012 11:44 PM
Surr: 2,4,6-Tribromophenol	*73.7*		*34-129*	*%REC*	1	8/3/2012 11:44 PM
Surr: 2-Fluorobiphenyl	*58.9*		*40-125*	*%REC*	1	8/3/2012 11:44 PM
Surr: 2-Fluorophenol	*57.2*		*20-120*	*%REC*	1	8/3/2012 11:44 PM
Surr: 4-Terphenyl-d14	*93.1*		*40-135*	*%REC*	1	8/3/2012 11:44 PM
Surr: Nitrobenzene-d5	*67.8*		*41-120*	*%REC*	1	8/3/2012 11:44 PM
Surr: Phenol-d6	*58.5*		*20-120*	*%REC*	1	8/3/2012 11:44 PM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
2-Butanone	ND		0.010	mg/L	1	8/2/2012 07:33 PM
2-Hexanone	ND		0.010	mg/L	1	8/2/2012 07:33 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	8/2/2012 07:33 PM
Acetone	ND		0.010	mg/L	1	8/2/2012 07:33 PM
Benzene	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
Bromodichloromethane	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
Bromoform	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
Bromomethane	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
Carbon disulfide	ND		0.010	mg/L	1	8/2/2012 07:33 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	8/2/2012 07:33 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071372
Sample ID: MW - 27 - 0712 **Lab ID:** 12071372-07
Collection Date: 7/26/2012 02:20 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
Chloroethane	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
Chloroform	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
Chloromethane	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
Dibromochloromethane	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
Ethylbenzene	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
Isopropylbenzene	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
m,p-Xylene	ND		0.010	mg/L	1	8/2/2012 07:33 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
Methylene chloride	ND		0.010	mg/L	1	8/2/2012 07:33 PM
Naphthalene	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
n-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
n-Propylbenzene	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
o-Xylene	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
Styrene	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
Tetrachloroethene	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
Toluene	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
Trichloroethene	ND		0.0050	mg/L	1	8/2/2012 07:33 PM
Vinyl chloride	ND		0.0020	mg/L	1	8/2/2012 07:33 PM
Xylenes, Total	ND		0.015	mg/L	1	8/2/2012 07:33 PM
Surr: 1,2-Dichloroethane-d4	*108*		*70-125*	*%REC*	1	8/2/2012 07:33 PM
Surr: 4-Bromofluorobenzene	*96.4*		*72-125*	*%REC*	1	8/2/2012 07:33 PM
Surr: Dibromofluoromethane	*111*		*71-125*	*%REC*	1	8/2/2012 07:33 PM
Surr: Toluene-d8	*95.9*		*75-125*	*%REC*	1	8/2/2012 07:33 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**164**		**5.00**	**mg/L**	10	8/2/2012 11:25 PM
Fluoride	**0.680**		**0.100**	**mg/L**	1	8/1/2012 10:12 PM
Sulfate	**65.3**		**0.500**	**mg/L**	1	8/1/2012 10:12 PM
Nitrate/Nitrite (as N)	**2.95**		**2.00**	**mg/L**	10	8/3/2012 08:00 PM
Surr: Selenate (surr)	*98.3*		*85-115*	*%REC*	10	8/3/2012 08:00 PM
Surr: Selenate (surr)	*106*		*85-115*	*%REC*	10	8/2/2012 11:25 PM
Surr: Selenate (surr)	*97.2*		*85-115*	*%REC*	1	8/1/2012 10:12 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**316**		**5.00**	**mg/L**	1	8/6/2012 03:58 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 27 - 0712
Lab ID: 12071372-07
Collection Date: 7/26/2012 02:20 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 03:58 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 03:58 PM
Alkalinity, Total (As CaCO3)	**316**		**5.00**	**mg/L**	1	8/6/2012 03:58 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**1,170**		**1.00**	**µmhos/cm**	1	8/1/2012 10:00 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**6.90**	H	**0.100**	**pH Units**	1	8/1/2012 06:50 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**754**		**10.0**	**mg/L**	1	8/2/2012 08:15 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 11 - 0712
Lab ID: 12071372-08
Collection Date: 7/27/2012 09:15 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/3/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/3/2012 03:31 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/6/2012**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	8/8/2012 09:27 PM
Arsenic	**0.0128**		**0.00500**	**mg/L**	1	8/8/2012 09:27 PM
Barium	**0.827**		**0.00500**	**mg/L**	1	8/8/2012 09:27 PM
Boron	**0.374**		**0.0200**	**mg/L**	1	8/8/2012 09:27 PM
Cadmium	ND		0.00200	mg/L	1	8/8/2012 09:27 PM
Calcium	**153**		**0.500**	**mg/L**	1	8/8/2012 09:27 PM
Chromium	ND		0.00500	mg/L	1	8/8/2012 09:27 PM
Cobalt	ND		0.00500	mg/L	1	8/8/2012 09:27 PM
Copper	ND		0.00500	mg/L	1	8/8/2012 09:27 PM
Iron	**2.02**		**0.200**	**mg/L**	1	8/8/2012 09:27 PM
Lead	ND		0.00500	mg/L	1	8/8/2012 09:27 PM
Magnesium	**23.1**		**0.200**	**mg/L**	1	8/8/2012 09:27 PM
Manganese	**2.54**		**0.0500**	**mg/L**	10	8/9/2012 03:07 PM
Molybdenum	ND		0.00500	mg/L	1	8/8/2012 09:27 PM
Nickel	**0.0351**		**0.00500**	**mg/L**	1	8/8/2012 09:27 PM
Potassium	**3.73**		**0.200**	**mg/L**	1	8/8/2012 09:27 PM
Selenium	ND		0.00500	mg/L	1	8/8/2012 09:27 PM
Silver	ND		0.00500	mg/L	1	8/8/2012 09:27 PM
Sodium	**103**		**0.200**	**mg/L**	1	8/8/2012 09:27 PM
Uranium	**0.0330**		**0.00500**	**mg/L**	1	8/8/2012 09:27 PM
Zinc	ND		0.00500	mg/L	1	8/8/2012 09:27 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/31/2012**	Analyst: **ACN**
1,1´-Biphenyl	**0.58**		**0.20**	**µg/L**	1	8/4/2012 12:04 AM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/4/2012 12:04 AM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/4/2012 12:04 AM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/4/2012 12:04 AM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/4/2012 12:04 AM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/4/2012 12:04 AM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
2-Chlorophenol	ND		0.20	µg/L	1	8/4/2012 12:04 AM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
2-Methylphenol	ND		0.20	µg/L	1	8/4/2012 12:04 AM
2-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 12:04 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 11 - 0712
Lab ID: 12071372-08
Collection Date: 7/27/2012 09:15 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/4/2012 12:04 AM
3&4-Methylphenol	ND		0.20	µg/L	1	8/4/2012 12:04 AM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/4/2012 12:04 AM
3-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 12:04 AM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/4/2012 12:04 AM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/4/2012 12:04 AM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/4/2012 12:04 AM
4-Chloroaniline	ND		0.20	µg/L	1	8/4/2012 12:04 AM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/4/2012 12:04 AM
4-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 12:04 AM
4-Nitrophenol	ND		1.0	µg/L	1	8/4/2012 12:04 AM
Acenaphthene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Acenaphthylene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Acetophenone	**0.21**		**0.20**	**µg/L**	1	8/4/2012 12:04 AM
Anthracene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Atrazine	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Benz(a)anthracene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Benzaldehyde	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Bis(2-ethylhexyl)phthalate	**3.5**		**0.20**	**µg/L**	1	8/4/2012 12:04 AM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Caprolactam	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Carbazole	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Chrysene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Dibenzofuran	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Diethyl phthalate	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Dimethyl phthalate	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Fluoranthene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Fluorene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Hexachlorobenzene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/4/2012 12:04 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071372
Sample ID: MW - 11 - 0712 **Lab ID:** 12071372-08
Collection Date: 7/27/2012 09:15 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Hexachloroethane	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Isophorone	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Naphthalene	**0.22**		**0.20**	**µg/L**	1	8/4/2012 12:04 AM
Nitrobenzene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/4/2012 12:04 AM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Pentachlorophenol	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Phenanthrene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Phenol	**0.23**		**0.20**	**µg/L**	1	8/4/2012 12:04 AM
Pyrene	ND		0.20	µg/L	1	8/4/2012 12:04 AM
Surr: 2,4,6-Tribromophenol	*81.4*		*34-129*	*%REC*	1	8/4/2012 12:04 AM
Surr: 2-Fluorobiphenyl	*59.6*		*40-125*	*%REC*	1	8/4/2012 12:04 AM
Surr: 2-Fluorophenol	*56.9*		*20-120*	*%REC*	1	8/4/2012 12:04 AM
Surr: 4-Terphenyl-d14	*97.1*		*40-135*	*%REC*	1	8/4/2012 12:04 AM
Surr: Nitrobenzene-d5	*63.1*		*41-120*	*%REC*	1	8/4/2012 12:04 AM
Surr: Phenol-d6	*59.2*		*20-120*	*%REC*	1	8/4/2012 12:04 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
2-Butanone	ND		0.010	mg/L	1	8/2/2012 09:49 PM
2-Hexanone	ND		0.010	mg/L	1	8/2/2012 09:49 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	8/2/2012 09:49 PM
Acetone	ND		0.010	mg/L	1	8/2/2012 09:49 PM
Benzene	**0.049**		**0.0050**	**mg/L**	1	8/2/2012 09:49 PM
Bromodichloromethane	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
Bromoform	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
Bromomethane	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
Carbon disulfide	ND		0.010	mg/L	1	8/2/2012 09:49 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	8/2/2012 09:49 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 11 - 0712
Lab ID: 12071372-08
Collection Date: 7/27/2012 09:15 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
Chloroethane	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
Chloroform	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
Chloromethane	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
Dibromochloromethane	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
Ethylbenzene	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
Isopropylbenzene	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
m,p-Xylene	ND		0.010	mg/L	1	8/2/2012 09:49 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
Methylene chloride	ND		0.010	mg/L	1	8/2/2012 09:49 PM
Naphthalene	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
n-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
n-Propylbenzene	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
o-Xylene	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
Styrene	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
Tetrachloroethene	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
Toluene	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
Trichloroethene	ND		0.0050	mg/L	1	8/2/2012 09:49 PM
Vinyl chloride	ND		0.0020	mg/L	1	8/2/2012 09:49 PM
Xylenes, Total	ND		0.015	mg/L	1	8/2/2012 09:49 PM
Surr: 1,2-Dichloroethane-d4	*110*		*70-125*	*%REC*	1	8/2/2012 09:49 PM
Surr: 4-Bromofluorobenzene	*94.0*		*72-125*	*%REC*	1	8/2/2012 09:49 PM
Surr: Dibromofluoromethane	*109*		*71-125*	*%REC*	1	8/2/2012 09:49 PM
Surr: Toluene-d8	*93.4*		*75-125*	*%REC*	1	8/2/2012 09:49 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**133**		**5.00**	**mg/L**	10	8/2/2012 11:46 PM
Fluoride	**0.708**		**0.100**	**mg/L**	1	8/1/2012 11:15 PM
Sulfate	**59.7**		**0.500**	**mg/L**	1	8/1/2012 11:15 PM
Nitrate/Nitrite (as N)	ND		2.00	mg/L	10	8/3/2012 08:21 PM
Surr: Selenate (surr)	*98.4*		*85-115*	*%REC*	10	8/3/2012 08:21 PM
Surr: Selenate (surr)	*106*		*85-115*	*%REC*	10	8/2/2012 11:46 PM
Surr: Selenate (surr)	*96.5*		*85-115*	*%REC*	1	8/1/2012 11:15 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**480**		**5.00**	**mg/L**	1	8/6/2012 04:04 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 11 - 0712
Lab ID: 12071372-08
Collection Date: 7/27/2012 09:15 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 04:04 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 04:04 PM
Alkalinity, Total (As CaCO3)	**480**		**5.00**	**mg/L**	1	8/6/2012 04:04 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**1,290**		**1.00**	**µmhos/cm**	1	8/1/2012 10:00 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**6.78**	H	**0.100**	**pH Units**	1	8/1/2012 06:50 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**784**		**10.0**	**mg/L**	1	8/3/2012 09:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 8 - 0712
Lab ID: 12071372-09
Collection Date: 7/27/2012 10:45 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/3/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/3/2012 03:33 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/6/2012**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	8/8/2012 09:29 PM
Arsenic	ND		0.00500	mg/L	1	8/8/2012 09:29 PM
Barium	**0.160**		**0.00500**	**mg/L**	1	8/8/2012 09:29 PM
Boron	**0.294**		**0.0200**	**mg/L**	1	8/8/2012 09:29 PM
Cadmium	ND		0.00200	mg/L	1	8/8/2012 09:29 PM
Calcium	**206**		**5.00**	**mg/L**	10	8/9/2012 03:09 PM
Chromium	ND		0.00500	mg/L	1	8/8/2012 09:29 PM
Cobalt	ND		0.00500	mg/L	1	8/8/2012 09:29 PM
Copper	ND		0.00500	mg/L	1	8/8/2012 09:29 PM
Iron	ND		0.200	mg/L	1	8/8/2012 09:29 PM
Lead	ND		0.00500	mg/L	1	8/8/2012 09:29 PM
Magnesium	**25.9**		**0.200**	**mg/L**	1	8/8/2012 09:29 PM
Manganese	ND		0.00500	mg/L	1	8/8/2012 09:29 PM
Molybdenum	ND		0.00500	mg/L	1	8/8/2012 09:29 PM
Nickel	**0.00523**		**0.00500**	**mg/L**	1	8/8/2012 09:29 PM
Potassium	**4.40**		**0.200**	**mg/L**	1	8/8/2012 09:29 PM
Selenium	ND		0.00500	mg/L	1	8/8/2012 09:29 PM
Silver	ND		0.00500	mg/L	1	8/8/2012 09:29 PM
Sodium	**122**		**0.200**	**mg/L**	1	8/8/2012 09:29 PM
Uranium	**0.00714**		**0.00500**	**mg/L**	1	8/8/2012 09:29 PM
Zinc	**0.00888**		**0.00500**	**mg/L**	1	8/8/2012 09:29 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/31/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/4/2012 12:24 AM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/4/2012 12:24 AM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/4/2012 12:24 AM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/4/2012 12:24 AM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/4/2012 12:24 AM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/4/2012 12:24 AM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
2-Chlorophenol	ND		0.20	µg/L	1	8/4/2012 12:24 AM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
2-Methylphenol	ND		0.20	µg/L	1	8/4/2012 12:24 AM
2-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 12:24 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 8 - 0712
Lab ID: 12071372-09
Collection Date: 7/27/2012 10:45 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/4/2012 12:24 AM
3&4-Methylphenol	ND		0.20	µg/L	1	8/4/2012 12:24 AM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/4/2012 12:24 AM
3-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 12:24 AM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/4/2012 12:24 AM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/4/2012 12:24 AM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/4/2012 12:24 AM
4-Chloroaniline	ND		0.20	µg/L	1	8/4/2012 12:24 AM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/4/2012 12:24 AM
4-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 12:24 AM
4-Nitrophenol	ND		1.0	µg/L	1	8/4/2012 12:24 AM
Acenaphthene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Acenaphthylene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Acetophenone	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Anthracene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Atrazine	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Benz(a)anthracene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Benzaldehyde	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Bis(2-ethylhexyl)phthalate	**0.61**		**0.20**	**µg/L**	1	8/4/2012 12:24 AM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Caprolactam	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Carbazole	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Chrysene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Dibenzofuran	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Diethyl phthalate	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Dimethyl phthalate	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Fluoranthene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Fluorene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Hexachlorobenzene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/4/2012 12:24 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071372
Sample ID: MW - 8 - 0712 **Lab ID:** 12071372-09
Collection Date: 7/27/2012 10:45 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Hexachloroethane	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Isophorone	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Naphthalene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Nitrobenzene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/4/2012 12:24 AM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Pentachlorophenol	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Phenanthrene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Phenol	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Pyrene	ND		0.20	µg/L	1	8/4/2012 12:24 AM
Surr: 2,4,6-Tribromophenol	*66.0*		*34-129*	*%REC*	1	8/4/2012 12:24 AM
Surr: 2-Fluorobiphenyl	*62.0*		*40-125*	*%REC*	1	8/4/2012 12:24 AM
Surr: 2-Fluorophenol	*50.3*		*20-120*	*%REC*	1	8/4/2012 12:24 AM
Surr: 4-Terphenyl-d14	*68.0*		*40-135*	*%REC*	1	8/4/2012 12:24 AM
Surr: Nitrobenzene-d5	*79.6*		*41-120*	*%REC*	1	8/4/2012 12:24 AM
Surr: Phenol-d6	*42.8*		*20-120*	*%REC*	1	8/4/2012 12:24 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
2-Butanone	ND		0.010	mg/L	1	8/2/2012 08:01 PM
2-Hexanone	ND		0.010	mg/L	1	8/2/2012 08:01 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	8/2/2012 08:01 PM
Acetone	ND		0.010	mg/L	1	8/2/2012 08:01 PM
Benzene	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
Bromodichloromethane	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
Bromoform	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
Bromomethane	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
Carbon disulfide	ND		0.010	mg/L	1	8/2/2012 08:01 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	8/2/2012 08:01 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071372
Sample ID: MW - 8 - 0712 **Lab ID:** 12071372-09
Collection Date: 7/27/2012 10:45 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
Chloroethane	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
Chloroform	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
Chloromethane	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
Dibromochloromethane	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
Ethylbenzene	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
Isopropylbenzene	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
m,p-Xylene	ND		0.010	mg/L	1	8/2/2012 08:01 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
Methylene chloride	ND		0.010	mg/L	1	8/2/2012 08:01 PM
Naphthalene	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
n-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
n-Propylbenzene	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
o-Xylene	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
Styrene	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
Tetrachloroethene	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
Toluene	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
Trichloroethene	ND		0.0050	mg/L	1	8/2/2012 08:01 PM
Vinyl chloride	ND		0.0020	mg/L	1	8/2/2012 08:01 PM
Xylenes, Total	ND		0.015	mg/L	1	8/2/2012 08:01 PM
Surr: 1,2-Dichloroethane-d4	*113*		*70-125*	*%REC*	1	8/2/2012 08:01 PM
Surr: 4-Bromofluorobenzene	*101*		*72-125*	*%REC*	1	8/2/2012 08:01 PM
Surr: Dibromofluoromethane	*110*		*71-125*	*%REC*	1	8/2/2012 08:01 PM
Surr: Toluene-d8	*93.2*		*75-125*	*%REC*	1	8/2/2012 08:01 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**224**		**5.00**	**mg/L**	10	8/3/2012 12:08 AM
Fluoride	**0.490**		**0.100**	**mg/L**	1	8/1/2012 11:36 PM
Sulfate	**122**		**5.00**	**mg/L**	10	8/3/2012 12:08 AM
Nitrate/Nitrite (as N)	**8.55**		**2.00**	**mg/L**	10	8/3/2012 09:24 PM
Surr: Selenate (surr)	*99.3*		*85-115*	*%REC*	10	8/3/2012 09:24 PM
Surr: Selenate (surr)	*106*		*85-115*	*%REC*	10	8/3/2012 12:08 AM
Surr: Selenate (surr)	*92.2*		*85-115*	*%REC*	1	8/1/2012 11:36 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**446**		**5.00**	**mg/L**	1	8/6/2012 04:16 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 8 - 0712
Lab ID: 12071372-09
Collection Date: 7/27/2012 10:45 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 04:16 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 04:16 PM
Alkalinity, Total (As CaCO3)	**446**		**5.00**	**mg/L**	1	8/6/2012 04:16 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**1,630**		**1.00**	**µmhos/cm**	1	8/1/2012 10:00 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**6.52**	H	**0.100**	**pH Units**	1	8/1/2012 06:50 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**1,080**		**10.0**	**mg/L**	1	8/3/2012 09:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 1 - 0712
Lab ID: 12071372-10
Collection Date: 7/27/2012 12:00 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/3/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/3/2012 03:35 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/6/2012**	Analyst: **SKS**
Aluminum	**0.0249**		**0.0100**	**mg/L**	1	8/8/2012 09:32 PM
Arsenic	**0.00870**		**0.00500**	**mg/L**	1	8/8/2012 09:32 PM
Barium	**0.0917**		**0.00500**	**mg/L**	1	8/8/2012 09:32 PM
Boron	**0.193**		**0.0200**	**mg/L**	1	8/8/2012 09:32 PM
Cadmium	ND		0.00200	mg/L	1	8/8/2012 09:32 PM
Calcium	**74.1**		**0.500**	**mg/L**	1	8/8/2012 09:32 PM
Chromium	ND		0.00500	mg/L	1	8/8/2012 09:32 PM
Cobalt	ND		0.00500	mg/L	1	8/8/2012 09:32 PM
Copper	ND		0.00500	mg/L	1	8/8/2012 09:32 PM
Iron	ND		0.200	mg/L	1	8/8/2012 09:32 PM
Lead	ND		0.00500	mg/L	1	8/8/2012 09:32 PM
Magnesium	**8.95**		**0.200**	**mg/L**	1	8/8/2012 09:32 PM
Manganese	**1.05**		**0.00500**	**mg/L**	1	8/8/2012 09:32 PM
Molybdenum	ND		0.00500	mg/L	1	8/8/2012 09:32 PM
Nickel	ND		0.00500	mg/L	1	8/8/2012 09:32 PM
Potassium	**1.16**		**0.200**	**mg/L**	1	8/8/2012 09:32 PM
Selenium	ND		0.00500	mg/L	1	8/8/2012 09:32 PM
Silver	ND		0.00500	mg/L	1	8/8/2012 09:32 PM
Sodium	**39.8**		**0.200**	**mg/L**	1	8/8/2012 09:32 PM
Uranium	ND		0.00500	mg/L	1	8/8/2012 09:32 PM
Zinc	**0.00759**		**0.00500**	**mg/L**	1	8/8/2012 09:32 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/31/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/4/2012 12:44 AM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/4/2012 12:44 AM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/4/2012 12:44 AM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/4/2012 12:44 AM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/4/2012 12:44 AM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/4/2012 12:44 AM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
2-Chlorophenol	ND		0.20	µg/L	1	8/4/2012 12:44 AM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
2-Methylphenol	ND		0.20	µg/L	1	8/4/2012 12:44 AM
2-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 12:44 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 1 - 0712
Lab ID: 12071372-10
Collection Date: 7/27/2012 12:00 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/4/2012 12:44 AM
3&4-Methylphenol	ND		0.20	µg/L	1	8/4/2012 12:44 AM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/4/2012 12:44 AM
3-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 12:44 AM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/4/2012 12:44 AM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/4/2012 12:44 AM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/4/2012 12:44 AM
4-Chloroaniline	ND		0.20	µg/L	1	8/4/2012 12:44 AM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/4/2012 12:44 AM
4-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 12:44 AM
4-Nitrophenol	ND		1.0	µg/L	1	8/4/2012 12:44 AM
Acenaphthene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Acenaphthylene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Acetophenone	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Anthracene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Atrazine	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Benz(a)anthracene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Benzaldehyde	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Bis(2-ethylhexyl)phthalate	**0.65**		**0.20**	**µg/L**	1	8/4/2012 12:44 AM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Caprolactam	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Carbazole	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Chrysene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Dibenzofuran	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Diethyl phthalate	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Dimethyl phthalate	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Fluoranthene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Fluorene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Hexachlorobenzene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/4/2012 12:44 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071372
Sample ID: MW - 1 - 0712 **Lab ID:** 12071372-10
Collection Date: 7/27/2012 12:00 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Hexachloroethane	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Isophorone	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Naphthalene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Nitrobenzene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/4/2012 12:44 AM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Pentachlorophenol	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Phenanthrene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Phenol	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Pyrene	ND		0.20	µg/L	1	8/4/2012 12:44 AM
Surr: 2,4,6-Tribromophenol	*58.9*		*34-129*	*%REC*	1	8/4/2012 12:44 AM
Surr: 2-Fluorobiphenyl	*57.7*		*40-125*	*%REC*	1	8/4/2012 12:44 AM
Surr: 2-Fluorophenol	*51.9*		*20-120*	*%REC*	1	8/4/2012 12:44 AM
Surr: 4-Terphenyl-d14	*69.1*		*40-135*	*%REC*	1	8/4/2012 12:44 AM
Surr: Nitrobenzene-d5	*66.2*		*41-120*	*%REC*	1	8/4/2012 12:44 AM
Surr: Phenol-d6	*51.9*		*20-120*	*%REC*	1	8/4/2012 12:44 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
2-Butanone	ND		0.010	mg/L	1	8/2/2012 08:28 PM
2-Hexanone	ND		0.010	mg/L	1	8/2/2012 08:28 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	8/2/2012 08:28 PM
Acetone	ND		0.010	mg/L	1	8/2/2012 08:28 PM
Benzene	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
Bromodichloromethane	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
Bromoform	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
Bromomethane	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
Carbon disulfide	ND		0.010	mg/L	1	8/2/2012 08:28 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	8/2/2012 08:28 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071372
Sample ID: MW - 1 - 0712 **Lab ID:** 12071372-10
Collection Date: 7/27/2012 12:00 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
Chloroethane	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
Chloroform	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
Chloromethane	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
Dibromochloromethane	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
Ethylbenzene	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
Isopropylbenzene	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
m,p-Xylene	ND		0.010	mg/L	1	8/2/2012 08:28 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
Methylene chloride	ND		0.010	mg/L	1	8/2/2012 08:28 PM
Naphthalene	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
n-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
n-Propylbenzene	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
o-Xylene	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
Styrene	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
Tetrachloroethene	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
Toluene	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
Trichloroethene	ND		0.0050	mg/L	1	8/2/2012 08:28 PM
Vinyl chloride	ND		0.0020	mg/L	1	8/2/2012 08:28 PM
Xylenes, Total	ND		0.015	mg/L	1	8/2/2012 08:28 PM
Surr: 1,2-Dichloroethane-d4	*113*		*70-125*	*%REC*	1	8/2/2012 08:28 PM
Surr: 4-Bromofluorobenzene	*101*		*72-125*	*%REC*	1	8/2/2012 08:28 PM
Surr: Dibromofluoromethane	*112*		*71-125*	*%REC*	1	8/2/2012 08:28 PM
Surr: Toluene-d8	*98.1*		*75-125*	*%REC*	1	8/2/2012 08:28 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**27.3**		**0.500**	**mg/L**	1	8/1/2012 11:58 PM
Fluoride	**0.944**		**0.100**	**mg/L**	1	8/1/2012 11:58 PM
Sulfate	**59.5**		**0.500**	**mg/L**	1	8/1/2012 11:58 PM
Nitrate/Nitrite (as N)	ND		2.00	mg/L	10	8/3/2012 09:45 PM
Surr: Selenate (surr)	*101*		*85-115*	*%REC*	10	8/3/2012 09:45 PM
Surr: Selenate (surr)	*90.8*		*85-115*	*%REC*	1	8/1/2012 11:58 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**215**		**5.00**	**mg/L**	1	8/6/2012 04:21 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 04:21 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 1 - 0712
Lab ID: 12071372-10
Collection Date: 7/27/2012 12:00 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 04:21 PM
Alkalinity, Total (As CaCO3)	**215**		**5.00**	**mg/L**	1	8/6/2012 04:21 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**585**		**1.00**	**µmhos/cm**	1	8/1/2012 10:00 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**6.73**	H	**0.100**	**pH Units**	1	8/1/2012 06:50 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**358**		**10.0**	**mg/L**	1	8/3/2012 09:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 7 - 0712
Lab ID: 12071372-11
Collection Date: 7/27/2012 01:20 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/3/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/3/2012 03:41 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/6/2012**	Analyst: **SKS**
Aluminum	**0.0727**		**0.0100**	**mg/L**	1	8/8/2012 09:35 PM
Arsenic	ND		0.00500	mg/L	1	8/8/2012 09:35 PM
Barium	**0.234**		**0.00500**	**mg/L**	1	8/8/2012 09:35 PM
Boron	**0.196**		**0.0200**	**mg/L**	1	8/8/2012 09:35 PM
Cadmium	ND		0.00200	mg/L	1	8/8/2012 09:35 PM
Calcium	**67.2**		**0.500**	**mg/L**	1	8/8/2012 09:35 PM
Chromium	ND		0.00500	mg/L	1	8/8/2012 09:35 PM
Cobalt	ND		0.00500	mg/L	1	8/8/2012 09:35 PM
Copper	ND		0.00500	mg/L	1	8/8/2012 09:35 PM
Iron	ND		0.200	mg/L	1	8/8/2012 09:35 PM
Lead	ND		0.00500	mg/L	1	8/8/2012 09:35 PM
Magnesium	**7.58**		**0.200**	**mg/L**	1	8/8/2012 09:35 PM
Manganese	**0.642**		**0.00500**	**mg/L**	1	8/8/2012 09:35 PM
Molybdenum	ND		0.00500	mg/L	1	8/8/2012 09:35 PM
Nickel	ND		0.00500	mg/L	1	8/8/2012 09:35 PM
Potassium	**2.48**		**0.200**	**mg/L**	1	8/8/2012 09:35 PM
Selenium	ND		0.00500	mg/L	1	8/8/2012 09:35 PM
Silver	ND		0.00500	mg/L	1	8/8/2012 09:35 PM
Sodium	**44.0**		**0.200**	**mg/L**	1	8/8/2012 09:35 PM
Uranium	ND		0.00500	mg/L	1	8/8/2012 09:35 PM
Zinc	**0.0114**		**0.00500**	**mg/L**	1	8/8/2012 09:35 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/31/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/4/2012 01:04 AM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/4/2012 01:04 AM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/4/2012 01:04 AM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/4/2012 01:04 AM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/4/2012 01:04 AM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/4/2012 01:04 AM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
2-Chlorophenol	ND		0.20	µg/L	1	8/4/2012 01:04 AM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
2-Methylphenol	ND		0.20	µg/L	1	8/4/2012 01:04 AM
2-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 01:04 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 7 - 0712
Lab ID: 12071372-11
Collection Date: 7/27/2012 01:20 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/4/2012 01:04 AM
3&4-Methylphenol	ND		0.20	µg/L	1	8/4/2012 01:04 AM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/4/2012 01:04 AM
3-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 01:04 AM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/4/2012 01:04 AM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/4/2012 01:04 AM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/4/2012 01:04 AM
4-Chloroaniline	ND		0.20	µg/L	1	8/4/2012 01:04 AM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/4/2012 01:04 AM
4-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 01:04 AM
4-Nitrophenol	ND		1.0	µg/L	1	8/4/2012 01:04 AM
Acenaphthene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Acenaphthylene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Acetophenone	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Anthracene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Atrazine	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Benz(a)anthracene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Benzaldehyde	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Bis(2-ethylhexyl)phthalate	**4.7**		**0.20**	**µg/L**	1	8/4/2012 01:04 AM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Caprolactam	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Carbazole	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Chrysene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Dibenzofuran	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Diethyl phthalate	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Dimethyl phthalate	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Fluoranthene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Fluorene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Hexachlorobenzene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/4/2012 01:04 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071372
Sample ID: MW - 7 - 0712 **Lab ID:** 12071372-11
Collection Date: 7/27/2012 01:20 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Hexachloroethane	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Isophorone	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Naphthalene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Nitrobenzene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/4/2012 01:04 AM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Pentachlorophenol	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Phenanthrene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Phenol	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Pyrene	ND		0.20	µg/L	1	8/4/2012 01:04 AM
Surr: 2,4,6-Tribromophenol	*69.6*		*34-129*	*%REC*	1	8/4/2012 01:04 AM
Surr: 2-Fluorobiphenyl	*59.1*		*40-125*	*%REC*	1	8/4/2012 01:04 AM
Surr: 2-Fluorophenol	*50.0*		*20-120*	*%REC*	1	8/4/2012 01:04 AM
Surr: 4-Terphenyl-d14	*87.7*		*40-135*	*%REC*	1	8/4/2012 01:04 AM
Surr: Nitrobenzene-d5	*66.1*		*41-120*	*%REC*	1	8/4/2012 01:04 AM
Surr: Phenol-d6	*53.6*		*20-120*	*%REC*	1	8/4/2012 01:04 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
2-Butanone	ND		0.010	mg/L	1	8/2/2012 08:55 PM
2-Hexanone	ND		0.010	mg/L	1	8/2/2012 08:55 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	8/2/2012 08:55 PM
Acetone	ND		0.010	mg/L	1	8/2/2012 08:55 PM
Benzene	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
Bromodichloromethane	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
Bromoform	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
Bromomethane	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
Carbon disulfide	ND		0.010	mg/L	1	8/2/2012 08:55 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	8/2/2012 08:55 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071372
Sample ID: MW - 7 - 0712 **Lab ID:** 12071372-11
Collection Date: 7/27/2012 01:20 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
Chloroethane	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
Chloroform	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
Chloromethane	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
Dibromochloromethane	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
Ethylbenzene	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
Isopropylbenzene	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
m,p-Xylene	ND		0.010	mg/L	1	8/2/2012 08:55 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
Methylene chloride	ND		0.010	mg/L	1	8/2/2012 08:55 PM
Naphthalene	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
n-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
n-Propylbenzene	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
o-Xylene	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
Styrene	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
Tetrachloroethene	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
Toluene	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
Trichloroethene	ND		0.0050	mg/L	1	8/2/2012 08:55 PM
Vinyl chloride	ND		0.0020	mg/L	1	8/2/2012 08:55 PM
Xylenes, Total	ND		0.015	mg/L	1	8/2/2012 08:55 PM
Surr: 1,2-Dichloroethane-d4	*109*		*70-125*	*%REC*	1	8/2/2012 08:55 PM
Surr: 4-Bromofluorobenzene	*99.9*		*72-125*	*%REC*	1	8/2/2012 08:55 PM
Surr: Dibromofluoromethane	*104*		*71-125*	*%REC*	1	8/2/2012 08:55 PM
Surr: Toluene-d8	*101*		*75-125*	*%REC*	1	8/2/2012 08:55 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**23.6**		**0.500**	**mg/L**	1	8/2/2012 12:19 AM
Fluoride	**0.796**		**0.100**	**mg/L**	1	8/2/2012 12:19 AM
Sulfate	**55.2**		**0.500**	**mg/L**	1	8/2/2012 12:19 AM
Nitrate/Nitrite (as N)	**2.01**		**2.00**	**mg/L**	10	8/3/2012 10:06 PM
Surr: Selenate (surr)	*99.3*		*85-115*	*%REC*	10	8/3/2012 10:06 PM
Surr: Selenate (surr)	*89.9*		*85-115*	*%REC*	1	8/2/2012 12:19 AM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**207**		**5.00**	**mg/L**	1	8/6/2012 04:31 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 04:31 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: MW - 7 - 0712
Lab ID: 12071372-11
Collection Date: 7/27/2012 01:20 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 04:31 PM
Alkalinity, Total (As CaCO3)	**207**		**5.00**	**mg/L**	1	8/6/2012 04:31 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**552**		**1.00**	**µmhos/cm**	1	8/1/2012 10:00 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**6.90**	H	**0.100**	**pH Units**	1	8/1/2012 06:50 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**342**		**10.0**	**mg/L**	1	8/3/2012 09:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: RW - 1 - 0712
Lab ID: 12071372-12
Collection Date: 7/27/2012 02:20 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/3/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/3/2012 03:43 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/6/2012**	Analyst: **SKS**
Aluminum	**0.0532**		**0.0100**	**mg/L**	1	8/8/2012 09:37 PM
Arsenic	**0.0103**		**0.00500**	**mg/L**	1	8/8/2012 09:37 PM
Barium	**0.163**		**0.00500**	**mg/L**	1	8/8/2012 09:37 PM
Boron	**0.177**		**0.0200**	**mg/L**	1	8/8/2012 09:37 PM
Cadmium	ND		0.00200	mg/L	1	8/8/2012 09:37 PM
Calcium	**63.6**		**0.500**	**mg/L**	1	8/8/2012 09:37 PM
Chromium	ND		0.00500	mg/L	1	8/8/2012 09:37 PM
Cobalt	ND		0.00500	mg/L	1	8/8/2012 09:37 PM
Copper	ND		0.00500	mg/L	1	8/8/2012 09:37 PM
Iron	ND		0.200	mg/L	1	8/8/2012 09:37 PM
Lead	ND		0.00500	mg/L	1	8/8/2012 09:37 PM
Magnesium	**7.39**		**0.200**	**mg/L**	1	8/8/2012 09:37 PM
Manganese	**0.0182**		**0.00500**	**mg/L**	1	8/8/2012 09:37 PM
Molybdenum	ND		0.00500	mg/L	1	8/8/2012 09:37 PM
Nickel	ND		0.00500	mg/L	1	8/8/2012 09:37 PM
Potassium	**2.52**		**0.200**	**mg/L**	1	8/8/2012 09:37 PM
Selenium	ND		0.00500	mg/L	1	8/8/2012 09:37 PM
Silver	ND		0.00500	mg/L	1	8/8/2012 09:37 PM
Sodium	**49.6**		**0.200**	**mg/L**	1	8/8/2012 09:37 PM
Uranium	ND		0.00500	mg/L	1	8/8/2012 09:37 PM
Zinc	**0.00764**		**0.00500**	**mg/L**	1	8/8/2012 09:37 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **7/31/2012**	Analyst: **ACN**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/4/2012 01:24 AM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/4/2012 01:24 AM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/4/2012 01:24 AM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/4/2012 01:24 AM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/4/2012 01:24 AM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/4/2012 01:24 AM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
2-Chlorophenol	ND		0.20	µg/L	1	8/4/2012 01:24 AM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
2-Methylphenol	ND		0.20	µg/L	1	8/4/2012 01:24 AM
2-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 01:24 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: RW - 1 - 0712
Lab ID: 12071372-12
Collection Date: 7/27/2012 02:20 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/4/2012 01:24 AM
3&4-Methylphenol	ND		0.20	µg/L	1	8/4/2012 01:24 AM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/4/2012 01:24 AM
3-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 01:24 AM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/4/2012 01:24 AM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/4/2012 01:24 AM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/4/2012 01:24 AM
4-Chloroaniline	ND		0.20	µg/L	1	8/4/2012 01:24 AM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/4/2012 01:24 AM
4-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 01:24 AM
4-Nitrophenol	ND		1.0	µg/L	1	8/4/2012 01:24 AM
Acenaphthene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Acenaphthylene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Acetophenone	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Anthracene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Atrazine	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Benz(a)anthracene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Benzaldehyde	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Bis(2-ethylhexyl)phthalate	**2.1**		**0.20**	**µg/L**	1	8/4/2012 01:24 AM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Caprolactam	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Carbazole	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Chrysene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Dibenzofuran	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Diethyl phthalate	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Dimethyl phthalate	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Fluoranthene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Fluorene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Hexachlorobenzene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/4/2012 01:24 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071372
Sample ID: RW - 1 - 0712 **Lab ID:** 12071372-12
Collection Date: 7/27/2012 02:20 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Hexachloroethane	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Isophorone	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Naphthalene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Nitrobenzene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/4/2012 01:24 AM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Pentachlorophenol	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Phenanthrene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Phenol	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Pyrene	ND		0.20	µg/L	1	8/4/2012 01:24 AM
Surr: 2,4,6-Tribromophenol	*64.8*		*34-129*	*%REC*	1	8/4/2012 01:24 AM
Surr: 2-Fluorobiphenyl	*57.4*		*40-125*	*%REC*	1	8/4/2012 01:24 AM
Surr: 2-Fluorophenol	*51.3*		*20-120*	*%REC*	1	8/4/2012 01:24 AM
Surr: 4-Terphenyl-d14	*71.5*		*40-135*	*%REC*	1	8/4/2012 01:24 AM
Surr: Nitrobenzene-d5	*65.9*		*41-120*	*%REC*	1	8/4/2012 01:24 AM
Surr: Phenol-d6	*53.2*		*20-120*	*%REC*	1	8/4/2012 01:24 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
2-Butanone	ND		0.010	mg/L	1	8/2/2012 09:22 PM
2-Hexanone	ND		0.010	mg/L	1	8/2/2012 09:22 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	8/2/2012 09:22 PM
Acetone	ND		0.010	mg/L	1	8/2/2012 09:22 PM
Benzene	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
Bromodichloromethane	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
Bromoform	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
Bromomethane	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
Carbon disulfide	ND		0.010	mg/L	1	8/2/2012 09:22 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	8/2/2012 09:22 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071372
Sample ID: RW - 1 - 0712 **Lab ID:** 12071372-12
Collection Date: 7/27/2012 02:20 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
Chloroethane	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
Chloroform	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
Chloromethane	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
Dibromochloromethane	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
Ethylbenzene	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
Isopropylbenzene	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
m,p-Xylene	ND		0.010	mg/L	1	8/2/2012 09:22 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
Methylene chloride	ND		0.010	mg/L	1	8/2/2012 09:22 PM
Naphthalene	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
n-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
n-Propylbenzene	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
o-Xylene	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
Styrene	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
Tetrachloroethene	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
Toluene	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
Trichloroethene	ND		0.0050	mg/L	1	8/2/2012 09:22 PM
Vinyl chloride	ND		0.0020	mg/L	1	8/2/2012 09:22 PM
Xylenes, Total	ND		0.015	mg/L	1	8/2/2012 09:22 PM
Surr: 1,2-Dichloroethane-d4	*97.6*		*70-125*	*%REC*	1	8/2/2012 09:22 PM
Surr: 4-Bromofluorobenzene	*99.6*		*72-125*	*%REC*	1	8/2/2012 09:22 PM
Surr: Dibromofluoromethane	*104*		*71-125*	*%REC*	1	8/2/2012 09:22 PM
Surr: Toluene-d8	*94.9*		*75-125*	*%REC*	1	8/2/2012 09:22 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**27.3**		**0.500**	**mg/L**	1	8/2/2012 12:40 AM
Fluoride	**1.18**		**0.100**	**mg/L**	1	8/2/2012 12:40 AM
Sulfate	**68.9**		**0.500**	**mg/L**	1	8/2/2012 12:40 AM
Nitrate/Nitrite (as N)	ND		2.00	mg/L	10	8/3/2012 10:27 PM
Surr: Selenate (surr)	*100*		*85-115*	*%REC*	10	8/3/2012 10:27 PM
Surr: Selenate (surr)	*90.3*		*85-115*	*%REC*	1	8/2/2012 12:40 AM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**192**		**5.00**	**mg/L**	1	8/6/2012 04:37 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 04:37 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: RW - 1 - 0712
Lab ID: 12071372-12
Collection Date: 7/27/2012 02:20 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 04:37 PM
Alkalinity, Total (As CaCO3)	**192**		**5.00**	**mg/L**	1	8/6/2012 04:37 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**597**		**1.00**	**µmhos/cm**	1	8/1/2012 10:00 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**6.84**	H	**0.100**	**pH Units**	1	8/1/2012 06:50 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**344**		**10.0**	**mg/L**	1	8/3/2012 09:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: TRIP BLANK 071912-83
Lab ID: 12071372-13
Collection Date: 7/27/2012 04:00 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
2-Butanone	ND		0.010	mg/L	1	8/2/2012 03:49 PM
2-Hexanone	ND		0.010	mg/L	1	8/2/2012 03:49 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	8/2/2012 03:49 PM
Acetone	ND		0.010	mg/L	1	8/2/2012 03:49 PM
Benzene	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
Bromodichloromethane	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
Bromoform	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
Bromomethane	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
Carbon disulfide	ND		0.010	mg/L	1	8/2/2012 03:49 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
Chlorobenzene	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
Chloroethane	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
Chloroform	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
Chloromethane	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
Dibromochloromethane	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
Ethylbenzene	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
Isopropylbenzene	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
m,p-Xylene	ND		0.010	mg/L	1	8/2/2012 03:49 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
Methylene chloride	ND		0.010	mg/L	1	8/2/2012 03:49 PM
Naphthalene	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
n-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
n-Propylbenzene	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
o-Xylene	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
Styrene	ND		0.0050	mg/L	1	8/2/2012 03:49 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *17-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071372
Sample ID: TRIP BLANK 071912-83
Lab ID: 12071372-13
Collection Date: 7/27/2012 04:00 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
Toluene	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
Trichloroethene	ND		0.0050	mg/L	1	8/2/2012 03:49 PM
Vinyl chloride	ND		0.0020	mg/L	1	8/2/2012 03:49 PM
Xylenes, Total	ND		0.015	mg/L	1	8/2/2012 03:49 PM
Surr: 1,2-Dichloroethane-d4	*104*		*70-125*	*%REC*	1	8/2/2012 03:49 PM
Surr: 4-Bromofluorobenzene	*98.2*		*72-125*	*%REC*	1	8/2/2012 03:49 PM
Surr: Dibromofluoromethane	*104*		*71-125*	*%REC*	1	8/2/2012 03:49 PM
Surr: Toluene-d8	*97.0*		*75-125*	*%REC*	1	8/2/2012 03:49 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **63154** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW5-080312-63154** Units: **mg/L** Analysis Date: **8/3/2012 02:43 PM**

Client ID: Run ID: **MERCURY_120803A** SeqNo: **2888162** Prep Date: **8/3/2012** 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: **GLCSW5-080312-63154** Units: **mg/L** Analysis Date: **8/3/2012 02:45 PM**

Client ID: Run ID: **MERCURY_120803A** SeqNo: **2888163** Prep Date: **8/3/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00483	0.00020	0.005	0	96.6	85-115	0			

MS Sample ID: **12071406-01CMS** Units: **mg/L** Analysis Date: **8/3/2012 03:01 PM**

Client ID: Run ID: **MERCURY_120803A** SeqNo: **2888166** Prep Date: **8/3/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00443	0.00020	0.005	-0.000053	89.7	85-115	0			

MSD Sample ID: **12071406-01CMSD** Units: **mg/L** Analysis Date: **8/3/2012 03:03 PM**

Client ID: Run ID: **MERCURY_120803A** SeqNo: **2888167** Prep Date: **8/3/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00435	0.00020	0.005	-0.000053	88.1	85-115	0.00443	1.82	20	

DUP Sample ID: **12071406-01CDUP** Units: **mg/L** Analysis Date: **8/3/2012 02:54 PM**

Client ID: Run ID: **MERCURY_120803A** SeqNo: **2888165** Prep Date: **8/3/2012** 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	-0.000053	0	20	

The following samples were analyzed in this batch:

12071372-01C	12071372-02C	12071372-03C
12071372-04C	12071372-05C	12071372-06C
12071372-07C	12071372-08C	12071372-09C
12071372-10C	12071372-11C	12071372-12C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **63209** Instrument ID **ICPMS05** Method: **SW6020** **(Dissolve)**

MBLK Sample ID: **MBLKW7-080612-63209** Units: **mg/L** Analysis Date: **8/8/2012 08:33 PM**

Client ID: Run ID: **ICPMS05_120808A** SeqNo: **2895009** Prep Date: **8/6/2012** 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								
Boron	ND	0.050								
Cadmium	ND	0.0020								
Calcium	ND	0.50								
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Copper	ND	0.0050								
Iron	ND	0.20								
Lead	ND	0.0050								
Magnesium	ND	0.20								
Manganese	ND	0.0050								
Molybdenum	ND	0.0050								
Nickel	ND	0.0050								
Potassium	ND	0.20								
Selenium	ND	0.0050								
Silver	ND	0.0050								
Sodium	ND	0.20								
Uranium	ND	0.0050								
Zinc	ND	0.0050								

MBLK Sample ID: **MBLKW7-080612-63209** Units: **mg/L** Analysis Date: **8/9/2012 02:52 PM**

Client ID: Run ID: **ICPMS05_120809A** SeqNo: **2896224** Prep Date: **8/6/2012** DF: **1**

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

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **63209** Instrument ID **ICPMS05** Method: **SW6020** **(Dissolve)**

LCS Sample ID: **MLCSW7-080612-63209** Units: **mg/L** Analysis Date: **8/8/2012 08:35 PM**
Client ID: Run ID: **ICPMS05_120808A** SeqNo: **2895010** Prep Date: **8/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1137	0.010	0.1	0	114	80-120	0			
Arsenic	0.05509	0.0050	0.05	0	110	80-120	0			
Barium	0.05168	0.0050	0.05	0	103	80-120	0			
Boron	0.5059	0.050	0.5	0	101	80-120	0			
Cadmium	0.05334	0.0020	0.05	0	107	80-120	0			
Calcium	5.326	0.50	5	0	107	80-120	0			
Chromium	0.05415	0.0050	0.05	0	108	80-120	0			
Cobalt	0.05404	0.0050	0.05	0	108	80-120	0			
Copper	0.05512	0.0050	0.05	0	110	80-120	0			
Iron	5.571	0.20	5	0	111	80-120	0			
Lead	0.05218	0.0050	0.05	0	104	80-120	0			
Magnesium	5.373	0.20	5	0	107	80-120	0			
Manganese	0.05565	0.0050	0.05	0	111	80-120	0			
Molybdenum	0.05176	0.0050	0.05	0	104	80-120	0			
Nickel	0.05233	0.0050	0.05	0	105	80-120	0			
Potassium	5.352	0.20	5	0	107	80-120	0			
Selenium	0.05725	0.0050	0.05	0	114	80-120	0			
Silver	0.05338	0.0050	0.05	0	107	80-120	0			
Sodium	5.235	0.20	5	0	105	80-120	0			
Zinc	0.05798	0.0050	0.05	0	116	80-120	0			

LCS Sample ID: **MLCSW7-080612-63209** Units: **mg/L** Analysis Date: **8/9/2012 02:54 PM**
Client ID: Run ID: **ICPMS05_120809A** SeqNo: **2896225** Prep Date: **8/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Uranium	0.09558	0.0050	0.1	0	95.6	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **63209** Instrument ID **ICPMS05** Method: **SW6020** **(Dissolve)**

MS Sample ID: **12071372-12DMS** Units: **mg/L** Analysis Date: **8/8/2012 09:42 PM**

Client ID: **RW - 1 - 0712** Run ID: **ICPMS05_120808A** SeqNo: **2895036** Prep Date: **8/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1159	0.010	0.1	0.05324	62.7	75-125	0			S
Arsenic	0.06236	0.0050	0.05	0.01031	104	75-125	0			
Barium	0.2163	0.0050	0.05	0.1627	107	75-125	0			
Boron	0.7002	0.050	0.5	0.1771	105	75-125	0			
Cadmium	0.04818	0.0020	0.05	0	96.4	75-125	0			
Calcium	70.28	0.50	5	63.6	134	75-125	0			SO
Chromium	0.05117	0.0050	0.05	0	102	75-125	0			
Cobalt	0.0499	0.0050	0.05	0	99.8	75-125	0			
Copper	0.05386	0.0050	0.05	0.001947	104	75-125	0			
Iron	5.302	0.20	5	0	106	75-125	0			
Lead	0.05035	0.0050	0.05	0	101	75-125	0			
Magnesium	12.87	0.20	5	7.392	109	75-125	0			
Manganese	0.07265	0.0050	0.05	0.01816	109	75-125	0			
Molybdenum	0.05273	0.0050	0.05	0.002267	101	75-125	0			
Nickel	0.05223	0.0050	0.05	0	104	75-125	0			
Potassium	7.921	0.20	5	2.521	108	75-125	0			
Selenium	0.05076	0.0050	0.05	0.001614	98.3	75-125	0			
Silver	0.05047	0.0050	0.05	0	101	75-125	0			
Sodium	55.62	0.20	5	49.57	121	75-125	0			O
Zinc	0.06121	0.0050	0.05	0.007643	107	75-125	0			

MS Sample ID: **12071372-12DMS** Units: **mg/L** Analysis Date: **8/9/2012 03:12 PM**

Client ID: **RW - 1 - 0712** Run ID: **ICPMS05_120809A** SeqNo: **2896232** Prep Date: **8/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Uranium	0.09202	0.0050	0.1	0	92	75-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **63209** Instrument ID **ICPMS05** Method: **SW6020** **(Dissolve)**

MSD Sample ID: **12071372-12DMSD** Units: **mg/L** Analysis Date: **8/8/2012 09:45 PM**

Client ID: **RW - 1 - 0712** Run ID: **ICPMS05_120808A** SeqNo: **2895037** Prep Date: **8/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1106	0.010	0.1	0.05324	57.3	75-125	0.1159	4.74	25	S
Arsenic	0.06001	0.0050	0.05	0.01031	99.4	75-125	0.06236	3.84	25	
Barium	0.2148	0.0050	0.05	0.1627	104	75-125	0.2163	0.668	25	
Boron	0.729	0.050	0.5	0.1771	110	75-125	0.7002	4.03	25	
Cadmium	0.049	0.0020	0.05	0	98	75-125	0.04818	1.69	25	
Calcium	69.28	0.50	5	63.6	114	75-125	70.28	1.43	25	O
Chromium	0.05394	0.0050	0.05	0	108	75-125	0.05117	5.27	25	
Cobalt	0.0516	0.0050	0.05	0	103	75-125	0.0499	3.35	25	
Copper	0.05517	0.0050	0.05	0.001947	106	75-125	0.05386	2.41	25	
Iron	5.399	0.20	5	0	108	75-125	5.302	1.82	25	
Lead	0.04926	0.0050	0.05	0	98.5	75-125	0.05035	2.18	25	
Magnesium	13.13	0.20	5	7.392	115	75-125	12.87	2.05	25	
Manganese	0.07349	0.0050	0.05	0.01816	111	75-125	0.07265	1.16	25	
Molybdenum	0.05194	0.0050	0.05	0.002267	99.3	75-125	0.05273	1.51	25	
Nickel	0.05011	0.0050	0.05	0	100	75-125	0.05223	4.15	25	
Potassium	7.92	0.20	5	2.521	108	75-125	7.921	0.016	25	
Selenium	0.05107	0.0050	0.05	0.001614	98.9	75-125	0.05076	0.613	25	
Silver	0.05038	0.0050	0.05	0	101	75-125	0.05047	0.194	25	
Sodium	56.01	0.20	5	49.57	129	75-125	55.62	0.686	25	SO
Zinc	0.06276	0.0050	0.05	0.007643	110	75-125	0.06121	2.49	25	

MSD Sample ID: **12071372-12DMSD** Units: **mg/L** Analysis Date: **8/9/2012 03:20 PM**

Client ID: **RW - 1 - 0712** Run ID: **ICPMS05_120809A** SeqNo: **2896235** Prep Date: **8/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Uranium	0.08904	0.0050	0.1	0	89	75-125	0.09202	3.28	25	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **63209** Instrument ID **ICPMS05** Method: **SW6020** **(Dissolve)**

DUP Sample ID: **12071372-12DDUP** Units: **mg/L** Analysis Date: **8/8/2012 09:40 PM**

Client ID: **RW - 1 - 0712** Run ID: **ICPMS05_120808A** SeqNo: **2895035** Prep Date: **8/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.02427	0.010	0	0	0	0-0	0.05324	74.8	25	R
Arsenic	0.01138	0.0050	0	0	0	0-0	0.01031	9.91	25	
Barium	0.1637	0.0050	0	0	0	0-0	0.1627	0.635	25	
Boron	0.1844	0.050	0	0	0	0-0	0.1771	4.03	25	
Cadmium	ND	0.0020	0	0	0	0-0	0	0	25	
Calcium	64.41	0.50	0	0	0	0-0	63.6	1.27	25	
Chromium	ND	0.0050	0	0	0	0-0	0.000162	0	25	
Cobalt	ND	0.0050	0	0	0	0-0	0.000086	0	25	
Copper	0.002019	0.0050	0	0	0	0-0	0.001947	0	25	J
Iron	ND	0.20	0	0	0	0-0	0.008693	0	25	
Lead	ND	0.0050	0	0	0	0-0	0.000092	0	25	
Magnesium	7.904	0.20	0	0	0	0-0	7.392	6.71	25	
Manganese	0.01831	0.0050	0	0	0	0-0	0.01816	0.801	25	
Molybdenum	0.002443	0.0050	0	0	0	0-0	0.002267	0	25	J
Nickel	ND	0.0050	0	0	0	0-0	0.000033	0	25	
Potassium	2.671	0.20	0	0	0	0-0	2.521	5.77	25	
Selenium	ND	0.0050	0	0	0	0-0	0.001614	0	25	
Silver	ND	0.0050	0	0	0	0-0	0.000005	0	25	
Sodium	50.84	0.20	0	0	0	0-0	49.57	2.53	25	
Uranium	ND	0.0050	0	0	0		0.001721	0	25	
Zinc	0.008399	0.0050	0	0	0	0-0	0.007643	9.43	25	

The following samples were analyzed in this batch:

12071372-01D	12071372-02D	12071372-03D
12071372-04D	12071372-05D	12071372-06D
12071372-07D	12071372-08D	12071372-09D
12071372-10D	12071372-11D	12071372-12D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **63036** Instrument ID **SV-4** Method: **SW8270**

MBLK Sample ID: **SBLKW1-120731-63036** Units: **µg/L** Analysis Date: **8/1/2012 08:48 PM**

Client ID: Run ID: **SV-4_120801A** SeqNo: **2885541** Prep Date: **7/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	ND	0.20								
1-Methylnaphthalene	ND	0.20								
2,4,5-Trichlorophenol	ND	0.20								
2,4,6-Trichlorophenol	ND	0.20								
2,4-Dichlorophenol	ND	0.20								
2,4-Dimethylphenol	ND	0.20								
2,4-Dinitrophenol	ND	1.0								
2,4-Dinitrotoluene	ND	0.20								
2,6-Dinitrotoluene	ND	0.20								
2-Chloronaphthalene	ND	0.20								
2-Chlorophenol	ND	0.20								
2-Methylnaphthalene	ND	0.20								
2-Methylphenol	ND	0.20								
2-Nitroaniline	ND	0.20								
2-Nitrophenol	ND	0.20								
3&4-Methylphenol	ND	0.20								
3,3´-Dichlorobenzidine	ND	0.20								
3-Nitroaniline	ND	0.20								
4,6-Dinitro-2-methylphenol	ND	0.20								
4-Bromophenyl phenyl ether	ND	0.20								
4-Chloro-3-methylphenol	ND	0.20								
4-Chloroaniline	ND	0.20								
4-Chlorophenyl phenyl ether	ND	0.20								
4-Nitroaniline	ND	0.20								
4-Nitrophenol	ND	1.0								
Acenaphthene	ND	0.20								
Acenaphthylene	ND	0.20								
Acetophenone	ND	0.20								
Anthracene	ND	0.20								
Atrazine	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzaldehyde	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								
Bis(2-chloroethoxy)methane	ND	0.20								
Bis(2-chloroethyl)ether	ND	0.20								
Bis(2-chloroisopropyl)ether	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.20								
Butyl benzyl phthalate	ND	0.20								
Caprolactam	ND	0.20								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **63036** Instrument ID **SV-4** Method: **SW8270**

Carbazole	ND	0.20					
Chrysene	ND	0.20					
Dibenz(a,h)anthracene	ND	0.20					
Dibenzofuran	ND	0.20					
Diethyl phthalate	ND	0.20					
Dimethyl phthalate	ND	0.20					
Di-n-butyl phthalate	ND	0.20					
Di-n-octyl phthalate	ND	0.20					
Fluoranthene	ND	0.20					
Fluorene	ND	0.20					
Hexachlorobenzene	ND	0.20					
Hexachlorobutadiene	ND	0.20					
Hexachlorocyclopentadiene	ND	0.20					
Hexachloroethane	ND	0.20					
Indeno(1,2,3-cd)pyrene	ND	0.20					
Isophorone	ND	0.20					
Naphthalene	ND	0.20					
Nitrobenzene	ND	0.20					
N-Nitrosodi-n-propylamine	ND	0.20					
N-Nitrosodiphenylamine	ND	0.20					
Pentachlorophenol	ND	0.20					
Phenanthrene	ND	0.20					
Phenol	ND	0.20					
Pyrene	ND	0.20					
Surr: 2,4,6-Tribromophenol	*4.158*	0.20	*5*	0	*83.2*	*34-129*	0
Surr: 2-Fluorobiphenyl	*4.242*	0.20	*5*	0	*84.8*	*40-125*	0
Surr: 2-Fluorophenol	*3.862*	0.20	*5*	0	*77.2*	*20-120*	0
Surr: 4-Terphenyl-d14	*4.67*	0.20	*5*	0	*93.4*	*40-135*	0
Surr: Nitrobenzene-d5	*4.461*	0.20	*5*	0	*89.2*	*41-120*	0
Surr: Phenol-d6	*4.252*	0.20	*5*	0	*85*	*20-120*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **63036** Instrument ID **SV-4** Method: **SW8270**

LCS Sample ID: **SLCSW1-120731-63036** Units: **µg/L** Analysis Date: **8/1/2012 09:09 PM**

Client ID: Run ID: **SV-4_120801A** SeqNo: **2885542** Prep Date: **7/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	3.94	0.20	5	0	78.8	45-125	0			
1-Methylnaphthalene	3.876	0.20	5	0	77.5	45-120	0			
2,4,5-Trichlorophenol	3.483	0.20	5	0	69.7	46-120	0			
2,4,6-Trichlorophenol	3.779	0.20	5	0	75.6	42-120	0			
2,4-Dichlorophenol	3.832	0.20	5	0	76.6	49-120	0			
2,4-Dimethylphenol	4.128	0.20	5	0	82.6	35-120	0			
2,4-Dinitrophenol	3.92	1.0	5	0	78.4	15-120	0			
2,4-Dinitrotoluene	3.655	0.20	5	0	73.1	50-122	0			
2,6-Dinitrotoluene	3.77	0.20	5	0	75.4	50-120	0			
2-Chloronaphthalene	3.859	0.20	5	0	77.2	50-120	0			
2-Chlorophenol	3.903	0.20	5	0	78.1	40-120	0			
2-Methylnaphthalene	4.321	0.20	5	0	86.4	50-120	0			
2-Methylphenol	3.938	0.20	5	0	78.8	45-120	0			
2-Nitroaniline	4.78	0.20	5	0	95.6	28-139	0			
2-Nitrophenol	3.879	0.20	5	0	77.6	40-120	0			
3&4-Methylphenol	4.009	0.20	5	0	80.2	35-120	0			
3,3´-Dichlorobenzidine	4.124	0.20	5	0	82.5	15-120	0			
3-Nitroaniline	4.173	0.20	5	0	83.5	30-120	0			
4,6-Dinitro-2-methylphenol	4.311	0.20	5	0	86.2	25-121	0			
4-Bromophenyl phenyl ether	3.595	0.20	5	0	71.9	45-120	0			
4-Chloro-3-methylphenol	4.14	0.20	5	0	82.8	47-120	0			
4-Chloroaniline	4.077	0.20	5	0	81.5	20-120	0			
4-Chlorophenyl phenyl ether	4.016	0.20	5	0	80.3	50-120	0			
4-Nitroaniline	4.314	0.20	5	0	86.3	30-133	0			
4-Nitrophenol	3.944	1.0	5	0	78.9	30-130	0			
Acenaphthene	3.953	0.20	5	0	79.1	45-120	0			
Acenaphthylene	4.111	0.20	5	0	82.2	47-120	0			
Acetophenone	4.259	0.20	5	0	85.2	40-120	0			
Anthracene	3.93	0.20	5	0	78.6	45-120	0			
Atrazine	4.32	0.20	5	0	86.4	40-130	0			
Benz(a)anthracene	4.177	0.20	5	0	83.5	40-120	0			
Benzaldehyde	1.358	0.20	5	0	27.2	15-120	0			
Benzo(a)pyrene	3.666	0.20	5	0	73.3	45-120	0			
Benzo(b)fluoranthene	3.756	0.20	5	0	75.1	50-120	0			
Benzo(g,h,i)perylene	3.446	0.20	5	0	68.9	42-127	0			
Benzo(k)fluoranthene	3.492	0.20	5	0	69.8	45-127	0			
Bis(2-chloroethoxy)methane	4.493	0.20	5	0	89.9	45-120	0			
Bis(2-chloroethyl)ether	3.964	0.20	5	0	79.3	37-121	0			
Bis(2-chloroisopropyl)ether	4.183	0.20	5	0	83.7	40-120	0			
Bis(2-ethylhexyl)phthalate	4.655	0.20	5	0	93.1	40-139	0			
Butyl benzyl phthalate	4.708	0.20	5	0	94.2	47-123	0			
Caprolactam	4.562	0.20	5	0	91.2	35-134	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **63036** Instrument ID **SV-4** Method: **SW8270**

Carbazole	4.099	0.20	5	0	82	42-128	0
Chrysene	4.084	0.20	5	0	81.7	43-120	0
Dibenz(a,h)anthracene	3.313	0.20	5	0	66.3	45-125	0
Dibenzofuran	3.638	0.20	5	0	72.8	50-120	0
Diethyl phthalate	3.765	0.20	5	0	75.3	41-120	0
Dimethyl phthalate	3.802	0.20	5	0	76	40-122	0
Di-n-butyl phthalate	4.776	0.20	5	0	95.5	45-123	0
Di-n-octyl phthalate	3.722	0.20	5	0	74.4	45-129	0
Fluoranthene	4.019	0.20	5	0	80.4	45-125	0
Fluorene	3.963	0.20	5	0	79.3	49-120	0
Hexachlorobenzene	3.508	0.20	5	0	70.2	48-120	0
Hexachlorobutadiene	4.126	0.20	5	0	82.5	40-120	0
Hexachlorocyclopentadiene	3.886	0.20	5	0	77.7	34-136	0
Hexachloroethane	3.878	0.20	5	0	77.6	40-120	0
Indeno(1,2,3-cd)pyrene	3.623	0.20	5	0	72.5	41-128	0
Isophorone	4.052	0.20	5	0	81	40-121	0
Naphthalene	4.289	0.20	5	0	85.8	45-120	0
Nitrobenzene	4.349	0.20	5	0	87	44-120	0
N-Nitrosodi-n-propylamine	4.212	0.20	5	0	84.2	40-120	0
N-Nitrosodiphenylamine	3.933	0.20	5	0	78.7	40-125	0
Pentachlorophenol	4.547	0.20	5	0	90.9	19-121	0
Phenanthrene	3.803	0.20	5	0	76.1	45-121	0
Phenol	3.954	0.20	5	0	79.1	20-124	0
Pyrene	4.217	0.20	5	0	84.3	40-130	0
Surr: 2,4,6-Tribromophenol	*4.061*	0.20	*5*	0	*81.2*	*34-129*	0
Surr: 2-Fluorobiphenyl	*3.817*	0.20	*5*	0	*76.3*	*40-125*	0
Surr: 2-Fluorophenol	*3.714*	0.20	*5*	0	*74.3*	*20-120*	0
Surr: 4-Terphenyl-d14	*5.184*	0.20	*5*	0	*104*	*40-135*	0
Surr: Nitrobenzene-d5	*4.547*	0.20	*5*	0	*90.9*	*41-120*	0
Surr: Phenol-d6	*4.223*	0.20	*5*	0	*84.5*	*20-120*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **63036** Instrument ID **SV-4** Method: **SW8270**

LCSD Sample ID: **SLCSDW1-120731-63036** Units: **µg/L** Analysis Date: **8/1/2012 09:29 PM**

Client ID: Run ID: **SV-4_120801A** SeqNo: **2885543** Prep Date: **7/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	4.327	0.20	5	0	86.5	45-125	3.94	9.38	20	
1-Methylnaphthalene	4.834	0.20	5	0	96.7	45-120	3.876	22	20	R
2,4,5-Trichlorophenol	4.371	0.20	5	0	87.4	46-120	3.483	22.6	20	R
2,4,6-Trichlorophenol	5.058	0.20	5	0	101	42-120	3.779	28.9	20	R
2,4-Dichlorophenol	4.624	0.20	5	0	92.5	49-120	3.832	18.7	20	
2,4-Dimethylphenol	4.723	0.20	5	0	94.5	35-120	4.128	13.4	20	
2,4-Dinitrophenol	4.541	1.0	5	0	90.8	15-120	3.92	14.7	20	
2,4-Dinitrotoluene	4.57	0.20	5	0	91.4	50-122	3.655	22.2	20	R
2,6-Dinitrotoluene	4.652	0.20	5	0	93	50-120	3.77	20.9	20	R
2-Chloronaphthalene	4.321	0.20	5	0	86.4	50-120	3.859	11.3	20	
2-Chlorophenol	4.268	0.20	5	0	85.4	40-120	3.903	8.94	20	
2-Methylnaphthalene	4.755	0.20	5	0	95.1	50-120	4.321	9.57	20	
2-Methylphenol	4.297	0.20	5	0	85.9	45-120	3.938	8.72	20	
2-Nitroaniline	5.818	0.20	5	0	116	28-139	4.78	19.6	20	
2-Nitrophenol	4.681	0.20	5	0	93.6	40-120	3.879	18.7	20	
3&4-Methylphenol	4.523	0.20	5	0	90.5	35-120	4.009	12.1	20	
3,3´-Dichlorobenzidine	4.354	0.20	5	0	87.1	15-120	4.124	5.41	20	
3-Nitroaniline	4.988	0.20	5	0	99.8	30-120	4.173	17.8	20	
4,6-Dinitro-2-methylphenol	4.195	0.20	5	0	83.9	25-121	4.311	2.71	20	
4-Bromophenyl phenyl ether	3.982	0.20	5	0	79.6	45-120	3.595	10.2	20	
4-Chloro-3-methylphenol	4.684	0.20	5	0	93.7	47-120	4.14	12.3	20	
4-Chloroaniline	4.263	0.20	5	0	85.3	20-120	4.077	4.46	20	
4-Chlorophenyl phenyl ether	4.241	0.20	5	0	84.8	50-120	4.016	5.46	20	
4-Nitroaniline	4.63	0.20	5	0	92.6	30-133	4.314	7.06	20	
4-Nitrophenol	5.087	1.0	5	0	102	30-130	3.944	25.3	20	R
Acenaphthene	4.406	0.20	5	0	88.1	45-120	3.953	10.9	20	
Acenaphthylene	4.846	0.20	5	0	96.9	47-120	4.111	16.4	20	
Acetophenone	4.757	0.20	5	0	95.1	40-120	4.259	11.1	20	
Anthracene	4.265	0.20	5	0	85.3	45-120	3.93	8.17	20	
Atrazine	4.192	0.20	5	0	83.8	40-130	4.32	3	20	
Benz(a)anthracene	4.339	0.20	5	0	86.8	40-120	4.177	3.81	20	
Benzaldehyde	1.418	0.20	5	0	28.4	15-120	1.358	4.35	30	
Benzo(a)pyrene	4.096	0.20	5	0	81.9	45-120	3.666	11.1	20	
Benzo(b)fluoranthene	4.378	0.20	5	0	87.6	50-120	3.756	15.3	20	
Benzo(g,h,i)perylene	3.803	0.20	5	0	76.1	42-127	3.446	9.85	20	
Benzo(k)fluoranthene	3.549	0.20	5	0	71	45-127	3.492	1.62	20	
Bis(2-chloroethoxy)methane	5.107	0.20	5	0	102	45-120	4.493	12.8	20	
Bis(2-chloroethyl)ether	4.416	0.20	5	0	88.3	37-121	3.964	10.8	20	
Bis(2-chloroisopropyl)ether	4.613	0.20	5	0	92.3	40-120	4.183	9.78	20	
Bis(2-ethylhexyl)phthalate	4.699	0.20	5	0	94	40-139	4.655	0.943	20	
Butyl benzyl phthalate	4.527	0.20	5	0	90.5	47-123	4.708	3.92	20	
Caprolactam	4.908	0.20	5	0	98.2	35-134	4.562	7.29	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **63036** Instrument ID **SV-4** Method: **SW8270**

Carbazole	4.664	0.20	5	0	93.3	42-128	4.099	12.9	20	
Chrysene	4.093	0.20	5	0	81.9	43-120	4.084	0.235	20	
Dibenz(a,h)anthracene	3.747	0.20	5	0	74.9	45-125	3.313	12.3	20	
Dibenzofuran	4.557	0.20	5	0	91.1	50-120	3.638	22.4	20	R
Diethyl phthalate	4.658	0.20	5	0	93.2	41-120	3.765	21.2	20	R
Dimethyl phthalate	4.933	0.20	5	0	98.7	40-122	3.802	25.9	20	R
Di-n-butyl phthalate	4.645	0.20	5	0	92.9	45-123	4.776	2.78	20	
Di-n-octyl phthalate	4.196	0.20	5	0	83.9	45-129	3.722	12	20	
Fluoranthene	4.429	0.20	5	0	88.6	45-125	4.019	9.7	20	
Fluorene	4.405	0.20	5	0	88.1	49-120	3.963	10.6	20	
Hexachlorobenzene	3.938	0.20	5	0	78.8	48-120	3.508	11.5	20	
Hexachlorobutadiene	4.662	0.20	5	0	93.2	40-120	4.126	12.2	20	
Hexachlorocyclopentadiene	4.741	0.20	5	0	94.8	34-136	3.886	19.8	20	
Hexachloroethane	4.451	0.20	5	0	89	40-120	3.878	13.8	20	
Indeno(1,2,3-cd)pyrene	4.417	0.20	5	0	88.3	41-128	3.623	19.8	20	
Isophorone	4.956	0.20	5	0	99.1	40-121	4.052	20.1	20	R
Naphthalene	4.636	0.20	5	0	92.7	45-120	4.289	7.78	20	
Nitrobenzene	4.839	0.20	5	0	96.8	44-120	4.349	10.7	20	
N-Nitrosodi-n-propylamine	4.494	0.20	5	0	89.9	40-120	4.212	6.49	20	
N-Nitrosodiphenylamine	4.137	0.20	5	0	82.7	40-125	3.933	5.06	20	
Pentachlorophenol	4.281	0.20	5	0	85.6	19-121	4.547	6.02	20	
Phenanthrene	4.389	0.20	5	0	87.8	45-121	3.803	14.3	20	
Phenol	4.183	0.20	5	0	83.7	20-124	3.954	5.63	20	
Pyrene	4.83	0.20	5	0	96.6	40-130	4.217	13.6	20	
Surr: 2,4,6-Tribromophenol	*4.211*	0.20	*5*	0	*84.2*	*34-129*	4.061	*3.64*	*0*	
Surr: 2-Fluorobiphenyl	*4.142*	0.20	*5*	0	*82.8*	*40-125*	3.817	*8.18*	*0*	
Surr: 2-Fluorophenol	*3.979*	0.20	*5*	0	*79.6*	*20-120*	3.714	*6.88*	*0*	
Surr: 4-Terphenyl-d14	*5.075*	0.20	*5*	0	*102*	*40-135*	5.184	*2.11*	*0*	
Surr: Nitrobenzene-d5	*5.094*	0.20	*5*	0	*102*	*41-120*	4.547	*11.3*	*0*	
Surr: Phenol-d6	*4.049*	0.20	*5*	0	*81*	*20-120*	4.223	*4.21*	*0*	

The following samples were analyzed in this batch:

12071372-01B	12071372-02B	12071372-03B
12071372-04B	12071372-05B	12071372-06B
12071372-07B	12071372-08B	12071372-09B
12071372-10B	12071372-11B	12071372-12B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132255** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-073112-R132255** Units: **µg/L** Analysis Date: **8/1/2012 12:40 AM**

Client ID: Run ID: **VOA1_120731C** SeqNo: **2883750** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
2-Butanone	ND	10								
2-Hexanone	ND	10								
4-Isopropyltoluene	ND	5.0								
4-Methyl-2-pentanone	ND	10								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	10								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								
Ethylbenzene	ND	5.0								
Isopropylbenzene	ND	5.0								
m,p-Xylene	ND	10								
Methyl tert-butyl ether	ND	5.0								
Methylene chloride	ND	10								
Naphthalene	ND	5.0								
n-Butylbenzene	ND	5.0								
n-Propylbenzene	ND	5.0								
o-Xylene	ND	5.0								
sec-Butylbenzene	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
trans-1,2-Dichloroethene	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R132255** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Vinyl chloride	ND	2.0					
Xylenes, Total	ND	15					
Surr: 1,2-Dichloroethane-d4	*52.45*	5.0	*50*	0	*105*	*70-125*	0
Surr: 4-Bromofluorobenzene	*50.24*	5.0	*50*	0	*100*	*72-125*	0
Surr: Dibromofluoromethane	*52.23*	5.0	*50*	0	*104*	*71-125*	0
Surr: Toluene-d8	*49.7*	5.0	*50*	0	*99.4*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132255** Instrument ID **VOA1** Method: **SW8260**

LCS Sample ID: **VLCSW-073112-R132255** Units: **µg/L** Analysis Date: **7/31/2012 11:48 PM**

Client ID: Run ID: **VOA1_120731C** SeqNo: **2883749** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.95	5.0	50	0	99.9	80-120	0			
1,1,2,2-Tetrachloroethane	44.88	5.0	50	0	89.8	72-120	0			
1,1,2-Trichloroethane	48.66	5.0	50	0	97.3	80-120	0			
1,1-Dichloroethane	50.05	5.0	50	0	100	76-120	0			
1,1-Dichloroethene	48.6	5.0	50	0	97.2	73-124	0			
1,2,4-Trimethylbenzene	49.81	5.0	50	0	99.6	68-123	0			
1,2-Dibromoethane	48.87	5.0	50	0	97.7	80-120	0			
1,2-Dichloroethane	47.78	5.0	50	0	95.6	78-120	0			
1,2-Dichloropropane	48.65	5.0	50	0	97.3	80-120	0			
1,3,5-Trimethylbenzene	51.57	5.0	50	0	103	80-120	0			
2-Butanone	85.16	10	100	0	85.2	58-132	0			
2-Hexanone	88.12	10	100	0	88.1	61-130	0			
4-Isopropyltoluene	47.76	5.0	50	0	95.5	79-120	0			
4-Methyl-2-pentanone	95.39	10	100	0	95.4	65-127	0			
Acetone	93.95	10	100	0	93.9	59-137	0			
Benzene	49.13	5.0	50	0	98.3	73-121	0			
Bromodichloromethane	47.93	5.0	50	0	95.9	80-120	0			
Bromoform	50.35	5.0	50	0	101	79-120	0			
Bromomethane	50.98	5.0	50	0	102	66-137	0			
Carbon disulfide	94.15	10	100	0	94.2	68-141	0			
Carbon tetrachloride	47.19	5.0	50	0	94.4	75-124	0			
Chlorobenzene	46.7	5.0	50	0	93.4	80-120	0			
Chloroethane	50.9	5.0	50	0	102	76-121	0			
Chloroform	47.12	5.0	50	0	94.2	80-120	0			
Chloromethane	47.6	5.0	50	0	95.2	67-123	0			
cis-1,2-Dichloroethene	47.52	5.0	50	0	95	78-120	0			
cis-1,3-Dichloropropene	48.74	5.0	50	0	97.5	80-120	0			
Dibromochloromethane	49.73	5.0	50	0	99.5	80-120	0			
Ethylbenzene	50.15	5.0	50	0	100	80-120	0			
Isopropylbenzene	49.29	5.0	50	0	98.6	80-120	0			
m,p-Xylene	96.17	10	100	0	96.2	78-121	0			
Methyl tert-butyl ether	46.63	5.0	50	0	93.3	73-121	0			
Methylene chloride	47.18	10	50	0	94.4	65-133	0			
Naphthalene	44.86	5.0	50	0	89.7	65-135	0			
n-Butylbenzene	48.2	5.0	50	0	96.4	77-120	0			
n-Propylbenzene	48.22	5.0	50	0	96.4	78-120	0			
o-Xylene	46.61	5.0	50	0	93.2	80-120	0			
sec-Butylbenzene	48.43	5.0	50	0	96.9	78-120	0			
Styrene	47.95	5.0	50	0	95.9	80-120	0			
Tetrachloroethene	50.67	5.0	50	0	101	79-120	0			
Toluene	47.07	5.0	50	0	94.1	80-120	0			
trans-1,2-Dichloroethene	49.22	5.0	50	0	98.4	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R132255** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	49.38	5.0	50	0	98.8	80-120	0
Trichloroethene	49.62	5.0	50	0	99.2	80-120	0
Vinyl chloride	47.54	2.0	50	0	95.1	70-127	0
Xylenes, Total	142.8	15	150	0	95.2	80-120	0
Surr: 1,2-Dichloroethane-d4	*50.64*	5.0	*50*	0	*101*	*70-125*	0
Surr: 4-Bromofluorobenzene	*50.09*	5.0	*50*	0	*100*	*72-125*	0
Surr: Dibromofluoromethane	*50.68*	5.0	*50*	0	*101*	*71-125*	0
Surr: Toluene-d8	*49.23*	5.0	*50*	0	*98.5*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132255** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **12071250-29ZMS** Units: **µg/L** Analysis Date: **8/1/2012 01:58 AM**

Client ID: Run ID: **VOA1_120731C** SeqNo: **2883752** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.81	5.0	50	0	99.6	80-120	0			
1,1,2,2-Tetrachloroethane	47.85	5.0	50	0	95.7	72-120	0			
1,1,2-Trichloroethane	49.45	5.0	50	0	98.9	80-120	0			
1,1-Dichloroethane	50.06	5.0	50	0	100	76-120	0			
1,1-Dichloroethene	49.27	5.0	50	0	98.5	73-124	0			
1,2,4-Trimethylbenzene	49.34	5.0	50	0	98.7	68-123	0			
1,2-Dibromoethane	51.3	5.0	50	0	103	80-120	0			
1,2-Dichloroethane	52.99	5.0	50	0	106	78-120	0			
1,2-Dichloropropane	52.21	5.0	50	0	104	80-120	0			
1,3,5-Trimethylbenzene	49.88	5.0	50	0	99.8	80-120	0			
2-Butanone	87.77	10	100	0	87.8	58-132	0			
2-Hexanone	93.64	10	100	0	93.6	61-130	0			
4-Isopropyltoluene	44.55	5.0	50	0	89.1	79-120	0			
4-Methyl-2-pentanone	100.5	10	100	0	100	65-127	0			
Acetone	91.16	10	100	0	91.2	59-137	0			
Benzene	51.94	5.0	50	0	104	73-121	0			
Bromodichloromethane	51.77	5.0	50	0	104	80-120	0			
Bromoform	51.86	5.0	50	0	104	79-120	0			
Bromomethane	53.07	5.0	50	0	106	66-137	0			
Carbon disulfide	91.09	10	100	0	91.1	68-141	0			
Carbon tetrachloride	51.36	5.0	50	0	103	75-124	0			
Chlorobenzene	45.9	5.0	50	0	91.8	80-120	0			
Chloroethane	55.63	5.0	50	0	111	76-121	0			
Chloroform	48.95	5.0	50	0	97.9	80-120	0			
Chloromethane	48.63	5.0	50	0	97.3	67-123	0			
cis-1,2-Dichloroethene	51.08	5.0	50	0	102	78-120	0			
cis-1,3-Dichloropropene	50.65	5.0	50	0	101	80-120	0			
Dibromochloromethane	52.23	5.0	50	0	104	80-120	0			
Ethylbenzene	50.65	5.0	50	0	101	80-120	0			
Isopropylbenzene	46.49	5.0	50	0	93	80-120	0			
m,p-Xylene	99.59	10	100	0	99.6	78-121	0			
Methyl tert-butyl ether	43.07	5.0	50	0	86.1	73-121	0			
Methylene chloride	48.31	10	50	0	96.6	65-133	0			
Naphthalene	37.61	5.0	50	0	75.2	65-135	0			
n-Butylbenzene	44.37	5.0	50	0	88.7	77-120	0			
n-Propylbenzene	49.47	5.0	50	0	98.9	78-120	0			
o-Xylene	52.14	5.0	50	0	104	80-120	0			
sec-Butylbenzene	46.8	5.0	50	0	93.6	78-120	0			
Styrene	51.79	5.0	50	0	104	80-120	0			
Tetrachloroethene	47.97	5.0	50	0	95.9	79-120	0			
Toluene	49.89	5.0	50	0	99.8	80-120	0			
trans-1,2-Dichloroethene	47.84	5.0	50	0	95.7	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R132255** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	51.41	5.0	50	0	103	80-120	0
Trichloroethene	50.84	5.0	50	0	102	80-120	0
Vinyl chloride	46.97	2.0	50	0	93.9	70-127	0
Xylenes, Total	151.7	15	150	0	101	80-120	0
Surr: 1,2-Dichloroethane-d4	*50.89*	5.0	*50*	0	*102*	*70-125*	0
Surr: 4-Bromofluorobenzene	*51.94*	5.0	*50*	0	*104*	*72-125*	0
Surr: Dibromofluoromethane	*49.56*	5.0	*50*	0	*99.1*	*71-125*	0
Surr: Toluene-d8	*50.61*	5.0	*50*	0	*101*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132255** Instrument ID **VOA1** Method: **SW8260**

MSD Sample ID: **12071250-29ZMSD** Units: **µg/L** Analysis Date: **8/1/2012 02:24 AM**

Client ID: Run ID: **VOA1_120731C** SeqNo: **2883753** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.09	5.0	50	0	98.2	80-120	49.81	1.45	20	
1,1,2,2-Tetrachloroethane	46.46	5.0	50	0	92.9	72-120	47.85	2.94	20	
1,1,2-Trichloroethane	49.61	5.0	50	0	99.2	80-120	49.45	0.337	20	
1,1-Dichloroethane	49.37	5.0	50	0	98.7	76-120	50.06	1.37	20	
1,1-Dichloroethene	46.82	5.0	50	0	93.6	73-124	49.27	5.1	20	
1,2,4-Trimethylbenzene	48.73	5.0	50	0	97.5	68-123	49.34	1.26	20	
1,2-Dibromoethane	51.99	5.0	50	0	104	80-120	51.3	1.33	20	
1,2-Dichloroethane	49.66	5.0	50	0	99.3	78-120	52.99	6.5	20	
1,2-Dichloropropane	49.09	5.0	50	0	98.2	80-120	52.21	6.15	20	
1,3,5-Trimethylbenzene	50.48	5.0	50	0	101	80-120	49.88	1.18	20	
2-Butanone	87.15	10	100	0	87.2	58-132	87.77	0.708	20	
2-Hexanone	93.25	10	100	0	93.3	61-130	93.64	0.413	20	
4-Isopropyltoluene	45.93	5.0	50	0	91.9	79-120	44.55	3.06	20	
4-Methyl-2-pentanone	102.8	10	100	0	103	65-127	100.5	2.31	20	
Acetone	90.85	10	100	0	90.8	59-137	91.16	0.349	20	
Benzene	48.99	5.0	50	0	98	73-121	51.94	5.84	20	
Bromodichloromethane	49.78	5.0	50	0	99.6	80-120	51.77	3.92	20	
Bromoform	50.53	5.0	50	0	101	79-120	51.86	2.59	20	
Bromomethane	53.33	5.0	50	0	107	66-137	53.07	0.488	20	
Carbon disulfide	92.35	10	100	0	92.4	68-141	91.09	1.37	20	
Carbon tetrachloride	47.95	5.0	50	0	95.9	75-124	51.36	6.87	20	
Chlorobenzene	50.13	5.0	50	0	100	80-120	45.9	8.81	20	
Chloroethane	51.69	5.0	50	0	103	76-121	55.63	7.34	20	
Chloroform	48.2	5.0	50	0	96.4	80-120	48.95	1.56	20	
Chloromethane	47.61	5.0	50	0	95.2	67-123	48.63	2.12	20	
cis-1,2-Dichloroethene	48.59	5.0	50	0	97.2	78-120	51.08	4.99	20	
cis-1,3-Dichloropropene	49.82	5.0	50	0	99.6	80-120	50.65	1.65	20	
Dibromochloromethane	52.37	5.0	50	0	105	80-120	52.23	0.272	20	
Ethylbenzene	48.32	5.0	50	0	96.6	80-120	50.65	4.71	20	
Isopropylbenzene	50.14	5.0	50	0	100	80-120	46.49	7.55	20	
m,p-Xylene	104.3	10	100	0	104	78-121	99.59	4.58	20	
Methyl tert-butyl ether	46.95	5.0	50	0	93.9	73-121	43.07	8.63	20	
Methylene chloride	48.11	10	50	0	96.2	65-133	48.31	0.41	20	
Naphthalene	42.2	5.0	50	0	84.4	65-135	37.61	11.5	20	
n-Butylbenzene	42.37	5.0	50	0	84.7	77-120	44.37	4.61	20	
n-Propylbenzene	45.96	5.0	50	0	91.9	78-120	49.47	7.36	20	
o-Xylene	52.01	5.0	50	0	104	80-120	52.14	0.255	20	
sec-Butylbenzene	47.26	5.0	50	0	94.5	78-120	46.8	0.977	20	
Styrene	52.77	5.0	50	0	106	80-120	51.79	1.89	20	
Tetrachloroethene	48.48	5.0	50	0	97	79-120	47.97	1.06	20	
Toluene	51.5	5.0	50	0	103	80-120	49.89	3.16	20	
trans-1,2-Dichloroethene	48.19	5.0	50	0	96.4	78-120	47.84	0.728	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R132255** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	48.86	5.0	50	0	97.7	80-120	51.41	5.08	20
Trichloroethene	50.05	5.0	50	0	100	80-120	50.84	1.56	20
Vinyl chloride	50.03	2.0	50	0	100	70-127	46.97	6.32	20
Xylenes, Total	156.3	15	150	0	104	80-120	151.7	2.95	20
Surr: 1,2-Dichloroethane-d4	*47.01*	5.0	*50*	0	*94*	*70-125*	50.89	*7.92*	*20*
Surr: 4-Bromofluorobenzene	*52.91*	5.0	*50*	0	*106*	*72-125*	51.94	*1.87*	*20*
Surr: Dibromofluoromethane	*48.66*	5.0	*50*	0	*97.3*	*71-125*	49.56	*1.82*	*20*
Surr: Toluene-d8	*53.05*	5.0	*50*	0	*106*	*75-125*	50.61	*4.7*	*20*

The following samples were analyzed in this batch:

12071372-01A	12071372-02A	12071372-03A
12071372-04A	12071372-05A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132370** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-080212-R132370** Units: **µg/L** Analysis Date: **8/2/2012 11:43 AM**

Client ID: Run ID: **VOA1_120802A** SeqNo: **2886072** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
2-Butanone	ND	10								
2-Hexanone	ND	10								
4-Isopropyltoluene	ND	5.0								
4-Methyl-2-pentanone	ND	10								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	10								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								
Ethylbenzene	ND	5.0								
Isopropylbenzene	ND	5.0								
m,p-Xylene	ND	10								
Methyl tert-butyl ether	ND	5.0								
Methylene chloride	ND	10								
Naphthalene	ND	5.0								
n-Butylbenzene	ND	5.0								
n-Propylbenzene	ND	5.0								
o-Xylene	ND	5.0								
sec-Butylbenzene	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
trans-1,2-Dichloroethene	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R132370** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Vinyl chloride	ND	2.0					
Xylenes, Total	ND	15					
Surr: 1,2-Dichloroethane-d4	*47.84*	5.0	*50*	0	*95.7*	*70-125*	0
Surr: 4-Bromofluorobenzene	*47.03*	5.0	*50*	0	*94.1*	*72-125*	0
Surr: Dibromofluoromethane	*51.06*	5.0	*50*	0	*102*	*71-125*	0
Surr: Toluene-d8	*47.46*	5.0	*50*	0	*94.9*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132370** Instrument ID **VOA1** Method: **SW8260**

LCS Sample ID: **VLCSW-080212-R132370** Units: **µg/L** Analysis Date: **8/2/2012 10:49 AM**

Client ID: Run ID: **VOA1_120802A** SeqNo: **2886071** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	52.37	5.0	50	0	105	80-120	0			
1,1,2,2-Tetrachloroethane	45.34	5.0	50	0	90.7	72-120	0			
1,1,2-Trichloroethane	46.2	5.0	50	0	92.4	80-120	0			
1,1-Dichloroethane	49.38	5.0	50	0	98.8	76-120	0			
1,1-Dichloroethene	51.98	5.0	50	0	104	73-124	0			
1,2,4-Trimethylbenzene	47.1	5.0	50	0	94.2	68-123	0			
1,2-Dibromoethane	46.57	5.0	50	0	93.1	80-120	0			
1,2-Dichloroethane	47.93	5.0	50	0	95.9	78-120	0			
1,2-Dichloropropane	48.09	5.0	50	0	96.2	80-120	0			
1,3,5-Trimethylbenzene	51.22	5.0	50	0	102	80-120	0			
2-Butanone	89.27	10	100	0	89.3	58-132	0			
2-Hexanone	88.36	10	100	0	88.4	61-130	0			
4-Isopropyltoluene	49.18	5.0	50	0	98.4	79-120	0			
4-Methyl-2-pentanone	99	10	100	0	99	65-127	0			
Acetone	91.64	10	100	0	91.6	59-137	0			
Benzene	49.75	5.0	50	0	99.5	73-121	0			
Bromodichloromethane	47.57	5.0	50	0	95.1	80-120	0			
Bromoform	48.15	5.0	50	0	96.3	79-120	0			
Bromomethane	50.4	5.0	50	0	101	66-137	0			
Carbon disulfide	99.56	10	100	0	99.6	68-141	0			
Carbon tetrachloride	46.22	5.0	50	0	92.4	75-124	0			
Chlorobenzene	45.37	5.0	50	0	90.7	80-120	0			
Chloroethane	54.71	5.0	50	0	109	76-121	0			
Chloroform	49.43	5.0	50	0	98.9	80-120	0			
Chloromethane	47.51	5.0	50	0	95	67-123	0			
cis-1,2-Dichloroethene	48.96	5.0	50	0	97.9	78-120	0			
cis-1,3-Dichloropropene	49.83	5.0	50	0	99.7	80-120	0			
Dibromochloromethane	49.84	5.0	50	0	99.7	80-120	0			
Ethylbenzene	49.23	5.0	50	0	98.5	80-120	0			
Isopropylbenzene	48.92	5.0	50	0	97.8	80-120	0			
m,p-Xylene	98.16	10	100	0	98.2	78-121	0			
Methyl tert-butyl ether	50.06	5.0	50	0	100	73-121	0			
Methylene chloride	46.72	10	50	0	93.4	65-133	0			
Naphthalene	45.2	5.0	50	0	90.4	65-135	0			
n-Butylbenzene	48.82	5.0	50	0	97.6	77-120	0			
n-Propylbenzene	48.27	5.0	50	0	96.5	78-120	0			
o-Xylene	50.7	5.0	50	0	101	80-120	0			
sec-Butylbenzene	47.97	5.0	50	0	95.9	78-120	0			
Styrene	51.26	5.0	50	0	103	80-120	0			
Tetrachloroethene	50.83	5.0	50	0	102	79-120	0			
Toluene	49.2	5.0	50	0	98.4	80-120	0			
trans-1,2-Dichloroethene	50.46	5.0	50	0	101	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R132370** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	50.99	5.0	50	0	102	80-120	0
Trichloroethene	49.4	5.0	50	0	98.8	80-120	0
Vinyl chloride	50.49	2.0	50	0	101	70-127	0
Xylenes, Total	148.9	15	150	0	99.2	80-120	0
Surr: 1,2-Dichloroethane-d4	*49.23*	5.0	*50*	0	*98.5*	*70-125*	0
Surr: 4-Bromofluorobenzene	*51.78*	5.0	*50*	0	*104*	*72-125*	0
Surr: Dibromofluoromethane	*51.75*	5.0	*50*	0	*104*	*71-125*	0
Surr: Toluene-d8	*51.28*	5.0	*50*	0	*103*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132370** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **12071426-01AMS** Units: **µg/L** Analysis Date: **8/2/2012 01:58 PM**

Client ID: Run ID: **VOA1_120802A** SeqNo: **2886074** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	44.14	5.0	50	0	88.3	80-120	0			
1,1,2,2-Tetrachloroethane	48.81	5.0	50	0	97.6	72-120	0			
1,1,2-Trichloroethane	48.11	5.0	50	0	96.2	80-120	0			
1,1-Dichloroethane	46.68	5.0	50	0	93.4	76-120	0			
1,1-Dichloroethene	41.77	5.0	50	0	83.5	73-124	0			
1,2,4-Trimethylbenzene	44.95	5.0	50	0	89.9	68-123	0			
1,2-Dibromoethane	48.75	5.0	50	0	97.5	80-120	0			
1,2-Dichloroethane	50.31	5.0	50	0	101	78-120	0			
1,2-Dichloropropane	47.46	5.0	50	0	94.9	80-120	0			
1,3,5-Trimethylbenzene	43.66	5.0	50	0	87.3	80-120	0			
2-Butanone	102.1	10	100	0	102	58-132	0			
2-Hexanone	96.92	10	100	0	96.9	61-130	0			
4-Isopropyltoluene	48.26	5.0	50	0	96.5	79-120	0			
4-Methyl-2-pentanone	107.6	10	100	0	108	65-127	0			
Acetone	107.1	10	100	4.317	103	59-137	0			
Benzene	46.94	5.0	50	0	93.9	73-121	0			
Bromodichloromethane	46.79	5.0	50	0	93.6	80-120	0			
Bromoform	50.51	5.0	50	0	101	79-120	0			
Bromomethane	41.3	5.0	50	0	82.6	66-137	0			
Carbon disulfide	89.23	10	100	0	89.2	68-141	0			
Carbon tetrachloride	38.83	5.0	50	0	77.7	75-124	0			
Chlorobenzene	45.36	5.0	50	0	90.7	80-120	0			
Chloroethane	51.07	5.0	50	0	102	76-121	0			
Chloroform	47.74	5.0	50	0	95.5	80-120	0			
Chloromethane	46.17	5.0	50	0	92.3	67-123	0			
cis-1,2-Dichloroethene	47.4	5.0	50	0	94.8	78-120	0			
cis-1,3-Dichloropropene	45.37	5.0	50	0	90.7	80-120	0			
Dibromochloromethane	49.71	5.0	50	0	99.4	80-120	0			
Ethylbenzene	45.06	5.0	50	0	90.1	80-120	0			
Isopropylbenzene	44.13	5.0	50	0	88.3	80-120	0			
m,p-Xylene	91.22	10	100	0	91.2	78-121	0			
Methyl tert-butyl ether	52.29	5.0	50	0	105	73-121	0			
Methylene chloride	47.97	10	50	0	95.9	65-133	0			
Naphthalene	45.91	5.0	50	0	91.8	65-135	0			
n-Butylbenzene	51.56	5.0	50	0	103	77-120	0			
n-Propylbenzene	42.57	5.0	50	0	85.1	78-120	0			
o-Xylene	45.81	5.0	50	0	91.6	80-120	0			
sec-Butylbenzene	45.62	5.0	50	0	91.2	78-120	0			
Styrene	45.87	5.0	50	0	91.7	80-120	0			
Tetrachloroethene	41.53	5.0	50	0	83.1	79-120	0			
Toluene	43.73	5.0	50	0	87.5	80-120	0			
trans-1,2-Dichloroethene	43.8	5.0	50	0	87.6	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R132370** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	50.93	5.0	50	0	102	80-120	0
Trichloroethene	40.43	5.0	50	0	80.9	80-120	0
Vinyl chloride	44.74	2.0	50	0	89.5	70-127	0
Xylenes, Total	137	15	150	0	91.4	80-120	0
Surr: 1,2-Dichloroethane-d4	*52.73*	5.0	*50*	0	*105*	*70-125*	0
Surr: 4-Bromofluorobenzene	*49.48*	5.0	*50*	0	*99*	*72-125*	0
Surr: Dibromofluoromethane	*52.86*	5.0	*50*	0	*106*	*71-125*	0
Surr: Toluene-d8	*49.1*	5.0	*50*	0	*98.2*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132370** Instrument ID **VOA1** Method: **SW8260**

MSD Sample ID: **12071426-01AMSD** Units: **µg/L** Analysis Date: **8/2/2012 02:26 PM**

Client ID: Run ID: **VOA1_120802A** SeqNo: **2886075** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	15.59	5.0	50	0	31.2	80-120	44.14	95.6	20	SR
1,1,2,2-Tetrachloroethane	48.93	5.0	50	0	97.9	72-120	48.81	0.257	20	
1,1,2-Trichloroethane	46.98	5.0	50	0	94	80-120	48.11	2.36	20	
1,1-Dichloroethane	46.04	5.0	50	0	92.1	76-120	46.68	1.37	20	
1,1-Dichloroethene	40.54	5.0	50	0	81.1	73-124	41.77	3	20	
1,2,4-Trimethylbenzene	40.74	5.0	50	0	81.5	68-123	44.95	9.83	20	
1,2-Dibromoethane	48.19	5.0	50	0	96.4	80-120	48.75	1.15	20	
1,2-Dichloroethane	52.29	5.0	50	0	105	78-120	50.31	3.86	20	
1,2-Dichloropropane	53.08	5.0	50	0	106	80-120	47.46	11.2	20	
1,3,5-Trimethylbenzene	41.56	5.0	50	0	83.1	80-120	43.66	4.93	20	
2-Butanone	99.73	10	100	0	99.7	58-132	102.1	2.38	20	
2-Hexanone	103.8	10	100	0	104	61-130	96.92	6.82	20	
4-Isopropyltoluene	37.4	5.0	50	0	74.8	79-120	48.26	25.3	20	SR
4-Methyl-2-pentanone	108.6	10	100	0	109	65-127	107.6	0.951	20	
Acetone	99.77	10	100	4.317	95.5	59-137	107.1	7.12	20	
Benzene	48.47	5.0	50	0	96.9	73-121	46.94	3.2	20	
Bromodichloromethane	48.16	5.0	50	0	96.3	80-120	46.79	2.9	20	
Bromoform	51.02	5.0	50	0	102	79-120	50.51	0.998	20	
Bromomethane	44.94	5.0	50	0	89.9	66-137	41.3	8.43	20	
Carbon disulfide	87.16	10	100	0	87.2	68-141	89.23	2.35	20	
Carbon tetrachloride	42.21	5.0	50	0	84.4	75-124	38.83	8.36	20	
Chlorobenzene	45.54	5.0	50	0	91.1	80-120	45.36	0.385	20	
Chloroethane	46.1	5.0	50	0	92.2	76-121	51.07	10.2	20	
Chloroform	45.98	5.0	50	0	92	80-120	47.74	3.74	20	
Chloromethane	41.91	5.0	50	0	83.8	67-123	46.17	9.67	20	
cis-1,2-Dichloroethene	46.55	5.0	50	0	93.1	78-120	47.4	1.81	20	
cis-1,3-Dichloropropene	51.77	5.0	50	0	104	80-120	45.37	13.2	20	
Dibromochloromethane	47.81	5.0	50	0	95.6	80-120	49.71	3.89	20	
Ethylbenzene	45.17	5.0	50	0	90.3	80-120	45.06	0.23	20	
Isopropylbenzene	38.91	5.0	50	0	77.8	80-120	44.13	12.6	20	S
m,p-Xylene	85.22	10	100	0	85.2	78-121	91.22	6.8	20	
Methyl tert-butyl ether	54.58	5.0	50	0	109	73-121	52.29	4.28	20	
Methylene chloride	46.92	10	50	0	93.8	65-133	47.97	2.22	20	
Naphthalene	51.82	5.0	50	0	104	65-135	45.91	12.1	20	
n-Butylbenzene	38.31	5.0	50	0	76.6	77-120	51.56	29.5	20	SR
n-Propylbenzene	38.3	5.0	50	0	76.6	78-120	42.57	10.6	20	S
o-Xylene	44.25	5.0	50	0	88.5	80-120	45.81	3.47	20	
sec-Butylbenzene	37.5	5.0	50	0	75	78-120	45.62	19.5	20	S
Styrene	46.51	5.0	50	0	93	80-120	45.87	1.37	20	
Tetrachloroethene	37.73	5.0	50	0	75.5	79-120	41.53	9.58	20	S
Toluene	44.61	5.0	50	0	89.2	80-120	43.73	1.98	20	
trans-1,2-Dichloroethene	45.41	5.0	50	0	90.8	78-120	43.8	3.61	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R132370** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	52.35	5.0	50	0	105	80-120	50.93	2.76	20
Trichloroethene	42.97	5.0	50	0	85.9	80-120	40.43	6.08	20
Vinyl chloride	43.49	2.0	50	0	87	70-127	44.74	2.85	20
Xylenes, Total	129.5	15	150	0	86.3	80-120	137	5.67	20
Surr: 1,2-Dichloroethane-d4	*47.8*	5.0	*50*	0	*95.6*	*70-125*	52.73	*9.8*	*20*
Surr: 4-Bromofluorobenzene	*45.48*	5.0	*50*	0	*91*	*72-125*	49.48	*8.44*	*20*
Surr: Dibromofluoromethane	*47.65*	5.0	*50*	0	*95.3*	*71-125*	52.86	*10.4*	*20*
Surr: Toluene-d8	*46.8*	5.0	*50*	0	*93.6*	*75-125*	49.1	*4.79*	*20*

The following samples were analyzed in this batch:

12071372-06A	12071372-07A	12071372-08A
12071372-09A	12071372-10A	12071372-11A
12071372-12A	12071372-13A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132269** Instrument ID **WetChem** Method: **M2510 B** **(Dissolve)**

MBLK Sample ID: **WBLKW1-080112-R132269** Units: **µmhos/cm** Analysis Date: **8/1/2012 10:00 AM**
Client ID: Run ID: **WETCHEM_120801C** SeqNo: **2883985** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	ND	1.0								

LCS Sample ID: **WLCSW1-080112-R132269** Units: **µmhos/cm** Analysis Date: **8/1/2012 10:00 AM**
Client ID: Run ID: **WETCHEM_120801C** SeqNo: **2883986** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	1350	1.0	1413	0	95.5	80-120	0			

DUP Sample ID: **12071372-01EDUP** Units: **µmhos/cm** Analysis Date: **8/1/2012 10:00 AM**
Client ID: **MW - 21 - 0712** Run ID: **WETCHEM_120801C** SeqNo: **2884001** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	1480	1.0	0	0	0		1470	0.678	20	

The following samples were analyzed in this batch:

12071372-01E	12071372-02E	12071372-03E
12071372-04E	12071372-05E	12071372-06E
12071372-07E	12071372-08E	12071372-09E
12071372-10E	12071372-11E	12071372-12E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132302** Instrument ID **WetChem** Method: **SM4500H+ B** **(Dissolve)**

LCS Sample ID: **WLCSW1-080112-R132302** Units: **pH Units** Analysis Date: **8/1/2012 06:50 PM**

Client ID: Run ID: **WETCHEM_120801J** SeqNo: **2884632** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.06	0.10	6	0	101	90-110	0			

DUP Sample ID: **12071414-01DDUP** Units: **pH Units** Analysis Date: **8/1/2012 06:50 PM**

Client ID: Run ID: **WETCHEM_120801J** SeqNo: **2884652** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.86	0.10	0	0	0	0-0	6.84	0.292	20	H

The following samples were analyzed in this batch:

12071372-01E	12071372-02E	12071372-03E
12071372-04E	12071372-05E	12071372-06E
12071372-07E	12071372-08E	12071372-09E
12071372-10E	12071372-11E	12071372-12E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132348** Instrument ID **ICS3000** Method: **E300** **(Dissolve)**

MBLK Sample ID: **WBLKW1-R132348** Units: **mg/L** Analysis Date: **8/1/2012 07:03 PM**
Client ID: Run ID: **ICS3000_120801A** SeqNo: **2885394** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Fluoride	ND	0.10								
Sulfate	ND	0.50								
Surr: Selenate (surr)	*5.101*	0.10	*5*	0	*102*	*85-115*	0			

LCS Sample ID: **WLCSW1-R132348** Units: **mg/L** Analysis Date: **8/1/2012 07:24 PM**
Client ID: Run ID: **ICS3000_120801A** SeqNo: **2885395** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.64	0.50	20	0	98.2	90-110	0			
Fluoride	3.961	0.10	4	0	99	90-110	0			
Sulfate	18.83	0.50	20	0	94.2	90-110	0			
Surr: Selenate (surr)	*5.061*	0.10	*5*	0	*101*	*85-115*	0			

MS Sample ID: **12071434-03EMS** Units: **mg/L** Analysis Date: **8/2/2012 04:10 AM**
Client ID: Run ID: **ICS3000_120801A** SeqNo: **2885422** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	123.7	0.50	10	115.1	85.3	80-120	0			EO
Fluoride	2.908	0.10	2	0.986	96.1	80-120	0			
Sulfate	81.22	0.50	10	72.68	85.4	80-120	0			O
Surr: Selenate (surr)	*3.96*	0.10	*4*	0	*99*	*85-115*	0			

MSD Sample ID: **12071434-03EMSD** Units: **mg/L** Analysis Date: **8/2/2012 04:31 AM**
Client ID: Run ID: **ICS3000_120801A** SeqNo: **2885423** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	123.9	0.50	10	115.1	87.5	80-120	123.7	0.174	20	EO
Fluoride	2.923	0.10	2	0.986	96.8	80-120	2.908	0.514	20	
Sulfate	81.35	0.50	10	72.68	86.8	80-120	81.22	0.17	20	O
Surr: Selenate (surr)	*3.553*	0.10	*4*	0	*88.8*	*85-115*	3.96	*10.8*	*20*	

The following samples were analyzed in this batch:

12071372-01E	12071372-02E	12071372-03E
12071372-04E	12071372-05E	12071372-06E
12071372-07E	12071372-08E	12071372-09E
12071372-10E	12071372-11E	12071372-12E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132474** Instrument ID **ICS3K2** Method: **E300** **(Dissolve)**

MBLK Sample ID: **WBLKW1-R132474** Units: **mg/L** Analysis Date: **8/2/2012 12:57 PM**
Client ID: Run ID: **ICS3K2_120802A** SeqNo: **2887608** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Sulfate	0.49	0.50								J
Surr: Selenate (surr)	*4.851*	0.10	*5*	0	*97*	*85-115*	0			

LCS Sample ID: **WLCSW1-R132474** Units: **mg/L** Analysis Date: **8/2/2012 01:19 PM**
Client ID: Run ID: **ICS3K2_120802A** SeqNo: **2887610** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.68	0.50	20	0	103	90-110	0			
Sulfate	21.71	0.50	20	0	109	90-110	0			
Surr: Selenate (surr)	*5.158*	0.10	*5*	0	*103*	*85-115*	0			

MSD Sample ID: **12071454-01BMS** Units: **mg/L** Analysis Date: **8/3/2012 02:18 AM**
Client ID: Run ID: **ICS3K2_120802A** SeqNo: **2887660** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	158	5.0	100	62.37	95.7	80-120	0			
Sulfate	339.4	5.0	100	246	93.5	80-120	0			
Surr: Selenate (surr)	*35.89*	1.0	*50*	0	*71.8*	*85-115*	0			*S*

MSD Sample ID: **12071454-01BMSD** Units: **mg/L** Analysis Date: **8/3/2012 02:40 AM**
Client ID: Run ID: **ICS3K2_120802A** SeqNo: **2887662** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	156.8	5.0	100	62.37	94.5	80-120	0			
Sulfate	337.2	5.0	100	246	91.2	80-120	0			
Surr: Selenate (surr)	*35.62*	1.0	*50*	0	*71.2*	*85-115*	0			*S*

The following samples were analyzed in this batch:

12071372-01E	12071372-02E	12071372-03E
12071372-04E	12071372-05E	12071372-06E
12071372-07E	12071372-08E	12071372-09E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132504** Instrument ID **Balance1** Method: **M2540C** **(Dissolve)**

MBLK Sample ID: **WBLK-080212-R132504** Units: **mg/L** Analysis Date: **8/2/2012 08:15 AM**
Client ID: Run ID: **BALANCE1_120802H** SeqNo: **2888362** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	ND	10								

LCS Sample ID: **WLCS-080212-R132504** Units: **mg/L** Analysis Date: **8/2/2012 08:15 AM**
Client ID: Run ID: **BALANCE1_120802H** SeqNo: **2888364** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	1012	10	1000	0	101	85-115	0			

DUP Sample ID: **12071307-01FDUP** Units: **mg/L** Analysis Date: **8/2/2012 08:15 AM**
Client ID: Run ID: **BALANCE1_120802H** SeqNo: **2888339** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	6076	10	0	0	0	0-0	5936	2.33	20	

DUP Sample ID: **12071353-01GDUP** Units: **mg/L** Analysis Date: **8/2/2012 08:15 AM**
Client ID: Run ID: **BALANCE1_120802H** SeqNo: **2888350** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	464	10	0	0	0	0-0	460	0.866	20	

The following samples were analyzed in this batch:

12071372-01E	12071372-02E	12071372-03E
12071372-04E	12071372-05E	12071372-06E
12071372-07E		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132521** Instrument ID **Balance1** Method: **M2540C** **(Dissolve)**

MBLK Sample ID: **WBLK-080312-R132521** Units: **mg/L** Analysis Date: **8/3/2012 09:00 AM**
Client ID: Run ID: **BALANCE1_120803C** SeqNo: **2888740** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	ND	10								

LCS Sample ID: **WLCS-080312-R132521** Units: **mg/L** Analysis Date: **8/3/2012 09:00 AM**
Client ID: Run ID: **BALANCE1_120803C** SeqNo: **2888739** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	946	10	1000	0	94.6	85-115	0			

DUP Sample ID: **12071351-01FDUP** Units: **mg/L** Analysis Date: **8/3/2012 09:00 AM**
Client ID: Run ID: **BALANCE1_120803C** SeqNo: **2888717** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	416	10	0	0	0	0-0	494	17.1	20	

DUP Sample ID: **12071416-01GDUP** Units: **mg/L** Analysis Date: **8/3/2012 09:00 AM**
Client ID: Run ID: **BALANCE1_120803C** SeqNo: **2888733** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	64	10	0	0	0	0-0	66	3.08	20	

The following samples were analyzed in this batch:

12071372-08E	12071372-09E	12071372-10E
12071372-11E	12071372-12E	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132621** Instrument ID **ICS3000** Method: **E300** **(Dissolve)**

MBLK Sample ID: **WBLKW1-R132621** Units: **mg/L** Analysis Date: **8/3/2012 05:11 PM**
Client ID: Run ID: **ICS3000_120802A** SeqNo: **2890891** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	ND	0.20								
Surr: Selenate (surr)	*4.783*	0.10	*5*	0	*95.7*	*85-115*	0			

LCS Sample ID: **WLCSW1-R132621** Units: **mg/L** Analysis Date: **8/3/2012 05:32 PM**
Client ID: Run ID: **ICS3000_120802A** SeqNo: **2890893** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	7.372	0.20	8	0	92.2	90-110	0			
Surr: Selenate (surr)	*4.829*	0.10	*5*	0	*96.6*	*85-115*	0			

MS Sample ID: **1208080-01JMS** Units: **mg/L** Analysis Date: **8/4/2012 01:36 AM**
Client ID: Run ID: **ICS3000_120802A** SeqNo: **2890946** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	29.46	2.0	40	0	73.7	80-120	0			S
Surr: Selenate (surr)	*50.25*	1.0	*50*	0	*100*	*85-115*	0			

MSD Sample ID: **1208080-01JMSD** Units: **mg/L** Analysis Date: **8/4/2012 01:57 AM**
Client ID: Run ID: **ICS3000_120802A** SeqNo: **2890947** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	29.31	2.0	40	0	73.3	80-120	29.46	0.517	20	S
Surr: Selenate (surr)	*50.4*	1.0	*50*	0	*101*	*85-115*	50.25	*0.302*	*20*	

The following samples were analyzed in this batch:

12071372-01F	12071372-02F	12071372-03F
12071372-04F	12071372-05F	12071372-06F
12071372-07F	12071372-08F	12071372-09F
12071372-10F	12071372-11F	12071372-12F

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132636** Instrument ID **ManTech01** Method: **SM2320B** **(Dissolve)**

MBLK Sample ID: **WBLKW2-R132636** Units: **mg/L** Analysis Date: **8/6/2012 02:47 PM**
Client ID: Run ID: **MANTECH01_120806A** SeqNo: **2891152** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.0								
Alkalinity, Carbonate (As CaCO3)	ND	5.0								
Alkalinity, Hydroxide (As CaCO3)	ND	5.0								
Alkalinity, Total (As CaCO3)	ND	5.0								

MBLK Sample ID: **WBLKW2-R132636** Units: **mg/L** Analysis Date: **8/6/2012 05:21 PM**
Client ID: Run ID: **MANTECH01_120806A** SeqNo: **2891178** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.0								
Alkalinity, Carbonate (As CaCO3)	ND	5.0								
Alkalinity, Hydroxide (As CaCO3)	ND	5.0								
Alkalinity, Total (As CaCO3)	ND	5.0								

LCS Sample ID: **WLCSW1-1-R132636** Units: **mg/L** Analysis Date: **8/6/2012 02:53 PM**
Client ID: Run ID: **MANTECH01_120806A** SeqNo: **2891153** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1023	5.0	1000	0	102	80-120	0			

LCS Sample ID: **WLCSW2-R132636** Units: **mg/L** Analysis Date: **8/6/2012 05:26 PM**
Client ID: Run ID: **MANTECH01_120806A** SeqNo: **2891179** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1002	5.0	1000	0	100	80-120	0			

DUP Sample ID: **12071372-08EDUP** Units: **mg/L** Analysis Date: **8/6/2012 04:10 PM**
Client ID: **MW - 11 - 0712** Run ID: **MANTECH01_120806A** SeqNo: **2891167** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	476.7	5.0	0	0	0	0-0	479.8	0.644	20	
Alkalinity, Carbonate (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	476.7	5.0	0	0	0	0-0	479.8	0.644	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071372
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132636** Instrument ID **ManTech01** Method: **SM2320B** **(Dissolve)**

DUP Sample ID: **12071436-08DDUP** Units: **mg/L** Analysis Date: **8/6/2012 07:13 PM**

Client ID: Run ID: **MANTECH01_120806A** SeqNo: **2891196** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	673.7	5.0	0	0	0	0-0	677.1	0.497	20	
Alkalinity, Carbonate (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	673.7	5.0	0	0	0	0-0	677.1	0.497	20	

The following samples were analyzed in this batch:

12071372-01E	12071372-02E	12071372-03E
12071372-04E	12071372-05E	12071372-06E
12071372-07E	12071372-08E	12071372-09E
12071372-10E	12071372-11E	12071372-12E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
WorkOrder: **12071372**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter
µmhos/cm	
mg/L	Milligrams per Liter
pH Units	

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **28-Jul-12 09:25**

Work Order: **12071372** Received by: **RDH**

Checklist completed by Lehnnie B. Allen (eSignature) 02-Aug-12 (Date) Reviewed by: Patricia L. Lynch (eSignature) 17-Aug-12 (Date)

Matrices: 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):	3.1c u/c 2.7c u/c 3.4c u/c 2.4c u/c 2.9c u/c	003	
Cooler(s)/Kit(s):	3638,3610,3446,2735,1603		
Date/Time sample(s) sent to storage:	7/30 10:55		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

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Chain of Custody Form

Page 3 of 4

COC ID: 66998

12071372

NAVAJO REFINING: Navajo Refining Company

Project: Navajo Lea Refinery Semi-Annual

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Lovington Lea Refining - SA	A	VOCs (8260) - Select List
Work Order		Project Number		B	LL SVOCs (8270) - TCL + 1-methylnaphthalene
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (7470) - Hg
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange	D	Dissolved Metals (6020/7000) - Select List
Address	501 East Main	Address	501 East Main	E	Anions (300) -Cl,F,SO4
				F	Alkalinity
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	pH
Phone	(575) 703-5057	Phone	(575) 703-5057	H	Specific Conductivity
Fax	(575) 746-5421	Fax	(575) 746-5421	I	TDS
e-Mail Address		e-Mail Address	CopyDboyce@Respec-NM.com		Nitrate/Nitrite (300) - H2SO4

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-21-0712	07/26/12	0910	H2O	1,8	3	X										
2	MW-22-0712	07/26/12	0955	H2O	1,8	3	X										
3	MW-23-0712	07/26/12	1035	H2O	1,8	3	X										
4	MW-25-0712	07/26/12	1120	H2O	1,8	3	X										
5	MW-26-0712	07/26/12	1210	H2O	1,8	3	X										
6	MW-13-0712	07/26/12	1335	H2O	1,8	3	X										
7	MW-27-0712	07/26/12	1420	H2O	1,8	3	X										
8	MW-11-0712	07/27/12	0915	H2O	1,8	3	X										
9	MW-8-0712	07/27/12	1045	H2O	1,8	3	X										
10	MW-1-0712	07/27/12	1200	H2O	1,8	3	X										

Sampler(s) Please Print & Sign: Jerry Sanjay

Shipment Method: FED X

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

Results Due Date:

Relinquished by: Jerry Sanjay — Date: 07/27/12 — Time: 1600 — Received by:

Relinquished by: — Date: — Time: — Received by (Laboratory): 7/27/12 RAS

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

Notes: 10 Day 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 / EDD
☐ 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 Environmental.
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Chain of Custody Form

Page 1 of 1

COC ID: 66995

ALS Project Manager:

ALS Work Order #: 1207132

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Lovington Lea Refining - SA	A	VOCs (8260) - Select List
Work Order		Project Number		B	LL SVOCs (8270) - TCL + 1-methylnaphthalene
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (7470) - Hg
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange	D	Dissolved Metals (6020/7000) - Select List
Address	501 East Main	Address	501 East Main	E	Anions (300) -Cl,F,SO4
				F	Alkalinity
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	pH
Phone	(575) 703-5057	Phone	(575) 703-5057	H	Specific Conductivity
Fax	(575) 746-5421	Fax	(575) 746-5421	I	TDS
e-Mail Address		e-Mail Address	Copy2Boyer@Secs-NM.com	J	Nitrate/Nitrite (300) - H2SO4

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-21-0712	7-26-12	0910	H2O	2,3,8	6		X	X	X	X	X	X	X	X	X	
2	MW-22-0712	7-26-12	0955	H2O	2,3,8	6											
3	MW-23-0712	7-26-12	1035	H2O	2,3,8	6											
4	MW-25-0712	7-26-12	1120	H2O	2,3,8	6											
5	MW-26-0712	7-26-12	1210	H2O	2,3,8	6											
6	MW-13-0712	7-26-12	1335	H2O	2,3,8	6											
7	MW-27-0712	7-26-12	1420	H2O	2,3,8	6		X	X	X	X	X	X	X	X	X	
8	MW-11-0712	07/27/12	0915	H2O	2,3,8	6											
9	MW-8-0712	07/27/12	1045	H2O	2,3,8	6											
10	MW-1-0712	07/27/12	1200	H2O	2,3,8	6		X	X	X	X	X	X	X	X	X	

Sampler(s) Please Print & Sign: Davis, David

Shipment Method: Fed-Ex

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

Results Due Date:

Relinquished by: Davis, David — Date: 07/27/12 — Time: 1600 — Received by:

Relinquished by: — Date: — Time: — Received by (Laboratory): 7/28/12 0825

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

Notes: 10 Day 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 / EDD ☐ 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

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Chain of Custody Form

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COC ID: 66997

ALS Project Manager: | ALS Work Order #: 12-171372

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Lovington Lea Refining - SA	A	VOCs (8260) - Select List
Work Order		Project Number		B	LL SVOCs (8270) - TCL + 1-methylnaphthalene
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (7470) - Hg
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange	D	Dissolved Metals (6020/7000) - Select List
Address	501 East Main	Address	501 East Main	E	Anions (300) -Cl,F,SO4
				F	Alkalinity
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	pH
Phone	(575) 703-5057	Phone	(575) 703-5057	H	Specific Conductivity
Fax	(575) 746-5421	Fax	(575) 746-5421	I	TDS
e-Mail Address		e-Mail Address		J	Nitrate/Nitrite (300) - H2SO4

107 of 111

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-7-0712	07/27/12	1320	H2O	1,8	3	X										
2	RW-1-0712	07/27/12	1420	H2O	1,8	3	X										
3	TRIP BLANK 071912-BB	07/27/12	1600	H2O	1,8	2	X										
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Josh Young Josh Young

Shipment Method: FED X

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

Results Due Date:

Relinquished by: Josh Young — Date: 07/27/12 — Time: 1600 — Received by:

Relinquished by: — Date: — Time: — Received by (Laboratory): 7/27/12 1625

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

Notes: 10 Day TAT.

Cooler ID	Cooler Temp.

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

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

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Salt Lake City, UT +1 801 266 7700
South Charleston, WV +1 304 356 3168
York, PA +1 717 505 5280

Chain of Custody Form

Page 2 of 4 (2 NB)

COC ID: 66996

ALS Project Manager: | ALS Work Order #: 1297177

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Lovington Lea Refining - SA	A	VOCs (8260) - Select List
Work Order		Project Number		B	LL SVOCs (8270) - TCL + 1-methylnaphthalene
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (7470) - Hg
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange	D	Dissolved Metals (6020/7000) - Select List
Address	501 East Main	Address	501 East Main	E	Anions (300) -Cl,F,SO4
				F	Alkalinity
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	pH
Phone	(575) 703-5057	Phone	(575) 703-5057	H	Specific Conductivity
Fax	(575) 746-5421	Fax	(575) 746-5421	I	TDS
e-Mail Address		e-Mail Address		J	Nitrate/Nitrite (300) - H2SO4

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-7-0712	07/27/12	1320	GW	2,3,8	6		X	X	X	X	X	X	X	X	X	
2	RW-1-0712	07/27/12	1420	GW	2,3,8	6		X	X	X	X	X	X	X	X	X	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

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Sampler(s) Please Print & Sign: Jerry Sosa Jerry Sosa

Shipment Method: FED X

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

Results Due Date:

Relinquished by: Jerry Sosa Jerry Sosa | Date: 07/27/12 | Time: 1600 | Received by:

Relinquished by: | Date: | Time: | Received by (Laboratory): 7/28/12 8AS

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

Notes: 10 Day 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 / EDD
☐ 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 Environmental.
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e 7-27-12 FedEx Tracking Number 899670161781

...der's ne David Davis Phone 575 392-0550

Company Safety & Environmental Solutions

Address 703 E. Clinton Dept/Floor/Suite/Room

Hobbs State NM ZIP 88240

...ur Internal Billing Reference

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

CUSTODY SEAL

Date: 7-27-12 Time: 1600
Name: Jerry Sosa
Company: SESE

Seal Broken By:
Date: 7/28/12

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

CUSTODY SEAL

7-27-12 Time: 1600
Jerry Sosa
SESE

Seal Broken By:
Date: 7/28/12

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FedEx Tracking Number 899670161792

Date 7-27-12

Sender's Name David Davis Phone 525 397-0510

Company Safety + Environmental Solutions Inc

Address 703 E. Clinton Dept./Floor/Suite/Room

Hobbs State NM ZIP 88240

Your Internal Billing Reference

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

Date:
Name:
Company:

CUSTODY SEAL

Date: 7/27/12 Time: 1600

Seal Broken By:

Date: 7/28/12

This portion can be removed for Recipient's records.

FedEx Tracking Number 899670161770

Date 7-27-12

Sender's Name David Davis Phone 525 397-0510

Company Safety + Environmental Solutions Inc

Address 703 E. Clinton Dept./Floor/Suite/Room

Hobbs State NM ZIP 88240

Your Internal Billing Reference

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

CUSTODY SEAL

Date: 7-27-12 Time: 1600

Name:

Company: Safety

Seal Broken By:

Date: 7/28/12

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e 7-27-12 FedEx Tracking Number 899670161818

der's ne David Davis Phone 505 397-0510

Company Safety + Environmental Solutions Inc

Address 703 E. Clinton Dept/Floor/Suite/Room

Hobbs State NM ZIP 88240

ur Internal Billing Reference

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

Date:
Name:
Comp

CUSTODY SEAL
7/27/12 Time: 1600
Jerry Tara
any: SESI

Seal Broken By:
Date:

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e 7-27-12 FedEx Tracking Number 899670161314

der's ne David Davis Phone 505 397-0510

Company Safety + Environmental Solutions INC

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Hobbs State NM ZIP 88240

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Tel. +1 281 530 5656
Fax. +1 281 530 5887

Date:
Name:
Compa

CUSTODY SEAL
7/27/12 Time: 1600
Jerry Tara
ny: SESI

Seal Broken By:
Date:

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

Date:
Name:
Company

CUSTODY SEAL
7/27/12 Time: 1600
Jerry Tara
SESI

Seal Broken By:
Date:

21-Aug-2012

Aaron Strange
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 748-6733
Fax: (575) 746-5421

Re: Navajo Lea Refinery Semi-Annual Work Order: **12071434**

Dear Aaron,

ALS Environmental received 6 samples on 31-Jul-2012 08:55 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental 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 Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 64.

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

Sincerely,

Patricia L. Lynch

Electronically approved by: Jumoke M. Lawal

Patricia L. Lynch
Project Manager

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 21-Aug-12

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: **12071434**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
12071434-01	MW-24-0712	Water		7/30/2012 08:45	7/31/2012 08:55	☐
12071434-02	SOUTH WELL-0712	Water		7/30/2012 09:45	7/31/2012 08:55	☐
12071434-03	NORTH WELL-0712	Water		7/30/2012 09:55	7/31/2012 08:55	☐
12071434-04	EAST WELL-0712	Water		7/30/2012 10:05	7/31/2012 08:55	☐
12071434-05	DUPLICATE SAMPLE	Water		7/30/2012	7/31/2012 08:55	☐
12071434-06	TRIP BLANK 071912-80	Water		7/30/2012	7/31/2012 08:55	☐

Client:	Navajo Refining Company
Project:	Navajo Lea Refinery Semi-Annual
Work Order:	12071434

Case Narrative

The samples were received outside method holding time for pH which is "immediate" per 40CFR136. Therefore, the results are flagged with H.

Batch 63110, Semivolatile Organics: Insufficient sample was available for MS/MSD. The LCS/LCSD was used for batch quality control.

Batch R132370, Volatile Organics, Sample 12071426-01: MSD recoveries and MS/MSD RPDs are for an unrelated sample.

Batch R132621, Nitrate, Sample 1208080-01: MS/MSD recoveries are for an unrelated sample.

Batch R132316, Anions, Sample 12071350-01: MS recovery and MS/MSD RPD are for an unrelated sample.

ALS Environmental

Date: *21-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071434
Sample ID: MW-24-0712
Lab ID: 12071434-01
Collection Date: 7/30/2012 08:45 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/6/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/7/2012 01:21 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/7/2012**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	8/8/2012 07:08 PM
Arsenic	ND		0.00500	mg/L	1	8/8/2012 07:08 PM
Barium	**0.0889**		**0.00500**	**mg/L**	1	8/8/2012 07:08 PM
Boron	**0.179**		**0.0200**	**mg/L**	1	8/9/2012 02:31 PM
Cadmium	ND		0.00200	mg/L	1	8/8/2012 07:08 PM
Calcium	**84.0**		**0.500**	**mg/L**	1	8/8/2012 07:08 PM
Chromium	ND		0.00500	mg/L	1	8/8/2012 07:08 PM
Cobalt	ND		0.00500	mg/L	1	8/8/2012 07:08 PM
Copper	ND		0.00500	mg/L	1	8/8/2012 07:08 PM
Iron	ND		0.200	mg/L	1	8/8/2012 07:08 PM
Lead	ND		0.00500	mg/L	1	8/8/2012 07:08 PM
Magnesium	**11.5**		**0.200**	**mg/L**	1	8/8/2012 07:08 PM
Manganese	**0.00508**		**0.00500**	**mg/L**	1	8/8/2012 07:08 PM
Molybdenum	ND		0.00500	mg/L	1	8/8/2012 07:08 PM
Nickel	**0.00758**		**0.00500**	**mg/L**	1	8/8/2012 07:08 PM
Potassium	**2.10**		**0.200**	**mg/L**	1	8/8/2012 07:08 PM
Selenium	ND		0.00500	mg/L	1	8/9/2012 02:31 PM
Silver	ND		0.00500	mg/L	1	8/8/2012 07:08 PM
Sodium	**42.4**		**0.200**	**mg/L**	1	8/8/2012 07:08 PM
Uranium	ND		0.00500	mg/L	1	8/8/2012 07:08 PM
Zinc	**0.0127**		**0.00500**	**mg/L**	1	8/8/2012 07:08 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **8/2/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/4/2012 02:04 AM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/4/2012 02:04 AM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/4/2012 02:04 AM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/4/2012 02:04 AM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/4/2012 02:04 AM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/4/2012 02:04 AM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
2-Chlorophenol	ND		0.20	µg/L	1	8/4/2012 02:04 AM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
2-Methylphenol	ND		0.20	µg/L	1	8/4/2012 02:04 AM
2-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 02:04 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *21-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071434
Sample ID: MW-24-0712
Lab ID: 12071434-01
Collection Date: 7/30/2012 08:45 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/4/2012 02:04 AM
3&4-Methylphenol	ND		0.20	µg/L	1	8/4/2012 02:04 AM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/4/2012 02:04 AM
3-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 02:04 AM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/4/2012 02:04 AM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/4/2012 02:04 AM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/4/2012 02:04 AM
4-Chloroaniline	ND		0.20	µg/L	1	8/4/2012 02:04 AM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/4/2012 02:04 AM
4-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 02:04 AM
4-Nitrophenol	ND		1.0	µg/L	1	8/4/2012 02:04 AM
Acenaphthene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Acenaphthylene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Acetophenone	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Anthracene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Atrazine	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Benz(a)anthracene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Benzaldehyde	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Bis(2-ethylhexyl)phthalate	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Caprolactam	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Carbazole	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Chrysene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Dibenzofuran	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Diethyl phthalate	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Dimethyl phthalate	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Fluoranthene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Fluorene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Hexachlorobenzene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/4/2012 02:04 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071434
Sample ID: MW-24-0712 **Lab ID:** 12071434-01
Collection Date: 7/30/2012 08:45 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Hexachloroethane	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Isophorone	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Naphthalene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Nitrobenzene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/4/2012 02:04 AM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Pentachlorophenol	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Phenanthrene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Phenol	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Pyrene	ND		0.20	µg/L	1	8/4/2012 02:04 AM
Surr: 2,4,6-Tribromophenol	*63.8*		*34-129*	*%REC*	1	8/4/2012 02:04 AM
Surr: 2-Fluorobiphenyl	*55.2*		*40-125*	*%REC*	1	8/4/2012 02:04 AM
Surr: 2-Fluorophenol	*42.0*		*20-120*	*%REC*	1	8/4/2012 02:04 AM
Surr: 4-Terphenyl-d14	*85.6*		*40-135*	*%REC*	1	8/4/2012 02:04 AM
Surr: Nitrobenzene-d5	*62.8*		*41-120*	*%REC*	1	8/4/2012 02:04 AM
Surr: Phenol-d6	*47.4*		*20-120*	*%REC*	1	8/4/2012 02:04 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
2-Butanone	ND		0.010	mg/L	1	8/2/2012 04:45 PM
2-Hexanone	ND		0.010	mg/L	1	8/2/2012 04:45 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	8/2/2012 04:45 PM
Acetone	ND		0.010	mg/L	1	8/2/2012 04:45 PM
Benzene	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
Bromodichloromethane	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
Bromoform	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
Bromomethane	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
Carbon disulfide	ND		0.010	mg/L	1	8/2/2012 04:45 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	8/2/2012 04:45 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071434
Sample ID: MW-24-0712 **Lab ID:** 12071434-01
Collection Date: 7/30/2012 08:45 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
Chloroethane	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
Chloroform	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
Chloromethane	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
Dibromochloromethane	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
Ethylbenzene	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
Isopropylbenzene	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
m,p-Xylene	ND		0.010	mg/L	1	8/2/2012 04:45 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
Methylene chloride	ND		0.010	mg/L	1	8/2/2012 04:45 PM
Naphthalene	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
n-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
n-Propylbenzene	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
o-Xylene	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
Styrene	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
Tetrachloroethene	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
Toluene	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
Trichloroethene	ND		0.0050	mg/L	1	8/2/2012 04:45 PM
Vinyl chloride	ND		0.0020	mg/L	1	8/2/2012 04:45 PM
Xylenes, Total	ND		0.015	mg/L	1	8/2/2012 04:45 PM
Surr: 1,2-Dichloroethane-d4	*107*		*70-125*	*%REC*	1	8/2/2012 04:45 PM
Surr: 4-Bromofluorobenzene	*93.5*		*72-125*	*%REC*	1	8/2/2012 04:45 PM
Surr: Dibromofluoromethane	*107*		*71-125*	*%REC*	1	8/2/2012 04:45 PM
Surr: Toluene-d8	*98.8*		*75-125*	*%REC*	1	8/2/2012 04:45 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**51.8**		**0.500**	**mg/L**	1	8/2/2012 02:25 AM
Fluoride	**2.42**		**0.100**	**mg/L**	1	8/2/2012 02:25 AM
Sulfate	**55.1**		**0.500**	**mg/L**	1	8/2/2012 02:25 AM
Nitrate/Nitrite (as N)	**2.39**		**2.00**	**mg/L**	10	8/3/2012 10:48 PM
Surr: Selenate (surr)	*101*		*85-115*	*%REC*	10	8/3/2012 10:48 PM
Surr: Selenate (surr)	*89.4*		*85-115*	*%REC*	1	8/2/2012 02:25 AM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**232**		**5.00**	**mg/L**	1	8/6/2012 04:43 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 04:43 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *21-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071434
Sample ID: MW-24-0712
Lab ID: 12071434-01
Collection Date: 7/30/2012 08:45 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 04:43 PM
Alkalinity, Total (As CaCO3)	**232**		**5.00**	**mg/L**	1	8/6/2012 04:43 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**691**		**1.00**	**µmhos/cm**	1	8/1/2012 09:15 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**6.84**	H	**0.100**	**pH Units**	1	8/2/2012 01:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**420**		**10.0**	**mg/L**	1	8/4/2012 01:50 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *21-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071434
Sample ID: SOUTH WELL-0712
Lab ID: 12071434-02
Collection Date: 7/30/2012 09:45 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/6/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/7/2012 01:23 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/7/2012**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	8/8/2012 07:16 PM
Arsenic	ND		0.00500	mg/L	1	8/8/2012 07:16 PM
Barium	**0.103**		**0.00500**	**mg/L**	1	8/8/2012 07:16 PM
Boron	**0.160**		**0.0200**	**mg/L**	1	8/9/2012 02:33 PM
Cadmium	ND		0.00200	mg/L	1	8/8/2012 07:16 PM
Calcium	**99.4**		**0.500**	**mg/L**	1	8/8/2012 07:16 PM
Chromium	**0.0111**		**0.00500**	**mg/L**	1	8/8/2012 07:16 PM
Cobalt	ND		0.00500	mg/L	1	8/8/2012 07:16 PM
Copper	ND		0.00500	mg/L	1	8/8/2012 07:16 PM
Iron	ND		0.200	mg/L	1	8/8/2012 07:16 PM
Lead	ND		0.00500	mg/L	1	8/8/2012 07:16 PM
Magnesium	**13.5**		**0.200**	**mg/L**	1	8/8/2012 07:16 PM
Manganese	ND		0.00500	mg/L	1	8/8/2012 07:16 PM
Molybdenum	ND		0.00500	mg/L	1	8/8/2012 07:16 PM
Nickel	ND		0.00500	mg/L	1	8/8/2012 07:16 PM
Potassium	**2.16**		**0.200**	**mg/L**	1	8/8/2012 07:16 PM
Selenium	ND		0.00500	mg/L	1	8/9/2012 02:33 PM
Silver	ND		0.00500	mg/L	1	8/8/2012 07:16 PM
Sodium	**56.3**		**0.200**	**mg/L**	1	8/8/2012 07:16 PM
Uranium	ND		0.00500	mg/L	1	8/8/2012 07:16 PM
Zinc	**0.0401**		**0.00500**	**mg/L**	1	8/8/2012 07:16 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **8/2/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/4/2012 02:24 AM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/4/2012 02:24 AM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/4/2012 02:24 AM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/4/2012 02:24 AM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/4/2012 02:24 AM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/4/2012 02:24 AM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
2-Chlorophenol	ND		0.20	µg/L	1	8/4/2012 02:24 AM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
2-Methylphenol	ND		0.20	µg/L	1	8/4/2012 02:24 AM
2-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 02:24 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071434
Sample ID: SOUTH WELL-0712 **Lab ID:** 12071434-02
Collection Date: 7/30/2012 09:45 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/4/2012 02:24 AM
3&4-Methylphenol	ND		0.20	µg/L	1	8/4/2012 02:24 AM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/4/2012 02:24 AM
3-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 02:24 AM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/4/2012 02:24 AM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/4/2012 02:24 AM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/4/2012 02:24 AM
4-Chloroaniline	ND		0.20	µg/L	1	8/4/2012 02:24 AM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/4/2012 02:24 AM
4-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 02:24 AM
4-Nitrophenol	ND		1.0	µg/L	1	8/4/2012 02:24 AM
Acenaphthene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Acenaphthylene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Acetophenone	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Anthracene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Atrazine	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Benz(a)anthracene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Benzaldehyde	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Bis(2-ethylhexyl)phthalate	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Caprolactam	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Carbazole	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Chrysene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Dibenzofuran	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Diethyl phthalate	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Dimethyl phthalate	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Fluoranthene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Fluorene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Hexachlorobenzene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/4/2012 02:24 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071434
Sample ID: SOUTH WELL-0712 **Lab ID:** 12071434-02
Collection Date: 7/30/2012 09:45 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Hexachloroethane	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Isophorone	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Naphthalene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Nitrobenzene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/4/2012 02:24 AM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Pentachlorophenol	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Phenanthrene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Phenol	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Pyrene	ND		0.20	µg/L	1	8/4/2012 02:24 AM
Surr: 2,4,6-Tribromophenol	*56.0*		*34-129*	*%REC*	1	8/4/2012 02:24 AM
Surr: 2-Fluorobiphenyl	*56.8*		*40-125*	*%REC*	1	8/4/2012 02:24 AM
Surr: 2-Fluorophenol	*55.3*		*20-120*	*%REC*	1	8/4/2012 02:24 AM
Surr: 4-Terphenyl-d14	*78.2*		*40-135*	*%REC*	1	8/4/2012 02:24 AM
Surr: Nitrobenzene-d5	*72.2*		*41-120*	*%REC*	1	8/4/2012 02:24 AM
Surr: Phenol-d6	*52.8*		*20-120*	*%REC*	1	8/4/2012 02:24 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
2-Butanone	ND		0.010	mg/L	1	8/2/2012 05:13 PM
2-Hexanone	ND		0.010	mg/L	1	8/2/2012 05:13 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	8/2/2012 05:13 PM
Acetone	ND		0.010	mg/L	1	8/2/2012 05:13 PM
Benzene	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
Bromodichloromethane	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
Bromoform	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
Bromomethane	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
Carbon disulfide	ND		0.010	mg/L	1	8/2/2012 05:13 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	8/2/2012 05:13 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071434
Sample ID: SOUTH WELL-0712
Lab ID: 12071434-02
Collection Date: 7/30/2012 09:45 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
Chloroethane	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
Chloroform	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
Chloromethane	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
Dibromochloromethane	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
Ethylbenzene	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
Isopropylbenzene	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
m,p-Xylene	ND		0.010	mg/L	1	8/2/2012 05:13 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
Methylene chloride	ND		0.010	mg/L	1	8/2/2012 05:13 PM
Naphthalene	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
n-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
n-Propylbenzene	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
o-Xylene	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
Styrene	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
Tetrachloroethene	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
Toluene	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
Trichloroethene	ND		0.0050	mg/L	1	8/2/2012 05:13 PM
Vinyl chloride	ND		0.0020	mg/L	1	8/2/2012 05:13 PM
Xylenes, Total	ND		0.015	mg/L	1	8/2/2012 05:13 PM
Surr: 1,2-Dichloroethane-d4	*103*		*70-125*	*%REC*	1	8/2/2012 05:13 PM
Surr: 4-Bromofluorobenzene	*91.7*		*72-125*	*%REC*	1	8/2/2012 05:13 PM
Surr: Dibromofluoromethane	*105*		*71-125*	*%REC*	1	8/2/2012 05:13 PM
Surr: Toluene-d8	*89.5*		*75-125*	*%REC*	1	8/2/2012 05:13 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**135**		**5.00**	**mg/L**	10	8/2/2012 06:32 PM
Fluoride	**1.01**		**0.100**	**mg/L**	1	8/2/2012 03:28 AM
Sulfate	**73.3**		**0.500**	**mg/L**	1	8/2/2012 03:28 AM
Nitrate/Nitrite (as N)	**2.53**		**2.00**	**mg/L**	10	8/3/2012 11:09 PM
Surr: Selenate (surr)	*88.8*		*85-115*	*%REC*	1	8/2/2012 03:28 AM
Surr: Selenate (surr)	*100*		*85-115*	*%REC*	10	8/3/2012 11:09 PM
Surr: Selenate (surr)	*106*		*85-115*	*%REC*	10	8/2/2012 06:32 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**186**		**5.00**	**mg/L**	1	8/6/2012 04:48 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *21-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071434
Sample ID: SOUTH WELL-0712
Lab ID: 12071434-02
Collection Date: 7/30/2012 09:45 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 04:48 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 04:48 PM
Alkalinity, Total (As CaCO3)	**186**		**5.00**	**mg/L**	1	8/6/2012 04:48 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**877**		**1.00**	**µmhos/cm**	1	8/1/2012 09:15 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**6.98**	H	**0.100**	**pH Units**	1	8/2/2012 01:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**582**		**10.0**	**mg/L**	1	8/4/2012 01:50 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *21-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071434
Sample ID: NORTH WELL-0712
Lab ID: 12071434-03
Collection Date: 7/30/2012 09:55 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/6/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/7/2012 01:25 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/7/2012**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	8/8/2012 07:18 PM
Arsenic	**0.00523**		**0.00500**	**mg/L**	1	8/8/2012 07:18 PM
Barium	**0.106**		**0.00500**	**mg/L**	1	8/8/2012 07:18 PM
Boron	**0.159**		**0.0200**	**mg/L**	1	8/9/2012 02:36 PM
Cadmium	ND		0.00200	mg/L	1	8/8/2012 07:18 PM
Calcium	**95.1**		**0.500**	**mg/L**	1	8/8/2012 07:18 PM
Chromium	ND		0.00500	mg/L	1	8/8/2012 07:18 PM
Cobalt	ND		0.00500	mg/L	1	8/8/2012 07:18 PM
Copper	ND		0.00500	mg/L	1	8/8/2012 07:18 PM
Iron	ND		0.200	mg/L	1	8/8/2012 07:18 PM
Lead	ND		0.00500	mg/L	1	8/8/2012 07:18 PM
Magnesium	**11.5**		**0.200**	**mg/L**	1	8/8/2012 07:18 PM
Manganese	ND		0.00500	mg/L	1	8/8/2012 07:18 PM
Molybdenum	ND		0.00500	mg/L	1	8/8/2012 07:18 PM
Nickel	ND		0.00500	mg/L	1	8/8/2012 07:18 PM
Potassium	**2.29**		**0.200**	**mg/L**	1	8/8/2012 07:18 PM
Selenium	ND		0.00500	mg/L	1	8/9/2012 02:36 PM
Silver	ND		0.00500	mg/L	1	8/8/2012 07:18 PM
Sodium	**64.5**		**0.200**	**mg/L**	1	8/8/2012 07:18 PM
Uranium	ND		0.00500	mg/L	1	8/8/2012 07:18 PM
Zinc	**0.0178**		**0.00500**	**mg/L**	1	8/8/2012 07:18 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **8/2/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/4/2012 02:44 AM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/4/2012 02:44 AM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/4/2012 02:44 AM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/4/2012 02:44 AM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/4/2012 02:44 AM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/4/2012 02:44 AM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
2-Chlorophenol	ND		0.20	µg/L	1	8/4/2012 02:44 AM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
2-Methylphenol	ND		0.20	µg/L	1	8/4/2012 02:44 AM
2-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 02:44 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *21-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071434
Sample ID: NORTH WELL-0712
Lab ID: 12071434-03
Collection Date: 7/30/2012 09:55 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/4/2012 02:44 AM
3&4-Methylphenol	ND		0.20	µg/L	1	8/4/2012 02:44 AM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/4/2012 02:44 AM
3-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 02:44 AM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/4/2012 02:44 AM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/4/2012 02:44 AM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/4/2012 02:44 AM
4-Chloroaniline	ND		0.20	µg/L	1	8/4/2012 02:44 AM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/4/2012 02:44 AM
4-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 02:44 AM
4-Nitrophenol	ND		1.0	µg/L	1	8/4/2012 02:44 AM
Acenaphthene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Acenaphthylene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Acetophenone	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Anthracene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Atrazine	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Benz(a)anthracene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Benzaldehyde	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Bis(2-ethylhexyl)phthalate	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Caprolactam	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Carbazole	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Chrysene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Dibenzofuran	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Diethyl phthalate	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Dimethyl phthalate	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Fluoranthene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Fluorene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Hexachlorobenzene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/4/2012 02:44 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071434
Sample ID: NORTH WELL-0712 **Lab ID:** 12071434-03
Collection Date: 7/30/2012 09:55 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Hexachloroethane	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Isophorone	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Naphthalene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Nitrobenzene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/4/2012 02:44 AM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Pentachlorophenol	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Phenanthrene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Phenol	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Pyrene	ND		0.20	µg/L	1	8/4/2012 02:44 AM
Surr: 2,4,6-Tribromophenol	*70.5*		*34-129*	*%REC*	1	8/4/2012 02:44 AM
Surr: 2-Fluorobiphenyl	*56.7*		*40-125*	*%REC*	1	8/4/2012 02:44 AM
Surr: 2-Fluorophenol	*51.9*		*20-120*	*%REC*	1	8/4/2012 02:44 AM
Surr: 4-Terphenyl-d14	*80.1*		*40-135*	*%REC*	1	8/4/2012 02:44 AM
Surr: Nitrobenzene-d5	*65.2*		*41-120*	*%REC*	1	8/4/2012 02:44 AM
Surr: Phenol-d6	*51.4*		*20-120*	*%REC*	1	8/4/2012 02:44 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
2-Butanone	ND		0.010	mg/L	1	8/2/2012 05:41 PM
2-Hexanone	ND		0.010	mg/L	1	8/2/2012 05:41 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	8/2/2012 05:41 PM
Acetone	ND		0.010	mg/L	1	8/2/2012 05:41 PM
Benzene	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
Bromodichloromethane	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
Bromoform	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
Bromomethane	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
Carbon disulfide	ND		0.010	mg/L	1	8/2/2012 05:41 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	8/2/2012 05:41 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071434
Sample ID: NORTH WELL-0712 **Lab ID:** 12071434-03
Collection Date: 7/30/2012 09:55 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
Chloroethane	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
Chloroform	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
Chloromethane	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
Dibromochloromethane	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
Ethylbenzene	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
Isopropylbenzene	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
m,p-Xylene	ND		0.010	mg/L	1	8/2/2012 05:41 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
Methylene chloride	ND		0.010	mg/L	1	8/2/2012 05:41 PM
Naphthalene	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
n-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
n-Propylbenzene	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
o-Xylene	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
Styrene	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
Tetrachloroethene	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
Toluene	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
Trichloroethene	ND		0.0050	mg/L	1	8/2/2012 05:41 PM
Vinyl chloride	ND		0.0020	mg/L	1	8/2/2012 05:41 PM
Xylenes, Total	ND		0.015	mg/L	1	8/2/2012 05:41 PM
Surr: 1,2-Dichloroethane-d4	*110*		*70-125*	*%REC*	1	8/2/2012 05:41 PM
Surr: 4-Bromofluorobenzene	*96.2*		*72-125*	*%REC*	1	8/2/2012 05:41 PM
Surr: Dibromofluoromethane	*109*		*71-125*	*%REC*	1	8/2/2012 05:41 PM
Surr: Toluene-d8	*93.6*		*75-125*	*%REC*	1	8/2/2012 05:41 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**121**		**5.00**	**mg/L**	10	8/2/2012 06:47 PM
Fluoride	**0.986**		**0.100**	**mg/L**	1	8/2/2012 03:49 AM
Sulfate	**72.7**		**0.500**	**mg/L**	1	8/2/2012 03:49 AM
Nitrate/Nitrite (as N)	**2.63**		**2.00**	**mg/L**	10	8/3/2012 11:30 PM
Surr: Selenate (surr)	*94.1*		*85-115*	*%REC*	1	8/2/2012 03:49 AM
Surr: Selenate (surr)	*101*		*85-115*	*%REC*	10	8/3/2012 11:30 PM
Surr: Selenate (surr)	*104*		*85-115*	*%REC*	10	8/2/2012 06:47 PM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**196**		**5.00**	**mg/L**	1	8/6/2012 04:54 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *21-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071434
Sample ID: NORTH WELL-0712
Lab ID: 12071434-03
Collection Date: 7/30/2012 09:55 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 04:54 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 04:54 PM
Alkalinity, Total (As CaCO3)	**196**		**5.00**	**mg/L**	1	8/6/2012 04:54 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**866**		**1.00**	**µmhos/cm**	1	8/1/2012 09:15 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**7.05**	H	**0.100**	**pH Units**	1	8/2/2012 01:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**528**		**10.0**	**mg/L**	1	8/4/2012 01:50 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *21-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071434
Sample ID: EAST WELL-0712
Lab ID: 12071434-04
Collection Date: 7/30/2012 10:05 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/6/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/7/2012 01:31 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/7/2012**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	8/8/2012 07:21 PM
Arsenic	ND		0.00500	mg/L	1	8/8/2012 07:21 PM
Barium	**0.0922**		**0.00500**	**mg/L**	1	8/8/2012 07:21 PM
Boron	**0.136**		**0.0200**	**mg/L**	1	8/9/2012 02:39 PM
Cadmium	ND		0.00200	mg/L	1	8/8/2012 07:21 PM
Calcium	**96.1**		**0.500**	**mg/L**	1	8/8/2012 07:21 PM
Chromium	**0.0157**		**0.00500**	**mg/L**	1	8/8/2012 07:21 PM
Cobalt	ND		0.00500	mg/L	1	8/8/2012 07:21 PM
Copper	**0.00774**		**0.00500**	**mg/L**	1	8/8/2012 07:21 PM
Iron	ND		0.200	mg/L	1	8/8/2012 07:21 PM
Lead	ND		0.00500	mg/L	1	8/8/2012 07:21 PM
Magnesium	**14.2**		**0.200**	**mg/L**	1	8/8/2012 07:21 PM
Manganese	ND		0.00500	mg/L	1	8/8/2012 07:21 PM
Molybdenum	ND		0.00500	mg/L	1	8/8/2012 07:21 PM
Nickel	ND		0.00500	mg/L	1	8/8/2012 07:21 PM
Potassium	**1.90**		**0.200**	**mg/L**	1	8/8/2012 07:21 PM
Selenium	ND		0.00500	mg/L	1	8/9/2012 02:39 PM
Silver	ND		0.00500	mg/L	1	8/8/2012 07:21 PM
Sodium	**45.8**		**0.200**	**mg/L**	1	8/8/2012 07:21 PM
Uranium	ND		0.00500	mg/L	1	8/8/2012 07:21 PM
Zinc	**0.0166**		**0.00500**	**mg/L**	1	8/8/2012 07:21 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **8/2/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/4/2012 03:04 AM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/4/2012 03:04 AM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/4/2012 03:04 AM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/4/2012 03:04 AM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/4/2012 03:04 AM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/4/2012 03:04 AM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
2-Chlorophenol	ND		0.20	µg/L	1	8/4/2012 03:04 AM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
2-Methylphenol	ND		0.20	µg/L	1	8/4/2012 03:04 AM
2-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 03:04 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *21-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071434
Sample ID: EAST WELL-0712
Lab ID: 12071434-04
Collection Date: 7/30/2012 10:05 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/4/2012 03:04 AM
3&4-Methylphenol	ND		0.20	µg/L	1	8/4/2012 03:04 AM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/4/2012 03:04 AM
3-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 03:04 AM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/4/2012 03:04 AM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/4/2012 03:04 AM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/4/2012 03:04 AM
4-Chloroaniline	ND		0.20	µg/L	1	8/4/2012 03:04 AM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/4/2012 03:04 AM
4-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 03:04 AM
4-Nitrophenol	ND		1.0	µg/L	1	8/4/2012 03:04 AM
Acenaphthene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Acenaphthylene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Acetophenone	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Anthracene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Atrazine	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Benz(a)anthracene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Benzaldehyde	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Bis(2-ethylhexyl)phthalate	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Caprolactam	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Carbazole	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Chrysene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Dibenzofuran	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Diethyl phthalate	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Dimethyl phthalate	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Fluoranthene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Fluorene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Hexachlorobenzene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/4/2012 03:04 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071434
Sample ID: EAST WELL-0712 **Lab ID:** 12071434-04
Collection Date: 7/30/2012 10:05 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Hexachloroethane	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Isophorone	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Naphthalene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Nitrobenzene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/4/2012 03:04 AM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Pentachlorophenol	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Phenanthrene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Phenol	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Pyrene	ND		0.20	µg/L	1	8/4/2012 03:04 AM
Surr: 2,4,6-Tribromophenol	*55.3*		*34-129*	*%REC*	1	8/4/2012 03:04 AM
Surr: 2-Fluorobiphenyl	*56.8*		*40-125*	*%REC*	1	8/4/2012 03:04 AM
Surr: 2-Fluorophenol	*53.9*		*20-120*	*%REC*	1	8/4/2012 03:04 AM
Surr: 4-Terphenyl-d14	*90.0*		*40-135*	*%REC*	1	8/4/2012 03:04 AM
Surr: Nitrobenzene-d5	*66.1*		*41-120*	*%REC*	1	8/4/2012 03:04 AM
Surr: Phenol-d6	*54.3*		*20-120*	*%REC*	1	8/4/2012 03:04 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
2-Butanone	ND		0.010	mg/L	1	8/2/2012 06:10 PM
2-Hexanone	ND		0.010	mg/L	1	8/2/2012 06:10 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	8/2/2012 06:10 PM
Acetone	ND		0.010	mg/L	1	8/2/2012 06:10 PM
Benzene	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
Bromodichloromethane	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
Bromoform	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
Bromomethane	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
Carbon disulfide	ND		0.010	mg/L	1	8/2/2012 06:10 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	8/2/2012 06:10 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071434
Sample ID: EAST WELL-0712
Lab ID: 12071434-04
Collection Date: 7/30/2012 10:05 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
Chloroethane	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
Chloroform	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
Chloromethane	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
Dibromochloromethane	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
Ethylbenzene	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
Isopropylbenzene	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
m,p-Xylene	ND		0.010	mg/L	1	8/2/2012 06:10 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
Methylene chloride	ND		0.010	mg/L	1	8/2/2012 06:10 PM
Naphthalene	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
n-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
n-Propylbenzene	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
o-Xylene	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
Styrene	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
Tetrachloroethene	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
Toluene	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
Trichloroethene	ND		0.0050	mg/L	1	8/2/2012 06:10 PM
Vinyl chloride	ND		0.0020	mg/L	1	8/2/2012 06:10 PM
Xylenes, Total	ND		0.015	mg/L	1	8/2/2012 06:10 PM
Surr: 1,2-Dichloroethane-d4	*109*		*70-125*	*%REC*	1	8/2/2012 06:10 PM
Surr: 4-Bromofluorobenzene	*96.6*		*72-125*	*%REC*	1	8/2/2012 06:10 PM
Surr: Dibromofluoromethane	*110*		*71-125*	*%REC*	1	8/2/2012 06:10 PM
Surr: Toluene-d8	*104*		*75-125*	*%REC*	1	8/2/2012 06:10 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**144**		**5.00**	**mg/L**	10	8/2/2012 07:01 PM
Fluoride	**0.962**		**0.100**	**mg/L**	1	8/2/2012 01:30 AM
Sulfate	**80.9**		**0.500**	**mg/L**	1	8/2/2012 01:30 AM
Nitrate/Nitrite (as N)	**2.40**		**2.00**	**mg/L**	10	8/3/2012 11:51 PM
Surr: Selenate (surr)	*105*		*85-115*	*%REC*	10	8/2/2012 07:01 PM
Surr: Selenate (surr)	*100*		*85-115*	*%REC*	10	8/3/2012 11:51 PM
Surr: Selenate (surr)	*94.0*		*85-115*	*%REC*	1	8/2/2012 01:30 AM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**175**		**5.00**	**mg/L**	1	8/6/2012 05:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *21-Aug-12*

Client:	Navajo Refining Company		
Project:	Navajo Lea Refinery Semi-Annual	**Work Order:**	12071434
Sample ID:	EAST WELL-0712	**Lab ID:**	12071434-04
Collection Date:	7/30/2012 10:05 AM	**Matrix:**	WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 05:00 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 05:00 PM
Alkalinity, Total (As CaCO3)	**175**		**5.00**	**mg/L**	1	8/6/2012 05:00 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**884**		**1.00**	**µmhos/cm**	1	8/1/2012 09:15 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**7.04**	H	**0.100**	**pH Units**	1	8/2/2012 01:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**636**		**10.0**	**mg/L**	1	8/4/2012 01:50 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *21-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071434
Sample ID: DUPLICATE SAMPLE
Lab ID: 12071434-05
Collection Date: 7/30/2012
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/6/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	8/7/2012 01:33 PM
DISSOLVED METALS			**SW6020**		Prep Date: **8/7/2012**	Analyst: **SKS**
Aluminum	ND		0.0100	mg/L	1	8/8/2012 07:24 PM
Arsenic	ND		0.00500	mg/L	1	8/8/2012 07:24 PM
Barium	**0.0851**		**0.00500**	**mg/L**	1	8/8/2012 07:24 PM
Boron	**0.160**		**0.0200**	**mg/L**	1	8/9/2012 02:41 PM
Cadmium	ND		0.00200	mg/L	1	8/8/2012 07:24 PM
Calcium	**79.8**		**0.500**	**mg/L**	1	8/8/2012 07:24 PM
Chromium	ND		0.00500	mg/L	1	8/8/2012 07:24 PM
Cobalt	ND		0.00500	mg/L	1	8/8/2012 07:24 PM
Copper	ND		0.00500	mg/L	1	8/8/2012 07:24 PM
Iron	ND		0.200	mg/L	1	8/8/2012 07:24 PM
Lead	ND		0.00500	mg/L	1	8/8/2012 07:24 PM
Magnesium	**10.8**		**0.200**	**mg/L**	1	8/8/2012 07:24 PM
Manganese	ND		0.00500	mg/L	1	8/8/2012 07:24 PM
Molybdenum	ND		0.00500	mg/L	1	8/8/2012 07:24 PM
Nickel	**0.00731**		**0.00500**	**mg/L**	1	8/8/2012 07:24 PM
Potassium	**2.02**		**0.200**	**mg/L**	1	8/8/2012 07:24 PM
Selenium	ND		0.00500	mg/L	1	8/9/2012 02:41 PM
Silver	ND		0.00500	mg/L	1	8/8/2012 07:24 PM
Sodium	**40.6**		**0.200**	**mg/L**	1	8/8/2012 07:24 PM
Uranium	ND		0.00500	mg/L	1	8/8/2012 07:24 PM
Zinc	**0.0155**		**0.00500**	**mg/L**	1	8/8/2012 07:24 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **8/2/2012**	Analyst: **LG**
1,1´-Biphenyl	ND		0.20	µg/L	1	8/4/2012 03:24 AM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
2,4,5-Trichlorophenol	ND		0.20	µg/L	1	8/4/2012 03:24 AM
2,4,6-Trichlorophenol	ND		0.20	µg/L	1	8/4/2012 03:24 AM
2,4-Dichlorophenol	ND		0.20	µg/L	1	8/4/2012 03:24 AM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/4/2012 03:24 AM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/4/2012 03:24 AM
2,4-Dinitrotoluene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
2,6-Dinitrotoluene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
2-Chloronaphthalene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
2-Chlorophenol	ND		0.20	µg/L	1	8/4/2012 03:24 AM
2-Methylnaphthalene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
2-Methylphenol	ND		0.20	µg/L	1	8/4/2012 03:24 AM
2-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 03:24 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *21-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071434
Sample ID: DUPLICATE SAMPLE
Lab ID: 12071434-05
Collection Date: 7/30/2012
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	ND		0.20	µg/L	1	8/4/2012 03:24 AM
3&4-Methylphenol	ND		0.20	µg/L	1	8/4/2012 03:24 AM
3,3´-Dichlorobenzidine	ND		0.20	µg/L	1	8/4/2012 03:24 AM
3-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 03:24 AM
4,6-Dinitro-2-methylphenol	ND		0.20	µg/L	1	8/4/2012 03:24 AM
4-Bromophenyl phenyl ether	ND		0.20	µg/L	1	8/4/2012 03:24 AM
4-Chloro-3-methylphenol	ND		0.20	µg/L	1	8/4/2012 03:24 AM
4-Chloroaniline	ND		0.20	µg/L	1	8/4/2012 03:24 AM
4-Chlorophenyl phenyl ether	ND		0.20	µg/L	1	8/4/2012 03:24 AM
4-Nitroaniline	ND		0.20	µg/L	1	8/4/2012 03:24 AM
4-Nitrophenol	ND		1.0	µg/L	1	8/4/2012 03:24 AM
Acenaphthene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Acenaphthylene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Acetophenone	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Anthracene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Atrazine	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Benz(a)anthracene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Benzaldehyde	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Benzo(g,h,i)perylene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Bis(2-chloroethoxy)methane	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Bis(2-chloroethyl)ether	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Bis(2-chloroisopropyl)ether	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Bis(2-ethylhexyl)phthalate	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Butyl benzyl phthalate	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Caprolactam	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Carbazole	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Chrysene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Dibenzofuran	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Diethyl phthalate	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Dimethyl phthalate	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Di-n-octyl phthalate	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Fluoranthene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Fluorene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Hexachlorobenzene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Hexachlorobutadiene	ND		0.20	µg/L	1	8/4/2012 03:24 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071434
Sample ID: DUPLICATE SAMPLE
Lab ID: 12071434-05
Collection Date: 7/30/2012
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Hexachloroethane	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Isophorone	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Naphthalene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Nitrobenzene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
N-Nitrosodi-n-propylamine	ND		0.20	µg/L	1	8/4/2012 03:24 AM
N-Nitrosodiphenylamine	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Pentachlorophenol	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Phenanthrene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Phenol	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Pyrene	ND		0.20	µg/L	1	8/4/2012 03:24 AM
Surr: 2,4,6-Tribromophenol	*61.3*		*34-129*	*%REC*	1	8/4/2012 03:24 AM
Surr: 2-Fluorobiphenyl	*53.4*		*40-125*	*%REC*	1	8/4/2012 03:24 AM
Surr: 2-Fluorophenol	*47.7*		*20-120*	*%REC*	1	8/4/2012 03:24 AM
Surr: 4-Terphenyl-d14	*76.1*		*40-135*	*%REC*	1	8/4/2012 03:24 AM
Surr: Nitrobenzene-d5	*64.5*		*41-120*	*%REC*	1	8/4/2012 03:24 AM
Surr: Phenol-d6	*50.9*		*20-120*	*%REC*	1	8/4/2012 03:24 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
2-Butanone	ND		0.010	mg/L	1	8/2/2012 06:38 PM
2-Hexanone	ND		0.010	mg/L	1	8/2/2012 06:38 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	8/2/2012 06:38 PM
Acetone	ND		0.010	mg/L	1	8/2/2012 06:38 PM
Benzene	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
Bromodichloromethane	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
Bromoform	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
Bromomethane	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
Carbon disulfide	ND		0.010	mg/L	1	8/2/2012 06:38 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	8/2/2012 06:38 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual **Work Order:** 12071434
Sample ID: DUPLICATE SAMPLE **Lab ID:** 12071434-05
Collection Date: 7/30/2012 **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
Chloroethane	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
Chloroform	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
Chloromethane	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
Dibromochloromethane	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
Ethylbenzene	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
Isopropylbenzene	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
m,p-Xylene	ND		0.010	mg/L	1	8/2/2012 06:38 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
Methylene chloride	ND		0.010	mg/L	1	8/2/2012 06:38 PM
Naphthalene	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
n-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
n-Propylbenzene	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
o-Xylene	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
Styrene	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
Tetrachloroethene	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
Toluene	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
Trichloroethene	ND		0.0050	mg/L	1	8/2/2012 06:38 PM
Vinyl chloride	ND		0.0020	mg/L	1	8/2/2012 06:38 PM
Xylenes, Total	ND		0.015	mg/L	1	8/2/2012 06:38 PM
Surr: 1,2-Dichloroethane-d4	*101*		*70-125*	*%REC*	1	8/2/2012 06:38 PM
Surr: 4-Bromofluorobenzene	*97.7*		*72-125*	*%REC*	1	8/2/2012 06:38 PM
Surr: Dibromofluoromethane	*104*		*71-125*	*%REC*	1	8/2/2012 06:38 PM
Surr: Toluene-d8	*99.2*		*75-125*	*%REC*	1	8/2/2012 06:38 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**55.5**		**0.500**	**mg/L**	1	8/2/2012 01:16 AM
Fluoride	**2.34**		**0.100**	**mg/L**	1	8/2/2012 01:16 AM
Sulfate	**58.8**		**0.500**	**mg/L**	1	8/2/2012 01:16 AM
Nitrate/Nitrite (as N)	**2.34**		**2.00**	**mg/L**	10	8/4/2012 12:54 AM
Surr: Selenate (surr)	*100*		*85-115*	*%REC*	10	8/4/2012 12:54 AM
Surr: Selenate (surr)	*92.1*		*85-115*	*%REC*	1	8/2/2012 01:16 AM
ALKALINITY-SM2320B			**SM2320B**			Analyst: **RPM**
Alkalinity, Bicarbonate (As CaCO3)	**231**		**5.00**	**mg/L**	1	8/6/2012 05:05 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 05:05 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *21-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071434
Sample ID: DUPLICATE SAMPLE
Lab ID: 12071434-05
Collection Date: 7/30/2012
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/6/2012 05:05 PM
Alkalinity, Total (As CaCO3)	**231**		**5.00**	**mg/L**	1	8/6/2012 05:05 PM
SPECIFIC CONDUCTIVITY			**M2510 B**			Analyst: **VAN**
Specific Conductivity	**688**		**1.00**	**µmhos/cm**	1	8/1/2012 09:15 AM
PH - SM4500H+ B			**SM4500H+ B**			Analyst: **VAN**
pH	**6.93**	H	**0.100**	**pH Units**	1	8/2/2012 01:00 PM
TOTAL DISSOLVED SOLIDS			**M2540C**			Analyst: **KAH**
Total Dissolved Solids (Residue, Filterable)	**446**		**10.0**	**mg/L**	1	8/6/2012 11:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *21-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071434
Sample ID: TRIP BLANK 071912-80
Lab ID: 12071434-06
Collection Date: 7/30/2012
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
2-Butanone	ND		0.010	mg/L	1	8/2/2012 04:17 PM
2-Hexanone	ND		0.010	mg/L	1	8/2/2012 04:17 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	8/2/2012 04:17 PM
Acetone	ND		0.010	mg/L	1	8/2/2012 04:17 PM
Benzene	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
Bromodichloromethane	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
Bromoform	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
Bromomethane	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
Carbon disulfide	ND		0.010	mg/L	1	8/2/2012 04:17 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
Chlorobenzene	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
Chloroethane	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
Chloroform	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
Chloromethane	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
Dibromochloromethane	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
Ethylbenzene	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
Isopropylbenzene	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
m,p-Xylene	ND		0.010	mg/L	1	8/2/2012 04:17 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
Methylene chloride	ND		0.010	mg/L	1	8/2/2012 04:17 PM
Naphthalene	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
n-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
n-Propylbenzene	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
o-Xylene	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
Styrene	ND		0.0050	mg/L	1	8/2/2012 04:17 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *21-Aug-12*

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
Work Order: 12071434
Sample ID: TRIP BLANK 071912-80
Lab ID: 12071434-06
Collection Date: 7/30/2012
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
Toluene	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
Trichloroethene	ND		0.0050	mg/L	1	8/2/2012 04:17 PM
Vinyl chloride	ND		0.0020	mg/L	1	8/2/2012 04:17 PM
Xylenes, Total	ND		0.015	mg/L	1	8/2/2012 04:17 PM
Surr: 1,2-Dichloroethane-d4	*97.6*		*70-125*	*%REC*	1	8/2/2012 04:17 PM
Surr: 4-Bromofluorobenzene	*88.7*		*72-125*	*%REC*	1	8/2/2012 04:17 PM
Surr: Dibromofluoromethane	*99.8*		*71-125*	*%REC*	1	8/2/2012 04:17 PM
Surr: Toluene-d8	*99.3*		*75-125*	*%REC*	1	8/2/2012 04:17 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **63210** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW2-080612-63210** Units: **mg/L** Analysis Date: **8/7/2012 12:35 PM**

Client ID: Run ID: **MERCURY_120807A** SeqNo: **2892669** Prep Date: **8/6/2012** 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: **GLCSW2-080612-63210** Units: **mg/L** Analysis Date: **8/7/2012 12:37 PM**

Client ID: Run ID: **MERCURY_120807A** SeqNo: **2892670** Prep Date: **8/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00454	0.00020	0.005	0	90.8	85-115	0			

MS Sample ID: **1208140-01DMS** Units: **mg/L** Analysis Date: **8/7/2012 12:48 PM**

Client ID: Run ID: **MERCURY_120807A** SeqNo: **2892673** Prep Date: **8/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00484	0.00020	0.005	-0.000006	96.9	85-115	0			

MSD Sample ID: **1208140-01DMSD** Units: **mg/L** Analysis Date: **8/7/2012 12:50 PM**

Client ID: Run ID: **MERCURY_120807A** SeqNo: **2892674** Prep Date: **8/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00516	0.00020	0.005	-0.000006	103	85-115	0.00484	6.4	20	

DUP Sample ID: **1208140-01DDUP** Units: **mg/L** Analysis Date: **8/7/2012 12:46 PM**

Client ID: Run ID: **MERCURY_120807A** SeqNo: **2892672** Prep Date: **8/6/2012** 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	-0.000006	0	20	

The following samples were analyzed in this batch:

12071434-01D	12071434-02D	12071434-03D
12071434-04D	12071434-05D	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **63247** Instrument ID **ICPMS05** Method: **SW6020** **(Dissolve)**

MBLK Sample ID: **MBLKW6-080712-63247** Units: **mg/L** Analysis Date: **8/9/2012 02:05 PM**

Client ID: Run ID: **ICPMS05_120809A** SeqNo: **2896206** Prep Date: **8/7/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	ND	0.010								
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Boron	ND	0.050								
Cadmium	ND	0.0020								
Calcium	ND	0.50								
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Copper	ND	0.0050								
Iron	ND	0.20								
Lead	ND	0.0050								
Magnesium	ND	0.20								
Manganese	ND	0.0050								
Molybdenum	ND	0.0050								
Nickel	ND	0.0050								
Potassium	ND	0.20								
Selenium	ND	0.0050								
Silver	ND	0.0050								
Sodium	ND	0.20								
Uranium	ND	0.0050								
Zinc	ND	0.0050								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **63247** Instrument ID **ICPMS05** Method: **SW6020** **(Dissolve)**

LCS Sample ID: **MLCSW6-080712-63247** Units: **mg/L** Analysis Date: **8/8/2012 06:32 PM**

Client ID: Run ID: **ICPMS05_120808A** SeqNo: **2894969** Prep Date: **8/7/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.12	0.010	0.1	0	120	80-120	0			
Arsenic	0.05136	0.0050	0.05	0	103	80-120	0			
Barium	0.05075	0.0050	0.05	0	101	80-120	0			
Cadmium	0.04964	0.0020	0.05	0	99.3	80-120	0			
Calcium	5.144	0.50	5	0	103	80-120	0			
Chromium	0.04976	0.0050	0.05	0	99.5	80-120	0			
Cobalt	0.05165	0.0050	0.05	0	103	80-120	0			
Copper	0.05094	0.0050	0.05	0	102	80-120	0			
Iron	5.236	0.20	5	0	105	80-120	0			
Lead	0.05154	0.0050	0.05	0	103	80-120	0			
Magnesium	5.113	0.20	5	0	102	80-120	0			
Manganese	0.0528	0.0050	0.05	0	106	80-120	0			
Molybdenum	0.04972	0.0050	0.05	0	99.4	80-120	0			
Nickel	0.051	0.0050	0.05	0	102	80-120	0			
Potassium	5.224	0.20	5	0	104	80-120	0			
Silver	0.05008	0.0050	0.05	0	100	80-120	0			
Sodium	5.113	0.20	5	0	102	80-120	0			
Uranium	0.09525	0.0050	0.1	0	95.2	80-120	0			
Zinc	0.05858	0.0050	0.05	0	117	80-120	0			

LCS Sample ID: **MLCSW6-080712-63247** Units: **mg/L** Analysis Date: **8/9/2012 02:08 PM**

Client ID: Run ID: **ICPMS05_120809A** SeqNo: **2896207** Prep Date: **8/7/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.4606	0.050	0.5	0	92.1	80-120	0			
Selenium	0.05628	0.0050	0.05	0	113	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **63247** Instrument ID **ICPMS05** Method: **SW6020** **(Dissolve)**

MS Sample ID: **12071407-01CMS** Units: **mg/L** Analysis Date: **8/8/2012 06:45 PM**

Client ID: Run ID: **ICPMS05_120808A** SeqNo: **2894974** Prep Date: **8/7/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1025	0.010	0.1	0.007314	95.2	75-125	0			
Arsenic	0.0462	0.0050	0.05	0	92.4	75-125	0			
Barium	0.1262	0.0050	0.05	0.08047	91.5	75-125	0			
Cadmium	0.04283	0.0020	0.05	0	85.7	75-125	0			
Calcium	30.3	0.50	5	25.84	89.2	75-125	0			O
Chromium	0.04698	0.0050	0.05	0	94	75-125	0			
Cobalt	0.04521	0.0050	0.05	0	90.4	75-125	0			
Copper	0.04581	0.0050	0.05	0.001684	88.3	75-125	0			
Iron	4.579	0.20	5	0	91.6	75-125	0			
Lead	0.04577	0.0050	0.05	0	91.5	75-125	0			
Magnesium	18.4	0.20	5	14.14	85.2	75-125	0			
Manganese	0.06479	0.0050	0.05	0.02031	89	75-125	0			
Molybdenum	0.04538	0.0050	0.05	0	90.8	75-125	0			
Nickel	0.04976	0.0050	0.05	0.004151	91.2	75-125	0			
Potassium	6.924	0.20	5	2.473	89	75-125	0			
Silver	0.04515	0.0050	0.05	0	90.3	75-125	0			
Sodium	42.75	0.20	5	37.4	107	75-125	0			O
Uranium	0.09973	0.0050	0.1	0	99.7	75-125	0			
Zinc	0.05907	0.0050	0.05	0.01715	83.8	75-125	0			

MS Sample ID: **12071407-01CMS** Units: **mg/L** Analysis Date: **8/9/2012 02:20 PM**

Client ID: Run ID: **ICPMS05_120809A** SeqNo: **2896212** Prep Date: **8/7/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.5213	0.050	0.5	0.04736	94.8	75-125	0			
Selenium	0.0451	0.0050	0.05	0.000567	89.1	75-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **63247** Instrument ID **ICPMS05** Method: **SW6020** **(Dissolve)**

MSD Sample ID: **12071407-01CMSD** Units: **mg/L** Analysis Date: **8/8/2012 06:48 PM**

Client ID: Run ID: **ICPMS05_120808A** SeqNo: **2894975** Prep Date: **8/7/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1071	0.010	0.1	0.007314	99.8	75-125	0.1025	4.37	25	
Arsenic	0.04899	0.0050	0.05	0	98	75-125	0.0462	5.87	25	
Barium	0.1324	0.0050	0.05	0.08047	104	75-125	0.1262	4.75	25	
Cadmium	0.05105	0.0020	0.05	0	102	75-125	0.04283	17.5	25	
Calcium	30.76	0.50	5	25.84	98.4	75-125	30.3	1.52	25	O
Chromium	0.0507	0.0050	0.05	0	101	75-125	0.04698	7.63	25	
Cobalt	0.05128	0.0050	0.05	0	103	75-125	0.04521	12.6	25	
Copper	0.05022	0.0050	0.05	0.001684	97.1	75-125	0.04581	9.17	25	
Iron	5.237	0.20	5	0	105	75-125	4.579	13.4	25	
Lead	0.05224	0.0050	0.05	0	104	75-125	0.04577	13.2	25	
Magnesium	19.18	0.20	5	14.14	101	75-125	18.4	4.16	25	
Manganese	0.06696	0.0050	0.05	0.02031	93.3	75-125	0.06479	3.29	25	
Molybdenum	0.04997	0.0050	0.05	0	99.9	75-125	0.04538	9.63	25	
Nickel	0.05585	0.0050	0.05	0.004151	103	75-125	0.04976	11.5	25	
Potassium	7.542	0.20	5	2.473	101	75-125	6.924	8.54	25	
Silver	0.05154	0.0050	0.05	0	103	75-125	0.04515	13.2	25	
Sodium	43.1	0.20	5	37.4	114	75-125	42.75	0.814	25	O
Uranium	0.1007	0.0050	0.1	0	101	75-125	0.09973	0.934	25	
Zinc	0.06366	0.0050	0.05	0.01715	93	75-125	0.05907	7.49	25	

MSD Sample ID: **12071407-01CMSD** Units: **mg/L** Analysis Date: **8/9/2012 02:23 PM**

Client ID: Run ID: **ICPMS05_120809A** SeqNo: **2896213** Prep Date: **8/7/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.5437	0.050	0.5	0.04736	99.3	75-125	0.5213	4.21	25	
Selenium	0.05735	0.0050	0.05	0.000567	114	75-125	0.0451	23.9	25	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **63247** Instrument ID **ICPMS05** Method: **SW6020** **(Dissolve)**

DUP Sample ID: **12071407-01CDUP** Units: **mg/L** Analysis Date: **8/8/2012 06:37 PM**

Client ID: Run ID: **ICPMS05_120808A** SeqNo: **2894971** Prep Date: **8/7/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.005416	0.010	0	0	0	0-0	0.007314	0	25	J
Arsenic	ND	0.0050	0	0	0	0-0	0.00037	0	25	
Barium	0.07491	0.0050	0	0	0	0-0	0.08047	7.16	25	
Cadmium	ND	0.0020	0	0	0	0-0	0.000131	0	25	
Calcium	23.41	0.50	0	0	0	0-0	25.84	9.86	25	
Chromium	ND	0.0050	0	0	0	0-0	0.000971	0	25	
Cobalt	ND	0.0050	0	0	0	0-0	0.000186	0	25	
Copper	ND	0.0050	0	0	0	0-0	0.001684	0	25	
Iron	ND	0.20	0	0	0	0-0	0.0175	0	25	
Lead	ND	0.0050	0	0	0	0-0	0.00037	0	25	
Magnesium	13.36	0.20	0	0	0	0-0	14.14	5.65	25	
Manganese	0.01936	0.0050	0	0	0	0-0	0.02031	4.77	25	
Molybdenum	ND	0.0050	0	0	0	0-0	0.00026	0	25	
Nickel	0.00447	0.0050	0	0	0	0-0	0.004151	0	25	J
Potassium	2.381	0.20	0	0	0	0-0	2.473	3.79	25	
Silver	ND	0.0050	0	0	0	0-0	0.000115	0	25	
Sodium	34.75	0.20	0	0	0	0-0	37.4	7.34	25	
Uranium	ND	0.0050	0	0	0		0.00028	0	25	
Zinc	0.01411	0.0050	0	0	0	0-0	0.01715	19.4	25	

DUP Sample ID: **12071407-01CDUP** Units: **mg/L** Analysis Date: **8/9/2012 02:18 PM**

Client ID: Run ID: **ICPMS05_120809A** SeqNo: **2896211** Prep Date: **8/7/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.04608	0.050	0	0	0	0-0	0.04736	0	25	J
Selenium	ND	0.0050	0	0	0	0-0	0.000567	0	25	

The following samples were analyzed in this batch:

12071434-01C	12071434-02C	12071434-03C
12071434-04C	12071434-05C	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **63110** Instrument ID **SV-4** Method: **SW8270**

MBLK Sample ID: **SBLKW1-120802-63110** Units: **µg/L** Analysis Date: **8/3/2012 07:24 PM**

Client ID: Run ID: **SV-4_120803A** SeqNo: **2890989** Prep Date: **8/2/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	ND	0.20								
1-Methylnaphthalene	ND	0.20								
2,4,5-Trichlorophenol	ND	0.20								
2,4,6-Trichlorophenol	ND	0.20								
2,4-Dichlorophenol	ND	0.20								
2,4-Dimethylphenol	ND	0.20								
2,4-Dinitrophenol	ND	1.0								
2,4-Dinitrotoluene	ND	0.20								
2,6-Dinitrotoluene	ND	0.20								
2-Chloronaphthalene	ND	0.20								
2-Chlorophenol	ND	0.20								
2-Methylnaphthalene	ND	0.20								
2-Methylphenol	ND	0.20								
2-Nitroaniline	ND	0.20								
2-Nitrophenol	ND	0.20								
3&4-Methylphenol	ND	0.20								
3,3´-Dichlorobenzidine	ND	0.20								
3-Nitroaniline	ND	0.20								
4,6-Dinitro-2-methylphenol	ND	0.20								
4-Bromophenyl phenyl ether	ND	0.20								
4-Chloro-3-methylphenol	ND	0.20								
4-Chloroaniline	ND	0.20								
4-Chlorophenyl phenyl ether	ND	0.20								
4-Nitroaniline	ND	0.20								
4-Nitrophenol	ND	1.0								
Acenaphthene	ND	0.20								
Acenaphthylene	ND	0.20								
Acetophenone	ND	0.20								
Anthracene	ND	0.20								
Atrazine	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzaldehyde	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								
Bis(2-chloroethoxy)methane	ND	0.20								
Bis(2-chloroethyl)ether	ND	0.20								
Bis(2-chloroisopropyl)ether	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.20								
Butyl benzyl phthalate	ND	0.20								
Caprolactam	ND	0.20								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **63110** Instrument ID **SV-4** Method: **SW8270**

Carbazole	ND	0.20					
Chrysene	ND	0.20					
Dibenz(a,h)anthracene	ND	0.20					
Dibenzofuran	ND	0.20					
Diethyl phthalate	ND	0.20					
Dimethyl phthalate	ND	0.20					
Di-n-butyl phthalate	ND	0.20					
Di-n-octyl phthalate	ND	0.20					
Fluoranthene	ND	0.20					
Fluorene	ND	0.20					
Hexachlorobenzene	ND	0.20					
Hexachlorobutadiene	ND	0.20					
Hexachlorocyclopentadiene	ND	0.20					
Hexachloroethane	ND	0.20					
Indeno(1,2,3-cd)pyrene	ND	0.20					
Isophorone	ND	0.20					
Naphthalene	ND	0.20					
Nitrobenzene	ND	0.20					
N-Nitrosodi-n-propylamine	ND	0.20					
N-Nitrosodiphenylamine	ND	0.20					
Pentachlorophenol	ND	0.20					
Phenanthrene	ND	0.20					
Phenol	ND	0.20					
Pyrene	ND	0.20					
Surr: 2,4,6-Tribromophenol	*4.703*	0.20	*5*	0	*94.1*	*34-129*	0
Surr: 2-Fluorobiphenyl	*4.794*	0.20	*5*	0	*95.9*	*40-125*	0
Surr: 2-Fluorophenol	*4.311*	0.20	*5*	0	*86.2*	*20-120*	0
Surr: 4-Terphenyl-d14	*5.076*	0.20	*5*	0	*102*	*40-135*	0
Surr: Nitrobenzene-d5	*4.946*	0.20	*5*	0	*98.9*	*41-120*	0
Surr: Phenol-d6	*4.635*	0.20	*5*	0	*92.7*	*20-120*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **63110** Instrument ID **SV-4** Method: **SW8270**

LCS Sample ID: **SLCSW1-120802-63110** Units: **µg/L** Analysis Date: **8/3/2012 07:44 PM**

Client ID: Run ID: **SV-4_120803A** SeqNo: **2890990** Prep Date: **8/2/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	4.633	0.20	5	0	92.7	45-125	0			
1-Methylnaphthalene	4.281	0.20	5	0	85.6	45-120	0			
2,4,5-Trichlorophenol	4.509	0.20	5	0	90.2	46-120	0			
2,4,6-Trichlorophenol	4.996	0.20	5	0	99.9	42-120	0			
2,4-Dichlorophenol	4.705	0.20	5	0	94.1	49-120	0			
2,4-Dimethylphenol	4.44	0.20	5	0	88.8	35-120	0			
2,4-Dinitrophenol	4.109	1.0	5	0	82.2	15-120	0			
2,4-Dinitrotoluene	4.955	0.20	5	0	99.1	50-122	0			
2,6-Dinitrotoluene	4.571	0.20	5	0	91.4	50-120	0			
2-Chloronaphthalene	4.306	0.20	5	0	86.1	50-120	0			
2-Chlorophenol	4.369	0.20	5	0	87.4	40-120	0			
2-Methylnaphthalene	4.245	0.20	5	0	84.9	50-120	0			
2-Methylphenol	4.445	0.20	5	0	88.9	45-120	0			
2-Nitroaniline	6.344	0.20	5	0	127	28-139	0			
2-Nitrophenol	4.501	0.20	5	0	90	40-120	0			
3&4-Methylphenol	4.788	0.20	5	0	95.8	35-120	0			
3,3´-Dichlorobenzidine	4.78	0.20	5	0	95.6	15-120	0			
3-Nitroaniline	4.654	0.20	5	0	93.1	30-120	0			
4,6-Dinitro-2-methylphenol	4.461	0.20	5	0	89.2	25-121	0			
4-Bromophenyl phenyl ether	4.77	0.20	5	0	95.4	45-120	0			
4-Chloro-3-methylphenol	4.489	0.20	5	0	89.8	47-120	0			
4-Chloroaniline	4.69	0.20	5	0	93.8	20-120	0			
4-Chlorophenyl phenyl ether	4.688	0.20	5	0	93.8	50-120	0			
4-Nitroaniline	5.272	0.20	5	0	105	30-133	0			
4-Nitrophenol	6.276	1.0	5	0	126	30-130	0			
Acenaphthene	4.425	0.20	5	0	88.5	45-120	0			
Acenaphthylene	4.692	0.20	5	0	93.8	47-120	0			
Acetophenone	4.433	0.20	5	0	88.7	40-120	0			
Anthracene	4.777	0.20	5	0	95.5	45-120	0			
Atrazine	4.689	0.20	5	0	93.8	40-130	0			
Benz(a)anthracene	4.698	0.20	5	0	94	40-120	0			
Benzaldehyde	1.517	0.20	5	0	30.3	15-120	0			
Benzo(a)pyrene	4.427	0.20	5	0	88.5	45-120	0			
Benzo(b)fluoranthene	4.957	0.20	5	0	99.1	50-120	0			
Benzo(g,h,i)perylene	4.432	0.20	5	0	88.6	42-127	0			
Benzo(k)fluoranthene	4.471	0.20	5	0	89.4	45-127	0			
Bis(2-chloroethoxy)methane	4.655	0.20	5	0	93.1	45-120	0			
Bis(2-chloroethyl)ether	4.604	0.20	5	0	92.1	37-121	0			
Bis(2-chloroisopropyl)ether	5.162	0.20	5	0	103	40-120	0			
Bis(2-ethylhexyl)phthalate	4.629	0.20	5	0	92.6	40-139	0			
Butyl benzyl phthalate	4.958	0.20	5	0	99.2	47-123	0			
Caprolactam	4.861	0.20	5	0	97.2	35-134	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **63110** Instrument ID **SV-4** Method: **SW8270**

Carbazole	4.747	0.20	5	0	94.9	42-128	0
Chrysene	4.529	0.20	5	0	90.6	43-120	0
Dibenz(a,h)anthracene	4.281	0.20	5	0	85.6	45-125	0
Dibenzofuran	4.967	0.20	5	0	99.3	50-120	0
Diethyl phthalate	4.883	0.20	5	0	97.7	41-120	0
Dimethyl phthalate	4.668	0.20	5	0	93.4	40-122	0
Di-n-butyl phthalate	5.017	0.20	5	0	100	45-123	0
Di-n-octyl phthalate	4.648	0.20	5	0	93	45-129	0
Fluoranthene	4.904	0.20	5	0	98.1	45-125	0
Fluorene	4.817	0.20	5	0	96.3	49-120	0
Hexachlorobenzene	4.909	0.20	5	0	98.2	48-120	0
Hexachlorobutadiene	4.435	0.20	5	0	88.7	40-120	0
Hexachlorocyclopentadiene	4.773	0.20	5	0	95.5	34-136	0
Hexachloroethane	4.488	0.20	5	0	89.8	40-120	0
Indeno(1,2,3-cd)pyrene	4.515	0.20	5	0	90.3	41-128	0
Isophorone	4.729	0.20	5	0	94.6	40-121	0
Naphthalene	4.785	0.20	5	0	95.7	45-120	0
Nitrobenzene	4.815	0.20	5	0	96.3	44-120	0
N-Nitrosodi-n-propylamine	4.835	0.20	5	0	96.7	40-120	0
N-Nitrosodiphenylamine	4.615	0.20	5	0	92.3	40-125	0
Pentachlorophenol	4.895	0.20	5	0	97.9	19-121	0
Phenanthrene	4.671	0.20	5	0	93.4	45-121	0
Phenol	4.483	0.20	5	0	89.7	20-124	0
Pyrene	4.929	0.20	5	0	98.6	40-130	0
Surr: 2,4,6-Tribromophenol	*4.964*	0.20	*5*	0	*99.3*	*34-129*	0
Surr: 2-Fluorobiphenyl	*4.542*	0.20	*5*	0	*90.8*	*40-125*	0
Surr: 2-Fluorophenol	*4.406*	0.20	*5*	0	*88.1*	*20-120*	0
Surr: 4-Terphenyl-d14	*4.966*	0.20	*5*	0	*99.3*	*40-135*	0
Surr: Nitrobenzene-d5	*4.677*	0.20	*5*	0	*93.5*	*41-120*	0
Surr: Phenol-d6	*4.596*	0.20	*5*	0	*91.9*	*20-120*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **63110** Instrument ID **SV-4** Method: **SW8270**

LCSD Sample ID: **SLCSDW1-120802-63110** Units: **µg/L** Analysis Date: **8/3/2012 08:04 PM**

Client ID: Run ID: **SV-4_120803A** SeqNo: **2890991** Prep Date: **8/2/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	4.567	0.20	5	0	91.3	45-125	4.633	1.45	20	
1-Methylnaphthalene	4.674	0.20	5	0	93.5	45-120	4.281	8.77	20	
2,4,5-Trichlorophenol	4.333	0.20	5	0	86.7	46-120	4.509	3.97	20	
2,4,6-Trichlorophenol	4.624	0.20	5	0	92.5	42-120	4.996	7.72	20	
2,4-Dichlorophenol	4.62	0.20	5	0	92.4	49-120	4.705	1.83	20	
2,4-Dimethylphenol	4.754	0.20	5	0	95.1	35-120	4.44	6.82	20	
2,4-Dinitrophenol	4.456	1.0	5	0	89.1	15-120	4.109	8.11	20	
2,4-Dinitrotoluene	4.763	0.20	5	0	95.3	50-122	4.955	3.95	20	
2,6-Dinitrotoluene	4.875	0.20	5	0	97.5	50-120	4.571	6.43	20	
2-Chloronaphthalene	4.236	0.20	5	0	84.7	50-120	4.306	1.64	20	
2-Chlorophenol	4.71	0.20	5	0	94.2	40-120	4.369	7.51	20	
2-Methylnaphthalene	4.643	0.20	5	0	92.9	50-120	4.245	8.95	20	
2-Methylphenol	4.462	0.20	5	0	89.2	45-120	4.445	0.391	20	
2-Nitroaniline	6.259	0.20	5	0	125	28-139	6.344	1.35	20	
2-Nitrophenol	4.798	0.20	5	0	96	40-120	4.501	6.39	20	
3&4-Methylphenol	4.996	0.20	5	0	99.9	35-120	4.788	4.24	20	
3,3´-Dichlorobenzidine	5.038	0.20	5	0	101	15-120	4.78	5.26	20	
3-Nitroaniline	4.937	0.20	5	0	98.7	30-120	4.654	5.91	20	
4,6-Dinitro-2-methylphenol	4.864	0.20	5	0	97.3	25-121	4.461	8.65	20	
4-Bromophenyl phenyl ether	5.007	0.20	5	0	100	45-120	4.77	4.85	20	
4-Chloro-3-methylphenol	4.926	0.20	5	0	98.5	47-120	4.489	9.29	20	
4-Chloroaniline	4.43	0.20	5	0	88.6	20-120	4.69	5.69	20	
4-Chlorophenyl phenyl ether	4.672	0.20	5	0	93.4	50-120	4.688	0.361	20	
4-Nitroaniline	4.866	0.20	5	0	97.3	30-133	5.272	8	20	
4-Nitrophenol	5.918	1.0	5	0	118	30-130	6.276	5.87	20	
Acenaphthene	4.388	0.20	5	0	87.8	45-120	4.425	0.842	20	
Acenaphthylene	4.882	0.20	5	0	97.6	47-120	4.692	3.96	20	
Acetophenone	4.494	0.20	5	0	89.9	40-120	4.433	1.36	20	
Anthracene	4.915	0.20	5	0	98.3	45-120	4.777	2.85	20	
Atrazine	4.715	0.20	5	0	94.3	40-130	4.689	0.55	20	
Benz(a)anthracene	4.704	0.20	5	0	94.1	40-120	4.698	0.126	20	
Benzaldehyde	1.553	0.20	5	0	31.1	15-120	1.517	2.34	30	
Benzo(a)pyrene	4.693	0.20	5	0	93.9	45-120	4.427	5.82	20	
Benzo(b)fluoranthene	5.181	0.20	5	0	104	50-120	4.957	4.43	20	
Benzo(g,h,i)perylene	4.547	0.20	5	0	90.9	42-127	4.432	2.56	20	
Benzo(k)fluoranthene	4.682	0.20	5	0	93.6	45-127	4.471	4.61	20	
Bis(2-chloroethoxy)methane	4.664	0.20	5	0	93.3	45-120	4.655	0.184	20	
Bis(2-chloroethyl)ether	5.02	0.20	5	0	100	37-121	4.604	8.64	20	
Bis(2-chloroisopropyl)ether	5.235	0.20	5	0	105	40-120	5.162	1.4	20	
Bis(2-ethylhexyl)phthalate	5.377	0.20	5	0	108	40-139	4.629	14.9	20	
Butyl benzyl phthalate	5.071	0.20	5	0	101	47-123	4.958	2.27	20	
Caprolactam	4.821	0.20	5	0	96.4	35-134	4.861	0.829	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **63110** Instrument ID **SV-4** Method: **SW8270**

Carbazole	5.081	0.20	5	0	102	42-128	4.747	6.8	20
Chrysene	4.511	0.20	5	0	90.2	43-120	4.529	0.384	20
Dibenz(a,h)anthracene	4.14	0.20	5	0	82.8	45-125	4.281	3.35	20
Dibenzofuran	4.67	0.20	5	0	93.4	50-120	4.967	6.15	20
Diethyl phthalate	4.664	0.20	5	0	93.3	41-120	4.883	4.6	20
Dimethyl phthalate	4.771	0.20	5	0	95.4	40-122	4.668	2.19	20
Di-n-butyl phthalate	5.401	0.20	5	0	108	45-123	5.017	7.38	20
Di-n-octyl phthalate	4.587	0.20	5	0	91.7	45-129	4.648	1.33	20
Fluoranthene	4.866	0.20	5	0	97.3	45-125	4.904	0.784	20
Fluorene	4.645	0.20	5	0	92.9	49-120	4.817	3.65	20
Hexachlorobenzene	4.843	0.20	5	0	96.9	48-120	4.909	1.35	20
Hexachlorobutadiene	4.617	0.20	5	0	92.3	40-120	4.435	4.02	20
Hexachlorocyclopentadiene	4.707	0.20	5	0	94.1	34-136	4.773	1.39	20
Hexachloroethane	5.163	0.20	5	0	103	40-120	4.488	14	20
Indeno(1,2,3-cd)pyrene	4.777	0.20	5	0	95.5	41-128	4.515	5.64	20
Isophorone	4.884	0.20	5	0	97.7	40-121	4.729	3.22	20
Naphthalene	4.774	0.20	5	0	95.5	45-120	4.785	0.233	20
Nitrobenzene	5.288	0.20	5	0	106	44-120	4.815	9.36	20
N-Nitrosodi-n-propylamine	5.029	0.20	5	0	101	40-120	4.835	3.93	20
N-Nitrosodiphenylamine	5.273	0.20	5	0	105	40-125	4.615	13.3	20
Pentachlorophenol	4.624	0.20	5	0	92.5	19-121	4.895	5.69	20
Phenanthrene	4.838	0.20	5	0	96.8	45-121	4.671	3.52	20
Phenol	4.959	0.20	5	0	99.2	20-124	4.483	10.1	20
Pyrene	4.676	0.20	5	0	93.5	40-130	4.929	5.27	20
Surr: 2,4,6-Tribromophenol	*5.035*	0.20	*5*	0	*101*	*34-129*	4.964	*1.43*	*0*
Surr: 2-Fluorobiphenyl	*4.412*	0.20	*5*	0	*88.2*	*40-125*	4.542	*2.91*	*0*
Surr: 2-Fluorophenol	*4.733*	0.20	*5*	0	*94.7*	*20-120*	4.406	*7.16*	*0*
Surr: 4-Terphenyl-d14	*5.247*	0.20	*5*	0	*105*	*40-135*	4.966	*5.49*	*0*
Surr: Nitrobenzene-d5	*5.056*	0.20	*5*	0	*101*	*41-120*	4.677	*7.79*	*0*
Surr: Phenol-d6	*5.146*	0.20	*5*	0	*103*	*20-120*	4.596	*11.3*	*0*

The following samples were analyzed in this batch:

12071434-01F	12071434-02F	12071434-03F
12071434-04F	12071434-05F	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132370** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-080212-R132370** Units: **µg/L** Analysis Date: **8/2/2012 11:43 AM**

Client ID: Run ID: **VOA1_120802A** SeqNo: **2886072** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
2-Butanone	ND	10								
2-Hexanone	ND	10								
4-Isopropyltoluene	ND	5.0								
4-Methyl-2-pentanone	ND	10								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	10								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								
Ethylbenzene	ND	5.0								
Isopropylbenzene	ND	5.0								
m,p-Xylene	ND	10								
Methyl tert-butyl ether	ND	5.0								
Methylene chloride	ND	10								
Naphthalene	ND	5.0								
n-Butylbenzene	ND	5.0								
n-Propylbenzene	ND	5.0								
o-Xylene	ND	5.0								
sec-Butylbenzene	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
trans-1,2-Dichloroethene	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R132370** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Vinyl chloride	ND	2.0					
Xylenes, Total	ND	15					
Surr: 1,2-Dichloroethane-d4	*47.84*	5.0	*50*	0	*95.7*	*70-125*	0
Surr: 4-Bromofluorobenzene	*47.03*	5.0	*50*	0	*94.1*	*72-125*	0
Surr: Dibromofluoromethane	*51.06*	5.0	*50*	0	*102*	*71-125*	0
Surr: Toluene-d8	*47.46*	5.0	*50*	0	*94.9*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132370** Instrument ID **VOA1** Method: **SW8260**

LCS Sample ID: **VLCSW-080212-R132370** Units: **µg/L** Analysis Date: **8/2/2012 10:49 AM**

Client ID: Run ID: **VOA1_120802A** SeqNo: **2886071** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	52.37	5.0	50	0	105	80-120	0			
1,1,2,2-Tetrachloroethane	45.34	5.0	50	0	90.7	72-120	0			
1,1,2-Trichloroethane	46.2	5.0	50	0	92.4	80-120	0			
1,1-Dichloroethane	49.38	5.0	50	0	98.8	76-120	0			
1,1-Dichloroethene	51.98	5.0	50	0	104	73-124	0			
1,2,4-Trimethylbenzene	47.1	5.0	50	0	94.2	68-123	0			
1,2-Dibromoethane	46.57	5.0	50	0	93.1	80-120	0			
1,2-Dichloroethane	47.93	5.0	50	0	95.9	78-120	0			
1,2-Dichloropropane	48.09	5.0	50	0	96.2	80-120	0			
1,3,5-Trimethylbenzene	51.22	5.0	50	0	102	80-120	0			
2-Butanone	89.27	10	100	0	89.3	58-132	0			
2-Hexanone	88.36	10	100	0	88.4	61-130	0			
4-Isopropyltoluene	49.18	5.0	50	0	98.4	79-120	0			
4-Methyl-2-pentanone	99	10	100	0	99	65-127	0			
Acetone	91.64	10	100	0	91.6	59-137	0			
Benzene	49.75	5.0	50	0	99.5	73-121	0			
Bromodichloromethane	47.57	5.0	50	0	95.1	80-120	0			
Bromoform	48.15	5.0	50	0	96.3	79-120	0			
Bromomethane	50.4	5.0	50	0	101	66-137	0			
Carbon disulfide	99.56	10	100	0	99.6	68-141	0			
Carbon tetrachloride	46.22	5.0	50	0	92.4	75-124	0			
Chlorobenzene	45.37	5.0	50	0	90.7	80-120	0			
Chloroethane	54.71	5.0	50	0	109	76-121	0			
Chloroform	49.43	5.0	50	0	98.9	80-120	0			
Chloromethane	47.51	5.0	50	0	95	67-123	0			
cis-1,2-Dichloroethene	48.96	5.0	50	0	97.9	78-120	0			
cis-1,3-Dichloropropene	49.83	5.0	50	0	99.7	80-120	0			
Dibromochloromethane	49.84	5.0	50	0	99.7	80-120	0			
Ethylbenzene	49.23	5.0	50	0	98.5	80-120	0			
Isopropylbenzene	48.92	5.0	50	0	97.8	80-120	0			
m,p-Xylene	98.16	10	100	0	98.2	78-121	0			
Methyl tert-butyl ether	50.06	5.0	50	0	100	73-121	0			
Methylene chloride	46.72	10	50	0	93.4	65-133	0			
Naphthalene	45.2	5.0	50	0	90.4	65-135	0			
n-Butylbenzene	48.82	5.0	50	0	97.6	77-120	0			
n-Propylbenzene	48.27	5.0	50	0	96.5	78-120	0			
o-Xylene	50.7	5.0	50	0	101	80-120	0			
sec-Butylbenzene	47.97	5.0	50	0	95.9	78-120	0			
Styrene	51.26	5.0	50	0	103	80-120	0			
Tetrachloroethene	50.83	5.0	50	0	102	79-120	0			
Toluene	49.2	5.0	50	0	98.4	80-120	0			
trans-1,2-Dichloroethene	50.46	5.0	50	0	101	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **R132370** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	50.99	5.0	50	0	102	80-120	0
Trichloroethene	49.4	5.0	50	0	98.8	80-120	0
Vinyl chloride	50.49	2.0	50	0	101	70-127	0
Xylenes, Total	148.9	15	150	0	99.2	80-120	0
Surr: 1,2-Dichloroethane-d4	*49.23*	5.0	*50*	0	*98.5*	*70-125*	0
Surr: 4-Bromofluorobenzene	*51.78*	5.0	*50*	0	*104*	*72-125*	0
Surr: Dibromofluoromethane	*51.75*	5.0	*50*	0	*104*	*71-125*	0
Surr: Toluene-d8	*51.28*	5.0	*50*	0	*103*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132370** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **12071426-01AMS** Units: **µg/L** Analysis Date: **8/2/2012 01:58 PM**

Client ID: Run ID: **VOA1_120802A** SeqNo: **2886074** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	44.14	5.0	50	0	88.3	80-120	0			
1,1,2,2-Tetrachloroethane	48.81	5.0	50	0	97.6	72-120	0			
1,1,2-Trichloroethane	48.11	5.0	50	0	96.2	80-120	0			
1,1-Dichloroethane	46.68	5.0	50	0	93.4	76-120	0			
1,1-Dichloroethene	41.77	5.0	50	0	83.5	73-124	0			
1,2,4-Trimethylbenzene	44.95	5.0	50	0	89.9	68-123	0			
1,2-Dibromoethane	48.75	5.0	50	0	97.5	80-120	0			
1,2-Dichloroethane	50.31	5.0	50	0	101	78-120	0			
1,2-Dichloropropane	47.46	5.0	50	0	94.9	80-120	0			
1,3,5-Trimethylbenzene	43.66	5.0	50	0	87.3	80-120	0			
2-Butanone	102.1	10	100	0	102	58-132	0			
2-Hexanone	96.92	10	100	0	96.9	61-130	0			
4-Isopropyltoluene	48.26	5.0	50	0	96.5	79-120	0			
4-Methyl-2-pentanone	107.6	10	100	0	108	65-127	0			
Acetone	107.1	10	100	4.317	103	59-137	0			
Benzene	46.94	5.0	50	0	93.9	73-121	0			
Bromodichloromethane	46.79	5.0	50	0	93.6	80-120	0			
Bromoform	50.51	5.0	50	0	101	79-120	0			
Bromomethane	41.3	5.0	50	0	82.6	66-137	0			
Carbon disulfide	89.23	10	100	0	89.2	68-141	0			
Carbon tetrachloride	38.83	5.0	50	0	77.7	75-124	0			
Chlorobenzene	45.36	5.0	50	0	90.7	80-120	0			
Chloroethane	51.07	5.0	50	0	102	76-121	0			
Chloroform	47.74	5.0	50	0	95.5	80-120	0			
Chloromethane	46.17	5.0	50	0	92.3	67-123	0			
cis-1,2-Dichloroethene	47.4	5.0	50	0	94.8	78-120	0			
cis-1,3-Dichloropropene	45.37	5.0	50	0	90.7	80-120	0			
Dibromochloromethane	49.71	5.0	50	0	99.4	80-120	0			
Ethylbenzene	45.06	5.0	50	0	90.1	80-120	0			
Isopropylbenzene	44.13	5.0	50	0	88.3	80-120	0			
m,p-Xylene	91.22	10	100	0	91.2	78-121	0			
Methyl tert-butyl ether	52.29	5.0	50	0	105	73-121	0			
Methylene chloride	47.97	10	50	0	95.9	65-133	0			
Naphthalene	45.91	5.0	50	0	91.8	65-135	0			
n-Butylbenzene	51.56	5.0	50	0	103	77-120	0			
n-Propylbenzene	42.57	5.0	50	0	85.1	78-120	0			
o-Xylene	45.81	5.0	50	0	91.6	80-120	0			
sec-Butylbenzene	45.62	5.0	50	0	91.2	78-120	0			
Styrene	45.87	5.0	50	0	91.7	80-120	0			
Tetrachloroethene	41.53	5.0	50	0	83.1	79-120	0			
Toluene	43.73	5.0	50	0	87.5	80-120	0			
trans-1,2-Dichloroethene	43.8	5.0	50	0	87.6	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R132370** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	50.93	5.0	50	0	102	80-120	0
Trichloroethene	40.43	5.0	50	0	80.9	80-120	0
Vinyl chloride	44.74	2.0	50	0	89.5	70-127	0
Xylenes, Total	137	15	150	0	91.4	80-120	0
Surr: 1,2-Dichloroethane-d4	*52.73*	5.0	*50*	0	*105*	*70-125*	0
Surr: 4-Bromofluorobenzene	*49.48*	5.0	*50*	0	*99*	*72-125*	0
Surr: Dibromofluoromethane	*52.86*	5.0	*50*	0	*106*	*71-125*	0
Surr: Toluene-d8	*49.1*	5.0	*50*	0	*98.2*	*75-125*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132370** Instrument ID **VOA1** Method: **SW8260**

MSD Sample ID: **12071426-01AMSD** Units: **µg/L** Analysis Date: **8/2/2012 02:26 PM**

Client ID: Run ID: **VOA1_120802A** SeqNo: **2886075** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	15.59	5.0	50	0	31.2	80-120	44.14	95.6	20	SR
1,1,2,2-Tetrachloroethane	48.93	5.0	50	0	97.9	72-120	48.81	0.257	20	
1,1,2-Trichloroethane	46.98	5.0	50	0	94	80-120	48.11	2.36	20	
1,1-Dichloroethane	46.04	5.0	50	0	92.1	76-120	46.68	1.37	20	
1,1-Dichloroethene	40.54	5.0	50	0	81.1	73-124	41.77	3	20	
1,2,4-Trimethylbenzene	40.74	5.0	50	0	81.5	68-123	44.95	9.83	20	
1,2-Dibromoethane	48.19	5.0	50	0	96.4	80-120	48.75	1.15	20	
1,2-Dichloroethane	52.29	5.0	50	0	105	78-120	50.31	3.86	20	
1,2-Dichloropropane	53.08	5.0	50	0	106	80-120	47.46	11.2	20	
1,3,5-Trimethylbenzene	41.56	5.0	50	0	83.1	80-120	43.66	4.93	20	
2-Butanone	99.73	10	100	0	99.7	58-132	102.1	2.38	20	
2-Hexanone	103.8	10	100	0	104	61-130	96.92	6.82	20	
4-Isopropyltoluene	37.4	5.0	50	0	74.8	79-120	48.26	25.3	20	SR
4-Methyl-2-pentanone	108.6	10	100	0	109	65-127	107.6	0.951	20	
Acetone	99.77	10	100	4.317	95.5	59-137	107.1	7.12	20	
Benzene	48.47	5.0	50	0	96.9	73-121	46.94	3.2	20	
Bromodichloromethane	48.16	5.0	50	0	96.3	80-120	46.79	2.9	20	
Bromoform	51.02	5.0	50	0	102	79-120	50.51	0.998	20	
Bromomethane	44.94	5.0	50	0	89.9	66-137	41.3	8.43	20	
Carbon disulfide	87.16	10	100	0	87.2	68-141	89.23	2.35	20	
Carbon tetrachloride	42.21	5.0	50	0	84.4	75-124	38.83	8.36	20	
Chlorobenzene	45.54	5.0	50	0	91.1	80-120	45.36	0.385	20	
Chloroethane	46.1	5.0	50	0	92.2	76-121	51.07	10.2	20	
Chloroform	45.98	5.0	50	0	92	80-120	47.74	3.74	20	
Chloromethane	41.91	5.0	50	0	83.8	67-123	46.17	9.67	20	
cis-1,2-Dichloroethene	46.55	5.0	50	0	93.1	78-120	47.4	1.81	20	
cis-1,3-Dichloropropene	51.77	5.0	50	0	104	80-120	45.37	13.2	20	
Dibromochloromethane	47.81	5.0	50	0	95.6	80-120	49.71	3.89	20	
Ethylbenzene	45.17	5.0	50	0	90.3	80-120	45.06	0.23	20	
Isopropylbenzene	38.91	5.0	50	0	77.8	80-120	44.13	12.6	20	S
m,p-Xylene	85.22	10	100	0	85.2	78-121	91.22	6.8	20	
Methyl tert-butyl ether	54.58	5.0	50	0	109	73-121	52.29	4.28	20	
Methylene chloride	46.92	10	50	0	93.8	65-133	47.97	2.22	20	
Naphthalene	51.82	5.0	50	0	104	65-135	45.91	12.1	20	
n-Butylbenzene	38.31	5.0	50	0	76.6	77-120	51.56	29.5	20	SR
n-Propylbenzene	38.3	5.0	50	0	76.6	78-120	42.57	10.6	20	S
o-Xylene	44.25	5.0	50	0	88.5	80-120	45.81	3.47	20	
sec-Butylbenzene	37.5	5.0	50	0	75	78-120	45.62	19.5	20	S
Styrene	46.51	5.0	50	0	93	80-120	45.87	1.37	20	
Tetrachloroethene	37.73	5.0	50	0	75.5	79-120	41.53	9.58	20	S
Toluene	44.61	5.0	50	0	89.2	80-120	43.73	1.98	20	
trans-1,2-Dichloroethene	45.41	5.0	50	0	90.8	78-120	43.8	3.61	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R132370** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	52.35	5.0	50	0	105	80-120	50.93	2.76	20
Trichloroethene	42.97	5.0	50	0	85.9	80-120	40.43	6.08	20
Vinyl chloride	43.49	2.0	50	0	87	70-127	44.74	2.85	20
Xylenes, Total	129.5	15	150	0	86.3	80-120	137	5.67	20
Surr: 1,2-Dichloroethane-d4	*47.8*	5.0	*50*	0	*95.6*	*70-125*	52.73	*9.8*	*20*
Surr: 4-Bromofluorobenzene	*45.48*	5.0	*50*	0	*91*	*72-125*	49.48	*8.44*	*20*
Surr: Dibromofluoromethane	*47.65*	5.0	*50*	0	*95.3*	*71-125*	52.86	*10.4*	*20*
Surr: Toluene-d8	*46.8*	5.0	*50*	0	*93.6*	*75-125*	49.1	*4.79*	*20*

The following samples were analyzed in this batch:

12071434-01A	12071434-02A	12071434-03A
12071434-04A	12071434-05A	12071434-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132268** Instrument ID **WetChem** Method: **M2510 B** **(Dissolve)**

MBLK Sample ID: **WBLKW1-080112-R132268** Units: **µmhos/cm** Analysis Date: **8/1/2012 09:15 AM**
Client ID: Run ID: **WETCHEM_120801B** SeqNo: **2883971** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	ND	1.0								

LCS Sample ID: **WLCSW1-080112-R132268** Units: **µmhos/cm** Analysis Date: **8/1/2012 09:15 AM**
Client ID: Run ID: **WETCHEM_120801B** SeqNo: **2883972** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	1350	1.0	1413	0	95.5	80-120	0			

DUP Sample ID: **1207954-01FDUP** Units: **µmhos/cm** Analysis Date: **8/1/2012 09:15 AM**
Client ID: Run ID: **WETCHEM_120801B** SeqNo: **2883982** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	637	1.0	0	0	0		635	0.314	20	

The following samples were analyzed in this batch:

12071434-01E	12071434-02E	12071434-03E
12071434-04E	12071434-05E	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132316** Instrument ID **ICS2100** Method: **E300** **(Dissolve)**

MBLK Sample ID: **WBLKW1-132316-R132316** Units: **mg/L** Analysis Date: **8/1/2012 07:12 PM**

Client ID: Run ID: **ICS2100_120801B** SeqNo: **2884995** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Fluoride	ND	0.10								
Sulfate	ND	0.50								
Surr: Selenate (surr)	*3.745*	0.10	*4*	0	*93.6*	*85-115*	0			

LCS Sample ID: **WLCSW1-132316-R132316** Units: **mg/L** Analysis Date: **8/1/2012 07:27 PM**

Client ID: Run ID: **ICS2100_120801B** SeqNo: **2884996** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.31	0.50	20	0	102	90-110	0			
Fluoride	3.972	0.10	4	0	99.3	90-110	0			
Sulfate	20.04	0.50	20	0	100	90-110	0			
Surr: Selenate (surr)	*3.726*	0.10	*4*	0	*93.2*	*85-115*	0			

MS Sample ID: **12071350-01GMS** Units: **mg/L** Analysis Date: **8/2/2012 12:47 AM**

Client ID: Run ID: **ICS2100_120801B** SeqNo: **2885018** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	336.2	5.0	100	230.7	105	80-120	0			
Fluoride	24.06	1.0	20	2.651	107	80-120	0			
Sulfate	10.32	5.0	100	1.048	9.28	80-120	0			S
Surr: Selenate (surr)	*54.17*	1.0	*50*	0	*108*	*85-115*	0			

MSD Sample ID: **12071350-01GMSD** Units: **mg/L** Analysis Date: **8/2/2012 01:01 AM**

Client ID: Run ID: **ICS2100_120801B** SeqNo: **2885019** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	337.8	5.0	100	230.7	107	80-120	336.2	0.487	20	
Fluoride	24.22	1.0	20	2.651	108	80-120	24.06	0.667	20	
Sulfate	108.5	5.0	100	1.048	107	80-120	10.32	165	20	R
Surr: Selenate (surr)	*54.5*	1.0	*50*	0	*109*	*85-115*	54.17	*0.607*	*20*	

The following samples were analyzed in this batch:

12071434-04E	12071434-05E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132348** Instrument ID **ICS3000** Method: **E300** **(Dissolve)**

MBLK Sample ID: **WBLKW1-R132348** Units: **mg/L** Analysis Date: **8/1/2012 07:03 PM**
Client ID: Run ID: **ICS3000_120801A** SeqNo: **2885394** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Fluoride	ND	0.10								
Sulfate	ND	0.50								
Surr: Selenate (surr)	*5.101*	0.10	*5*	0	*102*	*85-115*	0			

LCS Sample ID: **WLCSW1-R132348** Units: **mg/L** Analysis Date: **8/1/2012 07:24 PM**
Client ID: Run ID: **ICS3000_120801A** SeqNo: **2885395** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.64	0.50	20	0	98.2	90-110	0			
Fluoride	3.961	0.10	4	0	99	90-110	0			
Sulfate	18.83	0.50	20	0	94.2	90-110	0			
Surr: Selenate (surr)	*5.061*	0.10	*5*	0	*101*	*85-115*	0			

MS Sample ID: **12071434-03EMS** Units: **mg/L** Analysis Date: **8/2/2012 04:10 AM**
Client ID: **NORTH WELL-0712** Run ID: **ICS3000_120801A** SeqNo: **2885422** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	123.7	0.50	10	115.1	85.3	80-120	0			EO
Fluoride	2.908	0.10	2	0.986	96.1	80-120	0			
Sulfate	81.22	0.50	10	72.68	85.4	80-120	0			O
Surr: Selenate (surr)	*3.96*	0.10	*4*	0	*99*	*85-115*	0			

MSD Sample ID: **12071434-03EMSD** Units: **mg/L** Analysis Date: **8/2/2012 04:31 AM**
Client ID: **NORTH WELL-0712** Run ID: **ICS3000_120801A** SeqNo: **2885423** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	123.9	0.50	10	115.1	87.5	80-120	123.7	0.174	20	EO
Fluoride	2.923	0.10	2	0.986	96.8	80-120	2.908	0.514	20	
Sulfate	81.35	0.50	10	72.68	86.8	80-120	81.22	0.17	20	O
Surr: Selenate (surr)	*3.553*	0.10	*4*	0	*88.8*	*85-115*	3.96	*10.8*	*20*	

The following samples were analyzed in this batch:

12071434-01E	12071434-02E	12071434-03E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132388** Instrument ID **WetChem** Method: **SM4500H+ B** **(Dissolve)**

LCS Sample ID: **WLCSW1-080212-R132388** Units: **pH Units** Analysis Date: **8/2/2012 01:00 PM**

Client ID: Run ID: **WETCHEM_120802G** SeqNo: **2886348** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.07	0.10	6	0	101	90-110	0			

DUP Sample ID: **12071067-01GDUP** Units: **pH Units** Analysis Date: **8/2/2012 01:00 PM**

Client ID: Run ID: **WETCHEM_120802G** SeqNo: **2886364** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.83	0.10	0	0	0	0-0	8.81	0.227	20	HH

The following samples were analyzed in this batch:

12071434-01E	12071434-02E	12071434-03E
12071434-04E	12071434-05E	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132454** Instrument ID **ICS2100** Method: **E300** **(Dissolve)**

MBLK Sample ID: **WBLKW2-R132454** Units: **mg/L** Analysis Date: **8/2/2012 05:49 PM**
Client ID: Run ID: **ICS2100_120802A** SeqNo: **2887285** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Surr: Selenate (surr)	*4.013*	0.10	*4*	0	*100*	*85-115*	0			

LCS Sample ID: **WLCSW2-R132454** Units: **mg/L** Analysis Date: **8/2/2012 06:03 PM**
Client ID: Run ID: **ICS2100_120802A** SeqNo: **2887287** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.08	0.50	20	0	105	90-110	0			
Surr: Selenate (surr)	*3.855*	0.10	*4*	0	*96.4*	*85-115*	0			

MS Sample ID: **1208019-01FMS** Units: **mg/L** Analysis Date: **8/3/2012 12:07 AM**
Client ID: Run ID: **ICS2100_120802A** SeqNo: **2887337** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	13.88	0.50	10	3.474	104	80-120	0			
Surr: Selenate (surr)	*5.218*	0.10	*5*	0	*104*	*85-115*	0			

MSD Sample ID: **1208019-01FMSD** Units: **mg/L** Analysis Date: **8/3/2012 12:21 AM**
Client ID: Run ID: **ICS2100_120802A** SeqNo: **2887338** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	13.92	0.50	10	3.474	104	80-120	13.88	0.266	20	
Surr: Selenate (surr)	*5.226*	0.10	*5*	0	*105*	*85-115*	5.218	*0.153*	*20*	

The following samples were analyzed in this batch:

12071434-02E	12071434-03E	12071434-04E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132619** Instrument ID **Balance1** Method: **M2540C** **(Dissolve)**

MBLK Sample ID: **WBLK-080412-R132619** Units: **mg/L** Analysis Date: **8/4/2012 01:50 PM**
Client ID: Run ID: **BALANCE1_120804C** SeqNo: **2890859** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	ND	10								

LCS Sample ID: **WLCS-080412-R132619** Units: **mg/L** Analysis Date: **8/4/2012 01:50 PM**
Client ID: Run ID: **BALANCE1_120804C** SeqNo: **2890860** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	1000	10	1000	0	100	85-115	0			

DUP Sample ID: **12071421-01GDUP** Units: **mg/L** Analysis Date: **8/4/2012 01:50 PM**
Client ID: Run ID: **BALANCE1_120804C** SeqNo: **2890854** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	454	10	0	0	0	0-0	440	3.13	20	

The following samples were analyzed in this batch:

12071434-01E
12071434-02E
12071434-03E
12071434-04E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132621** Instrument ID **ICS3000** Method: **E300** **(Dissolve)**

MBLK Sample ID: **WBLKW1-R132621** Units: **mg/L** Analysis Date: **8/3/2012 05:11 PM**
Client ID: Run ID: **ICS3000_120802A** SeqNo: **2890891** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	ND	0.20								
Surr: Selenate (surr)	*4.783*	0.10	*5*	0	*95.7*	*85-115*	0			

LCS Sample ID: **WLCSW1-R132621** Units: **mg/L** Analysis Date: **8/3/2012 05:32 PM**
Client ID: Run ID: **ICS3000_120802A** SeqNo: **2890893** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	7.372	0.20	8	0	92.2	90-110	0			
Surr: Selenate (surr)	*4.829*	0.10	*5*	0	*96.6*	*85-115*	0			

MS Sample ID: **1208080-01JMS** Units: **mg/L** Analysis Date: **8/4/2012 01:36 AM**
Client ID: Run ID: **ICS3000_120802A** SeqNo: **2890946** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	29.46	2.0	40	0	73.7	80-120	0			S
Surr: Selenate (surr)	*50.25*	1.0	*50*	0	*100*	*85-115*	0			

MSD Sample ID: **1208080-01JMSD** Units: **mg/L** Analysis Date: **8/4/2012 01:57 AM**
Client ID: Run ID: **ICS3000_120802A** SeqNo: **2890947** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	29.31	2.0	40	0	73.3	80-120	29.46	0.517	20	S
Surr: Selenate (surr)	*50.4*	1.0	*50*	0	*101*	*85-115*	50.25	*0.302*	*20*	

The following samples were analyzed in this batch:

12071434-01B	12071434-02B	12071434-03B
12071434-04B	12071434-05B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132636** Instrument ID **ManTech01** Method: **SM2320B** **(Dissolve)**

MBLK Sample ID: **WBLKW2-R132636** Units: **mg/L** Analysis Date: **8/6/2012 02:47 PM**
Client ID: Run ID: **MANTECH01_120806A** SeqNo: **2891152** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.0								
Alkalinity, Carbonate (As CaCO3)	ND	5.0								
Alkalinity, Hydroxide (As CaCO3)	ND	5.0								
Alkalinity, Total (As CaCO3)	ND	5.0								

MBLK Sample ID: **WBLKW2-R132636** Units: **mg/L** Analysis Date: **8/6/2012 05:21 PM**
Client ID: Run ID: **MANTECH01_120806A** SeqNo: **2891178** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.0								
Alkalinity, Carbonate (As CaCO3)	ND	5.0								
Alkalinity, Hydroxide (As CaCO3)	ND	5.0								
Alkalinity, Total (As CaCO3)	ND	5.0								

LCS Sample ID: **WLCSW1-1-R132636** Units: **mg/L** Analysis Date: **8/6/2012 02:53 PM**
Client ID: Run ID: **MANTECH01_120806A** SeqNo: **2891153** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1023	5.0	1000	0	102	80-120	0			

LCS Sample ID: **WLCSW2-R132636** Units: **mg/L** Analysis Date: **8/6/2012 05:26 PM**
Client ID: Run ID: **MANTECH01_120806A** SeqNo: **2891179** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1002	5.0	1000	0	100	80-120	0			

DUP Sample ID: **12071372-08EDUP** Units: **mg/L** Analysis Date: **8/6/2012 04:10 PM**
Client ID: Run ID: **MANTECH01_120806A** SeqNo: **2891167** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	476.7	5.0	0	0	0	0-0	479.8	0.644	20	
Alkalinity, Carbonate (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	476.7	5.0	0	0	0	0-0	479.8	0.644	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132636** Instrument ID **ManTech01** Method: **SM2320B** **(Dissolve)**

DUP Sample ID: **12071436-08DDUP** Units: **mg/L** Analysis Date: **8/6/2012 07:13 PM**

Client ID: Run ID: **MANTECH01_120806A** SeqNo: **2891196** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	673.7	5.0	0	0	0	0-0	677.1	0.497	20	
Alkalinity, Carbonate (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	673.7	5.0	0	0	0	0-0	677.1	0.497	20	

The following samples were analyzed in this batch:

12071434-01E	12071434-02E	12071434-03E
12071434-04E	12071434-05E	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12071434
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R132688** Instrument ID **Balance1** Method: **M2540C** **(Dissolve)**

MBLK Sample ID: **WBLK-080612-R132688** Units: **mg/L** Analysis Date: **8/6/2012 11:00 AM**
Client ID: Run ID: **BALANCE1_120806D** SeqNo: **2892761** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	ND	10								

LCS Sample ID: **WLCS-080612-R132688** Units: **mg/L** Analysis Date: **8/6/2012 11:00 AM**
Client ID: Run ID: **BALANCE1_120806D** SeqNo: **2892763** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	1024	10	1000	0	102	85-115	0			

DUP Sample ID: **12071411-01GDUP** Units: **mg/L** Analysis Date: **8/6/2012 11:00 AM**
Client ID: Run ID: **BALANCE1_120806D** SeqNo: **2892739** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	322	10	0	0	0	0-0	326	1.23	20	

DUP Sample ID: **12071436-08DDUP** Units: **mg/L** Analysis Date: **8/6/2012 11:00 AM**
Client ID: Run ID: **BALANCE1_120806D** SeqNo: **2892755** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	1258	10	0	0	0	0-0	1250	0.638	20	

The following samples were analyzed in this batch: 12071434-05E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
WorkOrder: **12071434**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter
µmhos/cm	
mg/L	Milligrams per Liter
pH Units	

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **31-Jul-12 08:55**

Work Order: **12071434** Received by: **RNG**

Checklist completed by Rachel D. Naran (eSignature) 31-Jul-12 (Date) Reviewed by: Patricia L. Lynch (eSignature) 01-Aug-12 (Date)

Matrices: 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):	1.2C U/C 1.7C U/C	003	
Cooler(s)/Kit(s):	2751,7119		
Date/Time sample(s) sent to storage:	7/31/12 13:53		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

ALS Environmental

Cincinnati, OH +1 513 733 5336 | Fort Collins, CO +1 970 490 1511
Everett, WA +1 425 356 2600 | Holland, MI +1 616 399 6070

Chain of Custody Fo

Page 1 of 1

COC ID: 66999

12071434

NAVAJO REFINING: Navajo Refining Company

Project: Navajo Lea Refinery Semi-Annual

ALS Project Manager:

Customer Information		Project Information	
Purchase Order		Project Name	Lovington Lea Refining - SA
Work Order		Project Number	
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange
Address	501 East Main	Address	501 East Main
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211
Phone	(575) 703-5057	Phone	(575) 703-5057
Fax	(575) 746-5421	Fax	(575) 746-5421
e-Mail Address		e-Mail Address	Abayer@Sesi-NM.com

A	VOCs (8260) - Select List
B	LL SVOCs (8270) - TCL + 1-methylnaphthalene
C	Total Metals (7470) - Hg
D	Dissolved Metals (6020/7000) - Select List
E	Anions (300) -Cl,F,SO4
F	Alkalinity
G	pH
H	Specific Conductivity
I	TDS
J	Nitrate/Nitrite (300) - H2SO4

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-24-0712	7-30-12	845	H_2O	1,2,3,8	9	X	X	X	X	X	X	X	X	X	X	
2	South Well-0712	7-30-12	945	H_2O	1	9	X	X	X	X	X	X	X	X	X	X	
3	North Well-0712	7-30-12	955	1	1	1	X	X	X	X	X	X	X	X	X	X	
4	East Well-0712	7-30-12	1005	1	1	1	X	X	X	X	X	X	X	X	X	X	
5	Duplicate Sample	7-30-12	—	H_2O	1,2,3,8	9	X	X	X	X	X	X	X	X	X	X	
6	Trip Blank 072912-BO	—	—	H_2O	1,8	2	X										
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: David Davis

Shipment Method: Fed-EX

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

Results Due Date:

Relinquished by: David Davis — Date: 7-30-12 — Time: 1200 — Received by:

Relinquished by: — Date: — Time: — Received by (Laboratory): 7/31/12 08:55

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

Notes: 10 Day 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 / EDD ☐ 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 Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental 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.

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

e 7-30-12 FedEx Tracking Number 899670161807

der's ne David Davis Phone 575 397-0510

Company SESI

Address 703 E. Clinton Dept/Floor/Suite/Room

Hobbs State NM ZIP 88240

r Internal Billing Reference 1271

1207143

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

CU
Date: 7-30-
Name: David
Company: SES

USTODY SEAL
Time: 1200
Davis

Broken By:
Date: 7-31-12

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

CUSTODY SEAL
Date: 7-30-12 Time: 1200
Name: David Davis
Company: SESI

Broken By:
Date: 7-31-12

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

e 7-30-12 FedEx Tracking Number 899670161760

der's ne David Davis Phone 575 397-0510

Company SESI

Address 703 E. Clinton Dept/Floor/Suite/Room

Hobbs State NM ZIP 88240

r Internal Billing Reference 719

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

Date: 7-3
Name: Dav
Company: S

CUSTODY SEAL
-12 Time: 1200
Davis
SESI

Broken By:
Date: 7-31-12

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

CUSTODY SEAL
Date: 7-30-12 Time: 1200
Name: David Davis
Company: SESI

Broken By:
Date: 7-31-12

10-Sep-2012

Aaron Strange
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 748-6733
Fax: (575) 746-5421

Re: Lovington Lea Refining-Monthly Work Order: **12081185**

Dear Aaron,

ALS Environmental received 2 samples on 28-Aug-2012 09:10 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental 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 Environmental. 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,

Patricia L. Lynch

Electronically approved by: Yvan K. Ty

Patricia L. Lynch
Project Manager

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 10-Sep-12

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: **12081185**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
12081185-01	1210 TANK	Water		8/27/2012 08:00	8/28/2012 09:10	☐
12081185-02	Trip Blank 080212-81	Water		8/27/2012	8/28/2012	☐

Client:	Navajo Refining Company
Project:	Lovington Lea Refining-Monthly
Work Order:	12081185

Case Narrative

Batch 63790, Semivolatiles Organics, Insufficient sample to perform MS/MSD. LCS/LCSD provided as batch quality control.

Batch R134154, Volatile Organics, Sample 12081211-03 : MS/MSD is for an unrelated sample.

Batch R134154, Volatile Organics, Sample 12081211-03 : MS/MSD RPD is for an unrelated sample.

ALS Environmental

Date: *10-Sep-12*

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 12081185
Sample ID: 1210 TANK
Lab ID: 12081185-01
Collection Date: 8/27/2012 08:00 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **9/6/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	9/6/2012 03:12 PM
METALS			**SW6020**		Prep Date: **9/4/2012**	Analyst: **ALR**
Antimony	ND		0.00500	mg/L	1	9/5/2012 10:34 PM
Arsenic	**0.00550**		**0.00500**	**mg/L**	1	9/6/2012 03:58 PM
Barium	**0.106**		**0.00500**	**mg/L**	1	9/5/2012 10:34 PM
Beryllium	ND		0.00200	mg/L	1	9/6/2012 03:58 PM
Cadmium	ND		0.00200	mg/L	1	9/5/2012 10:34 PM
Chromium	**0.0112**		**0.00500**	**mg/L**	1	9/5/2012 10:34 PM
Cobalt	ND		0.00500	mg/L	1	9/5/2012 10:34 PM
Lead	ND		0.00500	mg/L	1	9/6/2012 03:58 PM
Nickel	ND		0.00500	mg/L	1	9/5/2012 10:34 PM
Selenium	ND		0.00500	mg/L	1	9/5/2012 10:34 PM
Silver	ND		0.00500	mg/L	1	9/5/2012 10:34 PM
Vanadium	**0.0269**		**0.00500**	**mg/L**	1	9/5/2012 10:34 PM
Zinc	**0.00821**		**0.00500**	**mg/L**	1	9/5/2012 10:34 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **8/30/2012**	Analyst: **LG**
1,2-Dichlorobenzene	ND		0.20	µg/L	1	8/31/2012 01:29 AM
1,3-Dichlorobenzene	ND		0.20	µg/L	1	8/31/2012 01:29 AM
1,4-Dichlorobenzene	ND		0.20	µg/L	1	8/31/2012 01:29 AM
1-Methylnaphthalene	ND		0.20	µg/L	1	8/31/2012 01:29 AM
2,4-Dimethylphenol	ND		0.20	µg/L	1	8/31/2012 01:29 AM
2,4-Dinitrophenol	ND		1.0	µg/L	1	8/31/2012 01:29 AM
2-Methylphenol	ND		0.20	µg/L	1	8/31/2012 01:29 AM
3&4-Methylphenol	ND		0.20	µg/L	1	8/31/2012 01:29 AM
4-Nitrophenol	ND		1.0	µg/L	1	8/31/2012 01:29 AM
Acenaphthylene	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Anthracene	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Benz(a)anthracene	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Benzenethiol	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Benzo(a)pyrene	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Bis(2-ethylhexyl)phthalate	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Chrysene	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Dibenz(a,h)acridine	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Diethyl phthalate	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Dimethyl phthalate	ND		0.20	µg/L	1	8/31/2012 01:29 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Sep-12*

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 12081185
Sample ID: 1210 TANK
Lab ID: 12081185-01
Collection Date: 8/27/2012 08:00 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Di-n-butyl phthalate	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Fluoranthene	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Fluorene	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Indene	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Naphthalene	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Phenanthrene	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Phenol	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Pyrene	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Pyridine	ND		1.0	µg/L	1	8/31/2012 01:29 AM
Quinoline	ND		0.20	µg/L	1	8/31/2012 01:29 AM
Surr: 2,4,6-Tribromophenol	*73.6*		*34-129*	*%REC*	1	8/31/2012 01:29 AM
Surr: 2-Fluorobiphenyl	*71.3*		*40-125*	*%REC*	1	8/31/2012 01:29 AM
Surr: 2-Fluorophenol	*70.5*		*20-120*	*%REC*	1	8/31/2012 01:29 AM
Surr: 4-Terphenyl-d14	*89.2*		*40-135*	*%REC*	1	8/31/2012 01:29 AM
Surr: Nitrobenzene-d5	*73.0*		*41-120*	*%REC*	1	8/31/2012 01:29 AM
Surr: Phenol-d6	*67.8*		*20-120*	*%REC*	1	8/31/2012 01:29 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		5.0	µg/L	1	8/31/2012 05:29 PM
1,1-Dichloroethane	ND		5.0	µg/L	1	8/31/2012 05:29 PM
1,2-Dibromoethane	ND		5.0	µg/L	1	8/31/2012 05:29 PM
1,2-Dichloroethane	ND		5.0	µg/L	1	8/31/2012 05:29 PM
1,4-Dioxane	ND		100	µg/L	1	8/31/2012 05:29 PM
2-Butanone	ND		10	µg/L	1	8/31/2012 05:29 PM
Benzene	ND		5.0	µg/L	1	8/31/2012 05:29 PM
Carbon disulfide	ND		10	µg/L	1	8/31/2012 05:29 PM
Chlorobenzene	ND		5.0	µg/L	1	8/31/2012 05:29 PM
Chloroform	ND		5.0	µg/L	1	8/31/2012 05:29 PM
Ethylbenzene	ND		5.0	µg/L	1	8/31/2012 05:29 PM
Methyl tert-butyl ether	ND		5.0	µg/L	1	8/31/2012 05:29 PM
Styrene	ND		5.0	µg/L	1	8/31/2012 05:29 PM
Tetrachloroethene	ND		5.0	µg/L	1	8/31/2012 05:29 PM
Toluene	ND		5.0	µg/L	1	8/31/2012 05:29 PM
Trichloroethene	ND		5.0	µg/L	1	8/31/2012 05:29 PM
Xylenes, Total	ND		15	µg/L	1	8/31/2012 05:29 PM
Surr: 1,2-Dichloroethane-d4	*95.0*		*70-125*	*%REC*	1	8/31/2012 05:29 PM
Surr: 4-Bromofluorobenzene	*104*		*72-125*	*%REC*	1	8/31/2012 05:29 PM
Surr: Dibromofluoromethane	*97.3*		*71-125*	*%REC*	1	8/31/2012 05:29 PM
Surr: Toluene-d8	*102*		*75-125*	*%REC*	1	8/31/2012 05:29 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Sep-12*

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 12081185
Sample ID: 1210 TANK
Lab ID: 12081185-01
Collection Date: 8/27/2012 08:00 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, TOTAL - EPA 335.2			**E335.3**			Analyst: **EDG**
Cyanide	ND		0.0200	mg/L	1	9/7/2012 12:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Batch ID: **63883** Instrument ID **ICP7500** Method: **SW6020**

MBLK Sample ID: **MBLKW2-090412-63883** Units: **mg/L** Analysis Date: **9/5/2012 09:42 PM**

Client ID: Run ID: **ICP7500_120905A** SeqNo: **2929381** Prep Date: **9/4/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.0050								
Arsenic	ND	0.0050								
Barium	0.0009326	0.0050								J
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Lead	ND	0.0050								
Nickel	ND	0.0050								
Selenium	ND	0.0050								
Silver	ND	0.0050								
Vanadium	ND	0.0050								
Zinc	0.002883	0.0050								J

LCS Sample ID: **MLCSW2-090412-63883** Units: **mg/L** Analysis Date: **9/5/2012 09:47 PM**

Client ID: Run ID: **ICP7500_120905A** SeqNo: **2929384** Prep Date: **9/4/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05271	0.0050	0.05	0	105	80-120	0			
Arsenic	0.04999	0.0050	0.05	0	100	80-120	0			
Barium	0.04924	0.0050	0.05	0	98.5	80-120	0			
Beryllium	0.05206	0.0020	0.05	0	104	80-120	0			
Cadmium	0.04735	0.0020	0.05	0	94.7	80-120	0			
Chromium	0.05016	0.0050	0.05	0	100	80-120	0			
Cobalt	0.04892	0.0050	0.05	0	97.8	80-120	0			
Lead	0.0478	0.0050	0.05	0	95.6	80-120	0			
Nickel	0.05031	0.0050	0.05	0	101	80-120	0			
Selenium	0.05099	0.0050	0.05	0	102	80-120	0			
Silver	0.05014	0.0050	0.05	0	100	80-120	0			
Vanadium	0.04893	0.0050	0.05	0	97.9	80-120	0			
Zinc	0.05434	0.0050	0.05	0	109	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081185
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **63883** Instrument ID **ICP7500** Method: **SW6020**

MS Sample ID: **12081311-17EMS** Units: **mg/L** Analysis Date: **9/5/2012 10:08 PM**

Client ID: Run ID: **ICP7500_120905A** SeqNo: **2929392** Prep Date: **9/4/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05346	0.0050	0.05	0	107	80-120	0			
Arsenic	0.05181	0.0050	0.05	0	104	80-120	0			
Barium	0.04996	0.0050	0.05	0	99.9	80-120	0			
Beryllium	0.05185	0.0020	0.05	0	104	80-120	0			
Cadmium	0.04924	0.0020	0.05	0	98.5	80-120	0			
Chromium	0.05133	0.0050	0.05	0	103	80-120	0			
Cobalt	0.04948	0.0050	0.05	0	99	80-120	0			
Lead	0.04796	0.0050	0.05	0	95.9	80-120	0			
Nickel	0.05038	0.0050	0.05	0	101	80-120	0			
Selenium	0.05107	0.0050	0.05	0	102	80-120	0			
Silver	0.04933	0.0050	0.05	0	98.7	80-120	0			
Vanadium	0.04918	0.0050	0.05	0	98.4	80-120	0			
Zinc	0.05682	0.0050	0.05	0.005212	103	80-120	0			

MSD Sample ID: **12081311-17EMSD** Units: **mg/L** Analysis Date: **9/5/2012 10:13 PM**

Client ID: Run ID: **ICP7500_120905A** SeqNo: **2929395** Prep Date: **9/4/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.0509	0.0050	0.05	0	102	80-120	0.05346	4.91	15	
Arsenic	0.05049	0.0050	0.05	0	101	80-120	0.05181	2.58	15	
Barium	0.04941	0.0050	0.05	0	98.8	80-120	0.04996	1.11	15	
Beryllium	0.05264	0.0020	0.05	0	105	80-120	0.05185	1.51	15	
Cadmium	0.04876	0.0020	0.05	0	97.5	80-120	0.04924	0.98	15	
Chromium	0.04923	0.0050	0.05	0	98.5	80-120	0.05133	4.18	15	
Cobalt	0.04713	0.0050	0.05	0	94.3	80-120	0.04948	4.86	15	
Lead	0.04837	0.0050	0.05	0	96.7	80-120	0.04796	0.851	15	
Nickel	0.04831	0.0050	0.05	0	96.6	80-120	0.05038	4.19	15	
Selenium	0.04963	0.0050	0.05	0	99.3	80-120	0.05107	2.86	15	
Silver	0.0496	0.0050	0.05	0	99.2	80-120	0.04933	0.546	15	
Vanadium	0.04683	0.0050	0.05	0	93.7	80-120	0.04918	4.9	15	
Zinc	0.05407	0.0050	0.05	0.005212	97.7	80-120	0.05682	4.96	15	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081185
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **63883** Instrument ID **ICP7500** Method: **SW6020**

DUP Sample ID: **12081311-17EDUP** Units: **mg/L** Analysis Date: **9/5/2012 09:58 PM**

Client ID: Run ID: **ICP7500_120905A** SeqNo: **2929388** Prep Date: **9/4/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.0050	0	0	0	0-0	0.0001958	0	25	
Arsenic	ND	0.0050	0	0	0	0-0	0.000485	0	25	
Barium	ND	0.0050	0	0	0	0-0	0.0006219	0	25	
Beryllium	ND	0.0020	0	0	0	0-0	0.0005838	0	25	
Cadmium	ND	0.0020	0	0	0	0-0	0.0006281	0	25	
Chromium	ND	0.0050	0	0	0	0-0	0.0008892	0	25	
Cobalt	ND	0.0050	0	0	0	0-0	0.0003211	0	25	
Lead	ND	0.0050	0	0	0	0-0	0.0006273	0	25	
Nickel	ND	0.0050	0	0	0	0-0	0.0001581	0	25	
Selenium	ND	0.0050	0	0	0	0-0	0.0003245	0	25	
Silver	ND	0.0050	0	0	0	0-0	0.0001113	0	25	
Vanadium	ND	0.0050	0	0	0	0-0	0.0005297	0	25	
Zinc	0.003295	0.0050	0	0	0	0-0	0.005212	0	25	J

The following samples were analyzed in this batch: 12081185-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081185
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **63979** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW1-090612-63979** Units: **mg/L** Analysis Date: **9/6/2012 02:28 PM**
Client ID: Run ID: **MERCURY_120906A** SeqNo: **2930813** Prep Date: **9/6/2012** 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: **GLCSW1-090612-63979** Units: **mg/L** Analysis Date: **9/6/2012 02:30 PM**
Client ID: Run ID: **MERCURY_120906A** SeqNo: **2930814** Prep Date: **9/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00513	0.00020	0.005	0	103	85-115	0			

MS Sample ID: **12081328-01DMS** Units: **mg/L** Analysis Date: **9/6/2012 02:39 PM**
Client ID: Run ID: **MERCURY_120906A** SeqNo: **2930817** Prep Date: **9/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00509	0.00020	0.005	-0.000013	102	85-115	0			

MSD Sample ID: **12081328-01DMSD** Units: **mg/L** Analysis Date: **9/6/2012 02:41 PM**
Client ID: Run ID: **MERCURY_120906A** SeqNo: **2930818** Prep Date: **9/6/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00509	0.00020	0.005	-0.000013	102	85-115	0.00509	0	20	

DUP Sample ID: **12081328-01DDUP** Units: **mg/L** Analysis Date: **9/6/2012 02:37 PM**
Client ID: Run ID: **MERCURY_120906A** SeqNo: **2930816** Prep Date: **9/6/2012** 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	-0.000013	0	20	

The following samples were analyzed in this batch: 12081185-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081185
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **63790** Instrument ID **SV-6** Method: **SW8270**

MBLK Sample ID: **SBLKW2-120830-63790** Units: **µg/L** Analysis Date: **8/30/2012 09:17 PM**

Client ID: Run ID: **SV-6_120830A** SeqNo: **2925035** Prep Date: **8/30/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	ND	0.20								
1,3-Dichlorobenzene	ND	0.20								
1,4-Dichlorobenzene	ND	0.20								
1-Methylnaphthalene	ND	0.20								
2,4-Dimethylphenol	ND	0.20								
2,4-Dinitrophenol	ND	1.0								
2-Methylphenol	ND	0.20								
3&4-Methylphenol	ND	0.20								
4-Nitrophenol	ND	1.0								
Acenaphthylene	ND	0.20								
Anthracene	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzenethiol	ND	0.20								
Benzo(a)pyrene	ND	0.20								
Benzo(b)fluoranthene	ND	0.20								
Benzo(k)fluoranthene	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.20								
Chrysene	ND	0.20								
Dibenz(a,h)acridine	ND	0.20								
Dibenz(a,h)anthracene	ND	0.20								
Diethyl phthalate	ND	0.20								
Dimethyl phthalate	ND	0.20								
Di-n-butyl phthalate	ND	0.20								
Fluoranthene	ND	0.20								
Fluorene	ND	0.20								
Indene	ND	0.20								
Indeno(1,2,3-cd)pyrene	ND	0.20								
Naphthalene	ND	0.20								
Phenanthrene	ND	0.20								
Phenol	ND	0.20								
Pyrene	ND	0.20								
Pyridine	ND	1.0								
Quinoline	ND	0.20								
Surr: 2,4,6-Tribromophenol	*3.956*	0.20	*5*	0	*79.1*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*4.25*	0.20	*5*	0	*85*	*40-125*	0			
Surr: 2-Fluorophenol	*4.009*	0.20	*5*	0	*80.2*	*20-120*	0			
Surr: 4-Terphenyl-d14	*5.068*	0.20	*5*	0	*101*	*40-135*	0			
Surr: Nitrobenzene-d5	*4.116*	0.20	*5*	0	*82.3*	*41-120*	0			
Surr: Phenol-d6	*3.825*	0.20	*5*	0	*76.5*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081185
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **63790** Instrument ID **SV-6** Method: **SW8270**

LCS Sample ID: **SLCSW2-120830-63790** Units: **µg/L** Analysis Date: **8/30/2012 09:36 PM**

Client ID: Run ID: **SV-6_120830A** SeqNo: **2925036** Prep Date: **8/30/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	4.146	0.20	5	0	82.9	45-120	0			
1,3-Dichlorobenzene	4.228	0.20	5	0	84.6	45-120	0			
1,4-Dichlorobenzene	3.962	0.20	5	0	79.2	40-120	0			
1-Methylnaphthalene	4.079	0.20	5	0	81.6	45-120	0			
2,4-Dimethylphenol	4.082	0.20	5	0	81.6	35-120	0			
2,4-Dinitrophenol	4.04	1.0	5	0	80.8	15-120	0			
2-Methylphenol	4.177	0.20	5	0	83.5	45-120	0			
3&4-Methylphenol	4.084	0.20	5	0	81.7	35-120	0			
4-Nitrophenol	3.708	1.0	5	0	74.2	30-130	0			
Acenaphthylene	4.299	0.20	5	0	86	47-120	0			
Anthracene	4.243	0.20	5	0	84.9	45-120	0			
Benz(a)anthracene	4.224	0.20	5	0	84.5	40-120	0			
Benzo(a)pyrene	4.374	0.20	5	0	87.5	45-120	0			
Benzo(b)fluoranthene	4.741	0.20	5	0	94.8	50-120	0			
Benzo(k)fluoranthene	4.486	0.20	5	0	89.7	45-127	0			
Bis(2-ethylhexyl)phthalate	4.267	0.20	5	0	85.3	40-139	0			
Chrysene	4.316	0.20	5	0	86.3	43-120	0			
Dibenz(a,h)anthracene	4.424	0.20	5	0	88.5	45-125	0			
Diethyl phthalate	4.225	0.20	5	0	84.5	41-120	0			
Dimethyl phthalate	4.277	0.20	5	0	85.5	40-122	0			
Di-n-butyl phthalate	4.254	0.20	5	0	85.1	45-123	0			
Fluoranthene	4.256	0.20	5	0	85.1	45-125	0			
Fluorene	4.482	0.20	5	0	89.6	49-120	0			
Indeno(1,2,3-cd)pyrene	4.522	0.20	5	0	90.4	41-128	0			
Naphthalene	4.097	0.20	5	0	81.9	45-120	0			
Phenanthrene	4.13	0.20	5	0	82.6	45-121	0			
Phenol	4.048	0.20	5	0	81	20-124	0			
Pyrene	4.18	0.20	5	0	83.6	40-130	0			
Pyridine	3.767	1.0	5	0	75.3	15-120	0			
Quinoline	3.828	0.20	5	0	76.6	45-120	0			
Surr: 2,4,6-Tribromophenol	*4.666*	0.20	*5*	0	*93.3*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*4.193*	0.20	*5*	0	*83.9*	*40-125*	0			
Surr: 2-Fluorophenol	*3.971*	0.20	*5*	0	*79.4*	*20-120*	0			
Surr: 4-Terphenyl-d14	*4.733*	0.20	*5*	0	*94.7*	*40-135*	0			
Surr: Nitrobenzene-d5	*4.027*	0.20	*5*	0	*80.5*	*41-120*	0			
Surr: Phenol-d6	*4.122*	0.20	*5*	0	*82.4*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081185
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **63790** Instrument ID **SV-6** Method: **SW8270**

LCS Sample ID: **SLCSW4-120830-63790** Units: **µg/L** Analysis Date: **8/30/2012 10:15 PM**

Client ID: Run ID: **SV-6_120830A** SeqNo: **2925039** Prep Date: **8/30/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzenethiol	4.09	0.20	5	0	81.8	11-110	0			
Surr: 2,4,6-Tribromophenol	*3.827*	0.20	*5*	0	*76.5*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.881*	0.20	*5*	0	*77.6*	*40-125*	0			
Surr: 2-Fluorophenol	*3.996*	0.20	*5*	0	*79.9*	*20-120*	0			
Surr: 4-Terphenyl-d14	*4.716*	0.20	*5*	0	*94.3*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.924*	0.20	*5*	0	*78.5*	*41-120*	0			
Surr: Phenol-d6	*3.82*	0.20	*5*	0	*76.4*	*20-120*	0			

LCS Sample ID: **SLCSW5-120830-63790** Units: **µg/L** Analysis Date: **8/30/2012 10:54 PM**

Client ID: Run ID: **SV-6_120830A** SeqNo: **2925040** Prep Date: **8/30/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibenz(a,h)acridine	4.245	0.20	5	0	84.9	35-140	0			
Indene	4.052	0.20	5	0	81	40-130	0			
Surr: 2,4,6-Tribromophenol	*3.921*	0.20	*5*	0	*78.4*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.803*	0.20	*5*	0	*76.1*	*40-125*	0			
Surr: 2-Fluorophenol	*3.923*	0.20	*5*	0	*78.5*	*20-120*	0			
Surr: 4-Terphenyl-d14	*4.579*	0.20	*5*	0	*91.6*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.925*	0.20	*5*	0	*78.5*	*41-120*	0			
Surr: Phenol-d6	*3.331*	0.20	*5*	0	*66.6*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081185
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **63790** Instrument ID **SV-6** Method: **SW8270**

LCSD Sample ID: **SLCSDW2-120830-63790** Units: **µg/L** Analysis Date: **8/30/2012 09:56 PM**

Client ID: Run ID: **SV-6_120830A** SeqNo: **2925037** Prep Date: **8/30/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	4.336	0.20	5	0	86.7	45-120	4.146	4.47	20	
1,3-Dichlorobenzene	4.174	0.20	5	0	83.5	45-120	4.228	1.28	20	
1,4-Dichlorobenzene	4.228	0.20	5	0	84.6	40-120	3.962	6.49	20	
1-Methylnaphthalene	4.116	0.20	5	0	82.3	45-120	4.079	0.898	20	
2,4-Dimethylphenol	4.247	0.20	5	0	84.9	35-120	4.082	3.97	20	
2,4-Dinitrophenol	4.325	1.0	5	0	86.5	15-120	4.04	6.82	20	
2-Methylphenol	4.093	0.20	5	0	81.9	45-120	4.177	2.02	20	
3&4-Methylphenol	3.963	0.20	5	0	79.3	35-120	4.084	2.99	20	
4-Nitrophenol	3.908	1.0	5	0	78.2	30-130	3.708	5.25	20	
Acenaphthylene	4.204	0.20	5	0	84.1	47-120	4.299	2.25	20	
Anthracene	4.382	0.20	5	0	87.6	45-120	4.243	3.23	20	
Benz(a)anthracene	4.149	0.20	5	0	83	40-120	4.224	1.78	20	
Benzo(a)pyrene	4.02	0.20	5	0	80.4	45-120	4.374	8.43	20	
Benzo(b)fluoranthene	4.291	0.20	5	0	85.8	50-120	4.741	9.96	20	
Benzo(k)fluoranthene	4.146	0.20	5	0	82.9	45-127	4.486	7.87	20	
Bis(2-ethylhexyl)phthalate	4.089	0.20	5	0	81.8	40-139	4.267	4.27	20	
Chrysene	4.216	0.20	5	0	84.3	43-120	4.316	2.35	20	
Dibenz(a,h)anthracene	4.217	0.20	5	0	84.3	45-125	4.424	4.79	20	
Diethyl phthalate	4.084	0.20	5	0	81.7	41-120	4.225	3.4	20	
Dimethyl phthalate	4.219	0.20	5	0	84.4	40-122	4.277	1.35	20	
Di-n-butyl phthalate	4.264	0.20	5	0	85.3	45-123	4.254	0.235	20	
Fluoranthene	4.292	0.20	5	0	85.8	45-125	4.256	0.846	20	
Fluorene	4.359	0.20	5	0	87.2	49-120	4.482	2.79	20	
Indeno(1,2,3-cd)pyrene	4.549	0.20	5	0	91	41-128	4.522	0.607	20	
Naphthalene	4.198	0.20	5	0	84	45-120	4.097	2.43	20	
Phenanthrene	4.2	0.20	5	0	84	45-121	4.13	1.67	20	
Phenol	3.975	0.20	5	0	79.5	20-124	4.048	1.82	20	
Pyrene	4.074	0.20	5	0	81.5	40-130	4.18	2.55	20	
Pyridine	3.971	1.0	5	0	79.4	15-120	3.767	5.29	20	
Quinoline	4.023	0.20	5	0	80.5	45-120	3.828	4.98	20	
Surr: 2,4,6-Tribromophenol	*4.4*	0.20	*5*	0	*88*	*34-129*	4.666	*5.89*	*0*	
Surr: 2-Fluorobiphenyl	*4.004*	0.20	*5*	0	*80.1*	*40-125*	4.193	*4.63*	*0*	
Surr: 2-Fluorophenol	*4.194*	0.20	*5*	0	*83.9*	*20-120*	3.971	*5.46*	*0*	
Surr: 4-Terphenyl-d14	*4.585*	0.20	*5*	0	*91.7*	*40-135*	4.733	*3.17*	*0*	
Surr: Nitrobenzene-d5	*4.228*	0.20	*5*	0	*84.6*	*41-120*	4.027	*4.87*	*0*	
Surr: Phenol-d6	*4.127*	0.20	*5*	0	*82.5*	*20-120*	4.122	*0.11*	*0*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081185
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **63790** Instrument ID **SV-6** Method: **SW8270**

LCSD Sample ID: **SLCSDW5-120830-63790** Units: **µg/L** Analysis Date: **8/30/2012 11:14 PM**

Client ID: Run ID: **SV-6_120830A** SeqNo: **2925042** Prep Date: **8/30/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibenz(a,h)acridine	4.603	0.20	5	0	92.1	35-140	4.245	8.09	20	
Indene	3.804	0.20	5	0	76.1	40-130	4.052	6.3	20	
Surr: 2,4,6-Tribromophenol	*3.965*	0.20	*5*	0	*79.3*	*34-129*	3.921	*1.1*	*0*	
Surr: 2-Fluorobiphenyl	*3.826*	0.20	*5*	0	*76.5*	*40-125*	3.803	*0.601*	*0*	
Surr: 2-Fluorophenol	*4.214*	0.20	*5*	0	*84.3*	*20-120*	3.923	*7.16*	*0*	
Surr: 4-Terphenyl-d14	*4.439*	0.20	*5*	0	*88.8*	*40-135*	4.579	*3.11*	*0*	
Surr: Nitrobenzene-d5	*3.944*	0.20	*5*	0	*78.9*	*41-120*	3.925	*0.482*	*0*	
Surr: Phenol-d6	*3.815*	0.20	*5*	0	*76.3*	*20-120*	3.331	*13.5*	*0*	

LCSD Sample ID: **SLCSDW4-12030-63790** Units: **µg/L** Analysis Date: **8/30/2012 11:33 PM**

Client ID: Run ID: **SV-6_120830A** SeqNo: **2925056** Prep Date: **8/30/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzenethiol	3.873	0.20	5	0	77.5	11-110	4.09	5.44	30	
Surr: 2,4,6-Tribromophenol	*3.317*	0.20	*5*	0	*66.3*	*34-129*	3.827	*14.3*	*0*	
Surr: 2-Fluorobiphenyl	*3.783*	0.20	*5*	0	*75.7*	*40-125*	3.881	*2.56*	*0*	
Surr: 2-Fluorophenol	*3.582*	0.20	*5*	0	*71.6*	*20-120*	3.996	*10.9*	*0*	
Surr: 4-Terphenyl-d14	*4.467*	0.20	*5*	0	*89.3*	*40-135*	4.716	*5.41*	*0*	
Surr: Nitrobenzene-d5	*3.83*	0.20	*5*	0	*76.6*	*41-120*	3.924	*2.42*	*0*	
Surr: Phenol-d6	*3.606*	0.20	*5*	0	*72.1*	*20-120*	3.82	*5.75*	*0*	

The following samples were analyzed in this batch: 12081185-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081185
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R134154** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-083112-R134154** Units: **µg/L** Analysis Date: **8/31/2012 11:02 AM**

Client ID: Run ID: **VOA1_120831A** SeqNo: **2925398** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dioxane	ND	100								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon disulfide	ND	10								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Ethylbenzene	ND	5.0								
Methyl tert-butyl ether	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
Trichloroethene	ND	5.0								
Xylenes, Total	ND	15								
Surr: 1,2-Dichloroethane-d4	*48.6*	5.0	*50*	0	*97.2*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.3*	5.0	*50*	0	*98.6*	*72-125*	0			
Surr: Dibromofluoromethane	*48.78*	5.0	*50*	0	*97.6*	*71-125*	0			
Surr: Toluene-d8	*48.45*	5.0	*50*	0	*96.9*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081185
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R134154** Instrument ID **VOA1** Method: **SW8260**

LCS Sample ID: **VLCSW-083112-R134154** Units: **µg/L** Analysis Date: **8/31/2012 10:09 AM**

Client ID: Run ID: **VOA1_120831A** SeqNo: **2925397** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.39	5.0	50	0	98.8	80-120	0			
1,1-Dichloroethane	48.35	5.0	50	0	96.7	76-120	0			
1,2-Dibromoethane	49.41	5.0	50	0	98.8	80-120	0			
1,2-Dichloroethane	52.49	5.0	50	0	105	78-120	0			
1,4-Dioxane	1229	100	1000	0	123	50-158	0			
2-Butanone	94.09	10	100	0	94.1	58-132	0			
Benzene	51.79	5.0	50	0	104	73-121	0			
Carbon disulfide	101.9	10	100	0	102	68-141	0			
Chlorobenzene	48.46	5.0	50	0	96.9	80-120	0			
Chloroform	48.9	5.0	50	0	97.8	80-120	0			
Ethylbenzene	50.46	5.0	50	0	101	80-120	0			
Methyl tert-butyl ether	49.32	5.0	50	0	98.6	73-121	0			
Styrene	48.54	5.0	50	0	97.1	80-120	0			
Tetrachloroethene	49.26	5.0	50	0	98.5	79-120	0			
Toluene	47.54	5.0	50	0	95.1	80-120	0			
Trichloroethene	56.77	5.0	50	0	114	80-120	0			
Xylenes, Total	148.1	15	150	0	98.8	80-120	0			
Surr: 1,2-Dichloroethane-d4	*46.14*	5.0	*50*	0	*92.3*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.99*	5.0	*50*	0	*102*	*72-125*	0			
Surr: Dibromofluoromethane	*48.58*	5.0	*50*	0	*97.2*	*71-125*	0			
Surr: Toluene-d8	*50.32*	5.0	*50*	0	*101*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081185
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R134154** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **12081211-03AMS** Units: **µg/L** Analysis Date: **8/31/2012 03:35 PM**

Client ID: Run ID: **VOA1_120831A** SeqNo: **2925407** Prep Date: DF: **2000**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	91790	10,000	100000	0	91.8	80-120	0			
1,1-Dichloroethane	92980	10,000	100000	0	93	76-120	0			
1,2-Dibromoethane	99910	10,000	100000	0	99.9	80-120	0			
1,2-Dichloroethane	96450	10,000	100000	0	96.5	78-120	0			
1,4-Dioxane	2716000	200,000	2000000	0	136	50-158	0			
2-Butanone	228000	20,000	200000	0	114	58-132	0			
Benzene	135200	10,000	100000	53130	82.1	73-121	0			
Carbon disulfide	197100	20,000	200000	0	98.5	68-141	0			
Chlorobenzene	273500	10,000	100000	221200	52.3	80-120	0			S
Chloroform	123000	10,000	100000	34130	88.9	80-120	0			
Ethylbenzene	85900	10,000	100000	0	85.9	80-120	0			
Methyl tert-butyl ether	104700	10,000	100000	0	105	73-121	0			
Styrene	94770	10,000	100000	0	94.8	80-120	0			
Tetrachloroethene	85870	10,000	100000	0	85.9	79-120	0			
Toluene	92820	10,000	100000	0	92.8	80-120	0			
Trichloroethene	90050	10,000	100000	0	90	80-120	0			
Xylenes, Total	273800	30,000	300000	0	91.3	80-120	0			
Surr: 1,2-Dichloroethane-d4	*96870*	10,000	*100000*	0	*96.9*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*102700*	10,000	*100000*	0	*103*	*72-125*	0			
Surr: Dibromofluoromethane	*100000*	10,000	*100000*	0	*100*	*71-125*	0			
Surr: Toluene-d8	*95690*	10,000	*100000*	0	*95.7*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081185
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R134154** Instrument ID **VOA1** Method: **SW8260**

MSD Sample ID: **12081211-03AMSD** Units: **µg/L** Analysis Date: **8/31/2012 04:03 PM**

Client ID: Run ID: **VOA1_120831A** SeqNo: **2925408** Prep Date: DF: **2000**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	88520	10,000	100000	0	88.5	80-120	91790	3.63	20	
1,1-Dichloroethane	96740	10,000	100000	0	96.7	76-120	92980	3.96	20	
1,2-Dibromoethane	102700	10,000	100000	0	103	80-120	99910	2.76	20	
1,2-Dichloroethane	95110	10,000	100000	0	95.1	78-120	96450	1.41	20	
1,4-Dioxane	3983000	200,000	2000000	0	199	50-158	2716000	37.8	20	SR
2-Butanone	239200	20,000	200000	0	120	58-132	228000	4.8	20	
Benzene	137800	10,000	100000	53130	84.6	73-121	135200	1.9	20	
Carbon disulfide	185200	20,000	200000	0	92.6	68-141	197100	6.2	20	
Chlorobenzene	285600	10,000	100000	221200	64.3	80-120	273500	4.3	20	S
Chloroform	126800	10,000	100000	34130	92.7	80-120	123000	3.03	20	
Ethylbenzene	85350	10,000	100000	0	85.3	80-120	85900	0.641	20	
Methyl tert-butyl ether	115000	10,000	100000	0	115	73-121	104700	9.39	20	
Styrene	92540	10,000	100000	0	92.5	80-120	94770	2.39	20	
Tetrachloroethene	80150	10,000	100000	0	80.1	79-120	85870	6.89	20	
Toluene	88750	10,000	100000	0	88.8	80-120	92820	4.48	20	
Trichloroethene	90370	10,000	100000	0	90.4	80-120	90050	0.358	20	
Xylenes, Total	271700	30,000	300000	0	90.6	80-120	273800	0.759	20	
Surr: 1,2-Dichloroethane-d4	*97770*	10,000	*100000*	0	*97.8*	*70-125*	96870	*0.925*	*20*	
Surr: 4-Bromofluorobenzene	*102400*	10,000	*100000*	0	*102*	*72-125*	102700	*0.346*	*20*	
Surr: Dibromofluoromethane	*100900*	10,000	*100000*	0	*101*	*71-125*	100000	*0.884*	*20*	
Surr: Toluene-d8	*101900*	10,000	*100000*	0	*102*	*75-125*	95690	*6.32*	*20*	

The following samples were analyzed in this batch: 12081185-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081185
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R134513** Instrument ID **UV-2450** Method: **E335.3** **(Dissolve)**

MBLK Sample ID: **WBLKW1-090712-R134513** Units: **mg/L** Analysis Date: **9/7/2012 12:00 PM**
Client ID: Run ID: **UV-2450_120907C** SeqNo: **2932639** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.004	0.020								J

LCS Sample ID: **WLCSW1-090712-R134513** Units: **mg/L** Analysis Date: **9/7/2012 12:00 PM**
Client ID: Run ID: **UV-2450_120907C** SeqNo: **2932640** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.182	0.020	0.2	0	91	80-120	0			

MS Sample ID: **12081185-01DMS** Units: **mg/L** Analysis Date: **9/7/2012 12:00 PM**
Client ID: **1210 TANK** Run ID: **UV-2450_120907C** SeqNo: **2932642** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.185	0.020	0.2	0.007	89	80-120	0			

The following samples were analyzed in this batch: 12081185-01D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
WorkOrder: **12081185**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **28-Aug-12 09:10**

Work Order: **12081185** Received by: **JBA**

Checklist completed by Johnnie B. Allen (eSignature) 29-Aug-12 (Date) Reviewed by: Patricia L. Lynch (eSignature) 04-Sep-12 (Date)

Matrices: 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):	2.7 C/uc	004	
Cooler(s)/Kit(s):	2837		
Date/Time sample(s) sent to storage:	08/29/12 08:35		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

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Chain of Custody Form

Page _____ of _____

COC ID: 64368

12081185

NAVAJO REFINING: Navajo Refining Company

Project: Lovington Lea Refining-Monthly

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Lovington Lea Refining SkinnerList	A	VOC (8260) Skinner List
Work Order		Project Number	128809	B	LL SVOC (8270) Skinner List
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (6020/7000) Skinner List
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange	D	Total Cyanide
Address	501 East Main	Address	501 East Main	E	
				F	
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	
Phone	(575) 748-6733	Phone	(575) 748-6733	H	
Fax	(575) 746-5421	Fax	(575) 746-5421	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	1210 tank	8/29/12	8:00am	W		7	✓	✓	✓	✓							
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Andrew Sandoval

Shipment Method:

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

Results Due Date:

Relinquished by: James Hodges Date: 8/29/12 Time: 8:00am

Received by:

Notes: 10 Day TAT

Relinquished by: Date: Time:

Received by (Laboratory):

Logged by (Laboratory): Date: Time:

Checked by (Laboratory):

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)

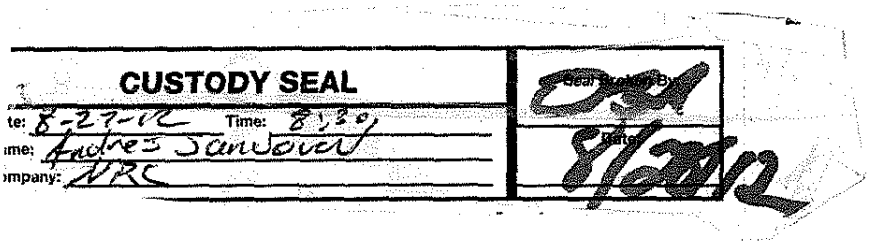
☑ Level II Std QC ☐ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other / EDD

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 Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental 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.

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10450 Stancliff Rd., Suite 210
Houston, Texas
Tel. +1 281
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Sender's Name CATHY [redacted] TRUETT Phone (575) 396-5821

Company NAVAJO REFINING CO (LEA)

Address 7406 S MAIN ST Dept/Floor/Suite/Room

City LOVINGTON State NM ZIP 88260

2 Your Internal Billing Reference First 24 characters will appear on invoice. August Monthly Samples

3 To Recipient's Name Phone 281, 530-5656

Company ALS LAB

Address 10450 STANDCLIFFE D. STE 210
We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept/Floor/Suite/Room

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4a Express Package Service * To most locations. Packages up to 150 lbs.

- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

4b Express Freight Service ** To most locations. Packages over 150 lbs.

- [ ] FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. CALL 1.800.332.0807 FedEx 1Day Freight Booking No.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
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6 Special Handling and Delivery Signature Options

- [ ] SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday — Print FedEx location address below. NOT available for FedEx First Overnight.
- [ ] HOLD Saturday — Print FedEx location address below. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.
- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

- [ ] Cargo Aircraft Only

Payment Bill to: Enter FedEx Acct. No. or Credit Card No. below.

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [X] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. 2470-7613-1 Exp. Date

Total Packages Total Weight Total Declared Value†

____ lbs. $ ____ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

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07-Sep-2012

Aaron Strange
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 748-6733
Fax: (575) 746-5421

Re: Lovington Lea Refining-Monthly Work Order: **12081148**

Dear Aaron,

ALS Environmental received 2 samples on 28-Aug-2012 09:10 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental 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 Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 24.

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

Sincerely,

Patricia L. Lynch

Electronically approved by: Jumoke M. Lawal

Patricia L. Lynch
Project Manager

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 07-Sep-12

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: **12081148**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
12081148-01	EAST WATER WELL	Water		8/27/2012 08:30	8/28/2012 09:10	☐
12081148-02	Trip Blank 080212-79	Water		8/27/2012	8/28/2012 09:10	☐

Client:	Navajo Refining Company
Project:	Lovington Lea Refining-Monthly
Work Order:	12081148

Case Narrative

Batch 63790, Semivolatile Organics; Insufficient sample to perform MS/MSD. LCS/LCSD provided as batch quality control.

Batch R134154, Volatile Organics, 12081211-03: MS/MSD/RPD is for an unrelated sample.

Batch 63836, Metals , Sample 12081077-05 : MS/MSD/RPD is for an unrelated sample.

ALS Environmental

Date: *07-Sep-12*

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 12081148
Sample ID: EAST WATER WELL
Lab ID: 12081148-01
Collection Date: 8/27/2012 08:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **8/31/2012**	Analyst: **JCJ**
Mercury	U		0.000200	mg/L	1	8/31/2012 04:08 PM
METALS			**SW6020**		Prep Date: **8/31/2012**	Analyst: **ALR**
Antimony	U		0.00500	mg/L	1	8/31/2012 10:37 PM
Arsenic	0.00485	J	0.00500	mg/L	1	8/31/2012 10:37 PM
Barium	**0.0944**		**0.00500**	**mg/L**	1	8/31/2012 10:37 PM
Beryllium	U		0.00200	mg/L	1	8/31/2012 10:37 PM
Cadmium	U		0.00200	mg/L	1	8/31/2012 10:37 PM
Chromium	**0.0152**		**0.00500**	**mg/L**	1	8/31/2012 10:37 PM
Cobalt	U		0.00500	mg/L	1	8/31/2012 10:37 PM
Lead	0.00454	J	0.00500	mg/L	1	8/31/2012 10:37 PM
Nickel	U		0.00500	mg/L	1	8/31/2012 10:37 PM
Selenium	0.00467	J	0.00500	mg/L	1	8/31/2012 10:37 PM
Silver	U		0.00500	mg/L	1	8/31/2012 10:37 PM
Vanadium	**0.0239**		**0.00500**	**mg/L**	1	8/31/2012 10:37 PM
Zinc	**0.0252**		**0.00500**	**mg/L**	1	8/31/2012 10:37 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **8/30/2012**	Analyst: **LG**
1,2-Dichlorobenzene	U		0.20	µg/L	1	8/31/2012 01:10 AM
1,3-Dichlorobenzene	U		0.20	µg/L	1	8/31/2012 01:10 AM
1,4-Dichlorobenzene	U		0.20	µg/L	1	8/31/2012 01:10 AM
1-Methylnaphthalene	U		0.20	µg/L	1	8/31/2012 01:10 AM
2,4-Dimethylphenol	U		0.20	µg/L	1	8/31/2012 01:10 AM
2,4-Dinitrophenol	U		1.0	µg/L	1	8/31/2012 01:10 AM
2-Methylphenol	U		0.20	µg/L	1	8/31/2012 01:10 AM
3&4-Methylphenol	U		0.20	µg/L	1	8/31/2012 01:10 AM
4-Nitrophenol	U		1.0	µg/L	1	8/31/2012 01:10 AM
Acenaphthylene	U		0.20	µg/L	1	8/31/2012 01:10 AM
Anthracene	U		0.20	µg/L	1	8/31/2012 01:10 AM
Benz(a)anthracene	U		0.20	µg/L	1	8/31/2012 01:10 AM
Benzenethiol	U		0.20	µg/L	1	8/31/2012 01:10 AM
Benzo(a)pyrene	U		0.20	µg/L	1	8/31/2012 01:10 AM
Benzo(b)fluoranthene	U		0.20	µg/L	1	8/31/2012 01:10 AM
Benzo(k)fluoranthene	U		0.20	µg/L	1	8/31/2012 01:10 AM
Bis(2-ethylhexyl)phthalate	U		0.20	µg/L	1	8/31/2012 01:10 AM
Chrysene	U		0.20	µg/L	1	8/31/2012 01:10 AM
Dibenz(a,h)acridine	U		0.20	µg/L	1	8/31/2012 01:10 AM
Dibenz(a,h)anthracene	U		0.20	µg/L	1	8/31/2012 01:10 AM
Diethyl phthalate	U		0.20	µg/L	1	8/31/2012 01:10 AM
Dimethyl phthalate	U		0.20	µg/L	1	8/31/2012 01:10 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly **Work Order:** 12081148
Sample ID: EAST WATER WELL **Lab ID:** 12081148-01
Collection Date: 8/27/2012 08:30 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Di-n-butyl phthalate	0.054	J	0.20	µg/L	1	8/31/2012 01:10 AM
Fluoranthene	U		0.20	µg/L	1	8/31/2012 01:10 AM
Fluorene	U		0.20	µg/L	1	8/31/2012 01:10 AM
Indene	U		0.20	µg/L	1	8/31/2012 01:10 AM
Indeno(1,2,3-cd)pyrene	U		0.20	µg/L	1	8/31/2012 01:10 AM
Naphthalene	U		0.20	µg/L	1	8/31/2012 01:10 AM
Phenanthrene	U		0.20	µg/L	1	8/31/2012 01:10 AM
Phenol	U		0.20	µg/L	1	8/31/2012 01:10 AM
Pyrene	U		0.20	µg/L	1	8/31/2012 01:10 AM
Pyridine	U		1.0	µg/L	1	8/31/2012 01:10 AM
Quinoline	U		0.20	µg/L	1	8/31/2012 01:10 AM
Surr: 2,4,6-Tribromophenol	*78.7*		*34-129*	*%REC*	1	8/31/2012 01:10 AM
Surr: 2-Fluorobiphenyl	*72.7*		*40-125*	*%REC*	1	8/31/2012 01:10 AM
Surr: 2-Fluorophenol	*71.4*		*20-120*	*%REC*	1	8/31/2012 01:10 AM
Surr: 4-Terphenyl-d14	*89.4*		*40-135*	*%REC*	1	8/31/2012 01:10 AM
Surr: Nitrobenzene-d5	*72.8*		*41-120*	*%REC*	1	8/31/2012 01:10 AM
Surr: Phenol-d6	*65.1*		*20-120*	*%REC*	1	8/31/2012 01:10 AM
VOLATILES			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	U		5.0	µg/L	1	8/31/2012 04:59 PM
1,1-Dichloroethane	U		5.0	µg/L	1	8/31/2012 04:59 PM
1,2-Dibromoethane	U		5.0	µg/L	1	8/31/2012 04:59 PM
1,2-Dichloroethane	U		5.0	µg/L	1	8/31/2012 04:59 PM
1,4-Dioxane	U		100	µg/L	1	8/31/2012 04:59 PM
2-Butanone	U		10	µg/L	1	8/31/2012 04:59 PM
Benzene	U		5.0	µg/L	1	8/31/2012 04:59 PM
Carbon disulfide	U		10	µg/L	1	8/31/2012 04:59 PM
Chlorobenzene	U		5.0	µg/L	1	8/31/2012 04:59 PM
Chloroform	U		5.0	µg/L	1	8/31/2012 04:59 PM
Ethylbenzene	U		5.0	µg/L	1	8/31/2012 04:59 PM
Methyl tert-butyl ether	U		5.0	µg/L	1	8/31/2012 04:59 PM
Styrene	U		5.0	µg/L	1	8/31/2012 04:59 PM
Tetrachloroethene	U		5.0	µg/L	1	8/31/2012 04:59 PM
Toluene	U		5.0	µg/L	1	8/31/2012 04:59 PM
Trichloroethene	U		5.0	µg/L	1	8/31/2012 04:59 PM
Xylenes, Total	U		15	µg/L	1	8/31/2012 04:59 PM
Surr: 1,2-Dichloroethane-d4	*102*		*70-125*	*%REC*	1	8/31/2012 04:59 PM
Surr: 4-Bromofluorobenzene	*93.2*		*72-125*	*%REC*	1	8/31/2012 04:59 PM
Surr: Dibromofluoromethane	*101*		*71-125*	*%REC*	1	8/31/2012 04:59 PM
Surr: Toluene-d8	*95.7*		*75-125*	*%REC*	1	8/31/2012 04:59 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *07-Sep-12*

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 12081148
Sample ID: EAST WATER WELL
Lab ID: 12081148-01
Collection Date: 8/27/2012 08:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, TOTAL - EPA 335.2			**E335.3**			Analyst: **EDG**
Cyanide	0.00900	J	0.0200	mg/L	1	9/5/2012 11:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **63833** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW4-083112-63833** Units: **mg/L** Analysis Date: **8/31/2012 03:09 PM**

Client ID: Run ID: **MERCURY_120831A** SeqNo: **2924905** Prep Date: **8/31/2012** 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: **GLCSW4-083112-63833** Units: **mg/L** Analysis Date: **8/31/2012 03:11 PM**

Client ID: Run ID: **MERCURY_120831A** SeqNo: **2924907** Prep Date: **8/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00436	0.00020	0.005	0	87.2	85-115	0			

MS Sample ID: **12081177-01DMS** Units: **mg/L** Analysis Date: **8/31/2012 03:17 PM**

Client ID: Run ID: **MERCURY_120831A** SeqNo: **2924910** Prep Date: **8/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00439	0.00020	0.005	-0.000005	87.9	85-115	0			

MSD Sample ID: **12081177-01DMSD** Units: **mg/L** Analysis Date: **8/31/2012 03:19 PM**

Client ID: Run ID: **MERCURY_120831A** SeqNo: **2924911** Prep Date: **8/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0044	0.00020	0.005	-0.000005	88.1	85-115	0.00439	0.228	20	

DUP Sample ID: **12081177-01DDUP** Units: **mg/L** Analysis Date: **8/31/2012 03:15 PM**

Client ID: Run ID: **MERCURY_120831A** SeqNo: **2924909** Prep Date: **8/31/2012** 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	-0.000005	0	20	

The following samples were analyzed in this batch: 12081148-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081148
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **63836** Instrument ID **ICPMS03** Method: **SW6020**

MBLK Sample ID: **MBLKW1-083112-63836** Units: **mg/L** Analysis Date: **8/31/2012 09:24 PM**

Client ID: Run ID: **ICPMS03_120831A** SeqNo: **2926137** Prep Date: **8/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.0050								
Arsenic	ND	0.0050								
Barium	0.001325	0.0050								J
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Lead	ND	0.0050								
Nickel	ND	0.0050								
Selenium	0.001248	0.0050								J
Silver	ND	0.0050								
Vanadium	ND	0.0050								
Zinc	0.003918	0.0050								J

LCS Sample ID: **MLCSW1-083112-63836** Units: **mg/L** Analysis Date: **8/31/2012 09:29 PM**

Client ID: Run ID: **ICPMS03_120831A** SeqNo: **2926138** Prep Date: **8/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04747	0.0050	0.05	0	94.9	80-120	0			
Arsenic	0.04885	0.0050	0.05	0	97.7	80-120	0			
Barium	0.04814	0.0050	0.05	0	96.3	80-120	0			
Beryllium	0.04905	0.0020	0.05	0	98.1	80-120	0			
Cadmium	0.04914	0.0020	0.05	0	98.3	80-120	0			
Chromium	0.04707	0.0050	0.05	0	94.1	80-120	0			
Cobalt	0.04693	0.0050	0.05	0	93.9	80-120	0			
Lead	0.0479	0.0050	0.05	0	95.8	80-120	0			
Nickel	0.04629	0.0050	0.05	0	92.6	80-120	0			
Selenium	0.05004	0.0050	0.05	0	100	80-120	0			
Silver	0.0471	0.0050	0.05	0	94.2	80-120	0			
Vanadium	0.04674	0.0050	0.05	0	93.5	80-120	0			
Zinc	0.05455	0.0050	0.05	0	109	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081148
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **63836** Instrument ID **ICPMS03** Method: **SW6020**

MS Sample ID: **12081077-05DMS** Units: **mg/L** Analysis Date: **8/31/2012 09:48 PM**

Client ID: Run ID: **ICPMS03_120831A** SeqNo: **2926142** Prep Date: **8/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04513	0.0050	0.05	-0.00006751	90.4	80-120	0			
Arsenic	0.05019	0.0050	0.05	0.001811	96.8	80-120	0			
Barium	0.3021	0.0050	0.05	0.2597	84.8	80-120	0			O
Beryllium	0.05222	0.0020	0.05	0.000353	104	80-120	0			
Cadmium	0.04751	0.0020	0.05	0.0007141	93.6	80-120	0			
Chromium	0.05143	0.0050	0.05	0.004621	93.6	80-120	0			
Cobalt	0.04853	0.0050	0.05	0.002582	91.9	80-120	0			
Lead	0.05059	0.0050	0.05	0.002933	95.3	80-120	0			
Nickel	0.04829	0.0050	0.05	0.003522	89.5	80-120	0			
Selenium	0.05025	0.0050	0.05	0.001949	96.6	80-120	0			
Silver	0.04356	0.0050	0.05	0.000318	86.5	80-120	0			
Vanadium	0.05891	0.0050	0.05	0.01204	93.7	80-120	0			
Zinc	0.08002	0.0050	0.05	0.01552	129	80-120	0			S

MSD Sample ID: **12081077-05DMSD** Units: **mg/L** Analysis Date: **8/31/2012 09:53 PM**

Client ID: Run ID: **ICPMS03_120831A** SeqNo: **2926143** Prep Date: **8/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04542	0.0050	0.05	-0.00006751	91	80-120	0.04513	0.641	15	
Arsenic	0.05087	0.0050	0.05	0.001811	98.1	80-120	0.05019	1.35	15	
Barium	0.3064	0.0050	0.05	0.2597	93.4	80-120	0.3021	1.41	15	O
Beryllium	0.05119	0.0020	0.05	0.000353	102	80-120	0.05222	1.99	15	
Cadmium	0.04713	0.0020	0.05	0.0007141	92.8	80-120	0.04751	0.803	15	
Chromium	0.05091	0.0050	0.05	0.004621	92.6	80-120	0.05143	1.02	15	
Cobalt	0.04705	0.0050	0.05	0.002582	88.9	80-120	0.04853	3.1	15	
Lead	0.04991	0.0050	0.05	0.002933	94	80-120	0.05059	1.35	15	
Nickel	0.0478	0.0050	0.05	0.003522	88.6	80-120	0.04829	1.02	15	
Selenium	0.05114	0.0050	0.05	0.001949	98.4	80-120	0.05025	1.76	15	
Silver	0.04256	0.0050	0.05	0.000318	84.5	80-120	0.04356	2.32	15	
Vanadium	0.06018	0.0050	0.05	0.01204	96.3	80-120	0.05891	2.13	15	
Zinc	0.06494	0.0050	0.05	0.01552	98.8	80-120	0.08002	20.8	15	R

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081148
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **63836** Instrument ID **ICPMS03** Method: **SW6020**

DUP Sample ID: **12081077-05DDUP** Units: **mg/L** Analysis Date: **8/31/2012 09:39 PM**

Client ID: Run ID: **ICPMS03_120831A** SeqNo: **2926140** Prep Date: **8/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.0050	0	0	0	0-0	-0.00006751	0	25	
Arsenic	0.001808	0.0050	0	0	0	0-0	0.001811	0	25	J
Barium	0.2601	0.0050	0	0	0	0-0	0.2597	0.154	25	
Beryllium	ND	0.0020	0	0	0	0-0	0.000353	0	25	
Cadmium	ND	0.0020	0	0	0	0-0	0.0007141	0	25	
Chromium	0.004787	0.0050	0	0	0	0-0	0.004621	0	25	J
Cobalt	0.002615	0.0050	0	0	0	0-0	0.002582	0	25	J
Lead	0.003146	0.0050	0	0	0	0-0	0.002933	0	25	J
Nickel	0.003659	0.0050	0	0	0	0-0	0.003522	0	25	J
Selenium	0.001633	0.0050	0	0	0	0-0	0.001949	0	25	J
Silver	ND	0.0050	0	0	0	0-0	0.000318	0	25	
Vanadium	0.01208	0.0050	0	0	0	0-0	0.01204	0.332	25	
Zinc	0.0163	0.0050	0	0	0	0-0	0.01552	4.9	25	

The following samples were analyzed in this batch: 12081148-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081148
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **63790** Instrument ID **SV-6** Method: **SW8270**

MBLK Sample ID: **SBLKW2-120830-63790** Units: **µg/L** Analysis Date: **8/30/2012 09:17 PM**

Client ID: Run ID: **SV-6_120830A** SeqNo: **2925035** Prep Date: **8/30/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	ND	0.20								
1,3-Dichlorobenzene	ND	0.20								
1,4-Dichlorobenzene	ND	0.20								
1-Methylnaphthalene	ND	0.20								
2,4-Dimethylphenol	ND	0.20								
2,4-Dinitrophenol	ND	1.0								
2-Methylphenol	ND	0.20								
3&4-Methylphenol	ND	0.20								
4-Nitrophenol	ND	1.0								
Acenaphthylene	ND	0.20								
Anthracene	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzenethiol	ND	0.20								
Benzo(a)pyrene	ND	0.20								
Benzo(b)fluoranthene	ND	0.20								
Benzo(k)fluoranthene	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.20								
Chrysene	ND	0.20								
Dibenz(a,h)acridine	ND	0.20								
Dibenz(a,h)anthracene	ND	0.20								
Diethyl phthalate	ND	0.20								
Dimethyl phthalate	ND	0.20								
Di-n-butyl phthalate	ND	0.20								
Fluoranthene	ND	0.20								
Fluorene	ND	0.20								
Indene	ND	0.20								
Indeno(1,2,3-cd)pyrene	ND	0.20								
Naphthalene	ND	0.20								
Phenanthrene	ND	0.20								
Phenol	ND	0.20								
Pyrene	ND	0.20								
Pyridine	ND	1.0								
Quinoline	ND	0.20								
Surr: 2,4,6-Tribromophenol	*3.956*	0.20	*5*	0	*79.1*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*4.25*	0.20	*5*	0	*85*	*40-125*	0			
Surr: 2-Fluorophenol	*4.009*	0.20	*5*	0	*80.2*	*20-120*	0			
Surr: 4-Terphenyl-d14	*5.068*	0.20	*5*	0	*101*	*40-135*	0			
Surr: Nitrobenzene-d5	*4.116*	0.20	*5*	0	*82.3*	*41-120*	0			
Surr: Phenol-d6	*3.825*	0.20	*5*	0	*76.5*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081148
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **63790** Instrument ID **SV-6** Method: **SW8270**

LCS Sample ID: **SLCSW2-120830-63790** Units: **µg/L** Analysis Date: **8/30/2012 09:36 PM**

Client ID: Run ID: **SV-6_120830A** SeqNo: **2925036** Prep Date: **8/30/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	4.146	0.20	5	0	82.9	45-120	0			
1,3-Dichlorobenzene	4.228	0.20	5	0	84.6	45-120	0			
1,4-Dichlorobenzene	3.962	0.20	5	0	79.2	40-120	0			
1-Methylnaphthalene	4.079	0.20	5	0	81.6	45-120	0			
2,4-Dimethylphenol	4.082	0.20	5	0	81.6	35-120	0			
2,4-Dinitrophenol	4.04	1.0	5	0	80.8	15-120	0			
2-Methylphenol	4.177	0.20	5	0	83.5	45-120	0			
3&4-Methylphenol	4.084	0.20	5	0	81.7	35-120	0			
4-Nitrophenol	3.708	1.0	5	0	74.2	30-130	0			
Acenaphthylene	4.299	0.20	5	0	86	47-120	0			
Anthracene	4.243	0.20	5	0	84.9	45-120	0			
Benz(a)anthracene	4.224	0.20	5	0	84.5	40-120	0			
Benzo(a)pyrene	4.374	0.20	5	0	87.5	45-120	0			
Benzo(b)fluoranthene	4.741	0.20	5	0	94.8	50-120	0			
Benzo(k)fluoranthene	4.486	0.20	5	0	89.7	45-127	0			
Bis(2-ethylhexyl)phthalate	4.267	0.20	5	0	85.3	40-139	0			
Chrysene	4.316	0.20	5	0	86.3	43-120	0			
Dibenz(a,h)anthracene	4.424	0.20	5	0	88.5	45-125	0			
Diethyl phthalate	4.225	0.20	5	0	84.5	41-120	0			
Dimethyl phthalate	4.277	0.20	5	0	85.5	40-122	0			
Di-n-butyl phthalate	4.254	0.20	5	0	85.1	45-123	0			
Fluoranthene	4.256	0.20	5	0	85.1	45-125	0			
Fluorene	4.482	0.20	5	0	89.6	49-120	0			
Indeno(1,2,3-cd)pyrene	4.522	0.20	5	0	90.4	41-128	0			
Naphthalene	4.097	0.20	5	0	81.9	45-120	0			
Phenanthrene	4.13	0.20	5	0	82.6	45-121	0			
Phenol	4.048	0.20	5	0	81	20-124	0			
Pyrene	4.18	0.20	5	0	83.6	40-130	0			
Pyridine	3.767	1.0	5	0	75.3	15-120	0			
Quinoline	3.828	0.20	5	0	76.6	45-120	0			
Surr: 2,4,6-Tribromophenol	*4.666*	0.20	*5*	0	*93.3*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*4.193*	0.20	*5*	0	*83.9*	*40-125*	0			
Surr: 2-Fluorophenol	*3.971*	0.20	*5*	0	*79.4*	*20-120*	0			
Surr: 4-Terphenyl-d14	*4.733*	0.20	*5*	0	*94.7*	*40-135*	0			
Surr: Nitrobenzene-d5	*4.027*	0.20	*5*	0	*80.5*	*41-120*	0			
Surr: Phenol-d6	*4.122*	0.20	*5*	0	*82.4*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081148
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **63790** Instrument ID **SV-6** Method: **SW8270**

LCS Sample ID: **SLCSW4-120830-63790** Units: **µg/L** Analysis Date: **8/30/2012 10:15 PM**

Client ID: Run ID: **SV-6_120830A** SeqNo: **2925039** Prep Date: **8/30/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzenethiol	4.09	0.20	5	0	81.8	11-110	0			
Surr: 2,4,6-Tribromophenol	*3.827*	0.20	*5*	0	*76.5*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.881*	0.20	*5*	0	*77.6*	*40-125*	0			
Surr: 2-Fluorophenol	*3.996*	0.20	*5*	0	*79.9*	*20-120*	0			
Surr: 4-Terphenyl-d14	*4.716*	0.20	*5*	0	*94.3*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.924*	0.20	*5*	0	*78.5*	*41-120*	0			
Surr: Phenol-d6	*3.82*	0.20	*5*	0	*76.4*	*20-120*	0			

LCS Sample ID: **SLCSW5-120830-63790** Units: **µg/L** Analysis Date: **8/30/2012 10:54 PM**

Client ID: Run ID: **SV-6_120830A** SeqNo: **2925040** Prep Date: **8/30/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibenz(a,h)acridine	4.245	0.20	5	0	84.9	35-140	0			
Indene	4.052	0.20	5	0	81	40-130	0			
Surr: 2,4,6-Tribromophenol	*3.921*	0.20	*5*	0	*78.4*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.803*	0.20	*5*	0	*76.1*	*40-125*	0			
Surr: 2-Fluorophenol	*3.923*	0.20	*5*	0	*78.5*	*20-120*	0			
Surr: 4-Terphenyl-d14	*4.579*	0.20	*5*	0	*91.6*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.925*	0.20	*5*	0	*78.5*	*41-120*	0			
Surr: Phenol-d6	*3.331*	0.20	*5*	0	*66.6*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081148
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **63790** Instrument ID **SV-6** Method: **SW8270**

LCSD Sample ID: **SLCSDW2-120830-63790** Units: **µg/L** Analysis Date: **8/30/2012 09:56 PM**

Client ID: Run ID: **SV-6_120830A** SeqNo: **2925037** Prep Date: **8/30/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	4.336	0.20	5	0	86.7	45-120	4.146	4.47	20	
1,3-Dichlorobenzene	4.174	0.20	5	0	83.5	45-120	4.228	1.28	20	
1,4-Dichlorobenzene	4.228	0.20	5	0	84.6	40-120	3.962	6.49	20	
1-Methylnaphthalene	4.116	0.20	5	0	82.3	45-120	4.079	0.898	20	
2,4-Dimethylphenol	4.247	0.20	5	0	84.9	35-120	4.082	3.97	20	
2,4-Dinitrophenol	4.325	1.0	5	0	86.5	15-120	4.04	6.82	20	
2-Methylphenol	4.093	0.20	5	0	81.9	45-120	4.177	2.02	20	
3&4-Methylphenol	3.963	0.20	5	0	79.3	35-120	4.084	2.99	20	
4-Nitrophenol	3.908	1.0	5	0	78.2	30-130	3.708	5.25	20	
Acenaphthylene	4.204	0.20	5	0	84.1	47-120	4.299	2.25	20	
Anthracene	4.382	0.20	5	0	87.6	45-120	4.243	3.23	20	
Benz(a)anthracene	4.149	0.20	5	0	83	40-120	4.224	1.78	20	
Benzo(a)pyrene	4.02	0.20	5	0	80.4	45-120	4.374	8.43	20	
Benzo(b)fluoranthene	4.291	0.20	5	0	85.8	50-120	4.741	9.96	20	
Benzo(k)fluoranthene	4.146	0.20	5	0	82.9	45-127	4.486	7.87	20	
Bis(2-ethylhexyl)phthalate	4.089	0.20	5	0	81.8	40-139	4.267	4.27	20	
Chrysene	4.216	0.20	5	0	84.3	43-120	4.316	2.35	20	
Dibenz(a,h)anthracene	4.217	0.20	5	0	84.3	45-125	4.424	4.79	20	
Diethyl phthalate	4.084	0.20	5	0	81.7	41-120	4.225	3.4	20	
Dimethyl phthalate	4.219	0.20	5	0	84.4	40-122	4.277	1.35	20	
Di-n-butyl phthalate	4.264	0.20	5	0	85.3	45-123	4.254	0.235	20	
Fluoranthene	4.292	0.20	5	0	85.8	45-125	4.256	0.846	20	
Fluorene	4.359	0.20	5	0	87.2	49-120	4.482	2.79	20	
Indeno(1,2,3-cd)pyrene	4.549	0.20	5	0	91	41-128	4.522	0.607	20	
Naphthalene	4.198	0.20	5	0	84	45-120	4.097	2.43	20	
Phenanthrene	4.2	0.20	5	0	84	45-121	4.13	1.67	20	
Phenol	3.975	0.20	5	0	79.5	20-124	4.048	1.82	20	
Pyrene	4.074	0.20	5	0	81.5	40-130	4.18	2.55	20	
Pyridine	3.971	1.0	5	0	79.4	15-120	3.767	5.29	20	
Quinoline	4.023	0.20	5	0	80.5	45-120	3.828	4.98	20	
Surr: 2,4,6-Tribromophenol	*4.4*	0.20	*5*	0	*88*	*34-129*	4.666	*5.89*	*0*	
Surr: 2-Fluorobiphenyl	*4.004*	0.20	*5*	0	*80.1*	*40-125*	4.193	*4.63*	*0*	
Surr: 2-Fluorophenol	*4.194*	0.20	*5*	0	*83.9*	*20-120*	3.971	*5.46*	*0*	
Surr: 4-Terphenyl-d14	*4.585*	0.20	*5*	0	*91.7*	*40-135*	4.733	*3.17*	*0*	
Surr: Nitrobenzene-d5	*4.228*	0.20	*5*	0	*84.6*	*41-120*	4.027	*4.87*	*0*	
Surr: Phenol-d6	*4.127*	0.20	*5*	0	*82.5*	*20-120*	4.122	*0.11*	*0*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081148
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **63790** Instrument ID **SV-6** Method: **SW8270**

LCSD Sample ID: **SLCSDW5-120830-63790** Units: **µg/L** Analysis Date: **8/30/2012 11:14 PM**

Client ID: Run ID: **SV-6_120830A** SeqNo: **2925042** Prep Date: **8/30/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibenz(a,h)acridine	4.603	0.20	5	0	92.1	35-140	4.245	8.09	20	
Indene	3.804	0.20	5	0	76.1	40-130	4.052	6.3	20	
Surr: 2,4,6-Tribromophenol	*3.965*	0.20	*5*	0	*79.3*	*34-129*	3.921	*1.1*	*0*	
Surr: 2-Fluorobiphenyl	*3.826*	0.20	*5*	0	*76.5*	*40-125*	3.803	*0.601*	*0*	
Surr: 2-Fluorophenol	*4.214*	0.20	*5*	0	*84.3*	*20-120*	3.923	*7.16*	*0*	
Surr: 4-Terphenyl-d14	*4.439*	0.20	*5*	0	*88.8*	*40-135*	4.579	*3.11*	*0*	
Surr: Nitrobenzene-d5	*3.944*	0.20	*5*	0	*78.9*	*41-120*	3.925	*0.482*	*0*	
Surr: Phenol-d6	*3.815*	0.20	*5*	0	*76.3*	*20-120*	3.331	*13.5*	*0*	

LCSD Sample ID: **SLCSDW4-12030-63790** Units: **µg/L** Analysis Date: **8/30/2012 11:33 PM**

Client ID: Run ID: **SV-6_120830A** SeqNo: **2925056** Prep Date: **8/30/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzenethiol	3.873	0.20	5	0	77.5	11-110	4.09	5.44	30	
Surr: 2,4,6-Tribromophenol	*3.317*	0.20	*5*	0	*66.3*	*34-129*	3.827	*14.3*	*0*	
Surr: 2-Fluorobiphenyl	*3.783*	0.20	*5*	0	*75.7*	*40-125*	3.881	*2.56*	*0*	
Surr: 2-Fluorophenol	*3.582*	0.20	*5*	0	*71.6*	*20-120*	3.996	*10.9*	*0*	
Surr: 4-Terphenyl-d14	*4.467*	0.20	*5*	0	*89.3*	*40-135*	4.716	*5.41*	*0*	
Surr: Nitrobenzene-d5	*3.83*	0.20	*5*	0	*76.6*	*41-120*	3.924	*2.42*	*0*	
Surr: Phenol-d6	*3.606*	0.20	*5*	0	*72.1*	*20-120*	3.82	*5.75*	*0*	

The following samples were analyzed in this batch: 12081148-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081148
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R134154** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-083112-R134154** Units: **µg/L** Analysis Date: **8/31/2012 11:02 AM**

Client ID: Run ID: **VOA1_120831A** SeqNo: **2925398** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dioxane	ND	100								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon disulfide	ND	10								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Ethylbenzene	ND	5.0								
Methyl tert-butyl ether	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
Trichloroethene	ND	5.0								
Xylenes, Total	ND	15								
Surr: 1,2-Dichloroethane-d4	*48.6*	5.0	*50*	0	*97.2*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.3*	5.0	*50*	0	*98.6*	*72-125*	0			
Surr: Dibromofluoromethane	*48.78*	5.0	*50*	0	*97.6*	*71-125*	0			
Surr: Toluene-d8	*48.45*	5.0	*50*	0	*96.9*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081148
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R134154** Instrument ID **VOA1** Method: **SW8260**

LCS Sample ID: **VLCSW-083112-R134154** Units: **µg/L** Analysis Date: **8/31/2012 10:09 AM**

Client ID: Run ID: **VOA1_120831A** SeqNo: **2925397** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.39	5.0	50	0	98.8	80-120	0			
1,1-Dichloroethane	48.35	5.0	50	0	96.7	76-120	0			
1,2-Dibromoethane	49.41	5.0	50	0	98.8	80-120	0			
1,2-Dichloroethane	52.49	5.0	50	0	105	78-120	0			
1,4-Dioxane	1229	100	1000	0	123	50-158	0			
2-Butanone	94.09	10	100	0	94.1	58-132	0			
Benzene	51.79	5.0	50	0	104	73-121	0			
Carbon disulfide	101.9	10	100	0	102	68-141	0			
Chlorobenzene	48.46	5.0	50	0	96.9	80-120	0			
Chloroform	48.9	5.0	50	0	97.8	80-120	0			
Ethylbenzene	50.46	5.0	50	0	101	80-120	0			
Methyl tert-butyl ether	49.32	5.0	50	0	98.6	73-121	0			
Styrene	48.54	5.0	50	0	97.1	80-120	0			
Tetrachloroethene	49.26	5.0	50	0	98.5	79-120	0			
Toluene	47.54	5.0	50	0	95.1	80-120	0			
Trichloroethene	56.77	5.0	50	0	114	80-120	0			
Xylenes, Total	148.1	15	150	0	98.8	80-120	0			
Surr: 1,2-Dichloroethane-d4	*46.14*	5.0	*50*	0	*92.3*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.99*	5.0	*50*	0	*102*	*72-125*	0			
Surr: Dibromofluoromethane	*48.58*	5.0	*50*	0	*97.2*	*71-125*	0			
Surr: Toluene-d8	*50.32*	5.0	*50*	0	*101*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081148
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R134154** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **12081211-03AMS** Units: **µg/L** Analysis Date: **8/31/2012 03:35 PM**

Client ID: Run ID: **VOA1_120831A** SeqNo: **2925407** Prep Date: DF: **2000**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	91790	10,000	100000	0	91.8	80-120	0			
1,1-Dichloroethane	92980	10,000	100000	0	93	76-120	0			
1,2-Dibromoethane	99910	10,000	100000	0	99.9	80-120	0			
1,2-Dichloroethane	96450	10,000	100000	0	96.5	78-120	0			
1,4-Dioxane	2716000	200,000	2000000	0	136	50-158	0			
2-Butanone	228000	20,000	200000	0	114	58-132	0			
Benzene	135200	10,000	100000	53130	82.1	73-121	0			
Carbon disulfide	197100	20,000	200000	0	98.5	68-141	0			
Chlorobenzene	273500	10,000	100000	221200	52.3	80-120	0			S
Chloroform	123000	10,000	100000	34130	88.9	80-120	0			
Ethylbenzene	85900	10,000	100000	0	85.9	80-120	0			
Methyl tert-butyl ether	104700	10,000	100000	0	105	73-121	0			
Styrene	94770	10,000	100000	0	94.8	80-120	0			
Tetrachloroethene	85870	10,000	100000	0	85.9	79-120	0			
Toluene	92820	10,000	100000	0	92.8	80-120	0			
Trichloroethene	90050	10,000	100000	0	90	80-120	0			
Xylenes, Total	273800	30,000	300000	0	91.3	80-120	0			
Surr: 1,2-Dichloroethane-d4	*96870*	10,000	*100000*	0	*96.9*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*102700*	10,000	*100000*	0	*103*	*72-125*	0			
Surr: Dibromofluoromethane	*100000*	10,000	*100000*	0	*100*	*71-125*	0			
Surr: Toluene-d8	*95690*	10,000	*100000*	0	*95.7*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081148
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R134154** Instrument ID **VOA1** Method: **SW8260**

MSD Sample ID: **12081211-03AMSD** Units: **µg/L** Analysis Date: **8/31/2012 04:03 PM**

Client ID: Run ID: **VOA1_120831A** SeqNo: **2925408** Prep Date: DF: **2000**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	88520	10,000	100000	0	88.5	80-120	91790	3.63	20	
1,1-Dichloroethane	96740	10,000	100000	0	96.7	76-120	92980	3.96	20	
1,2-Dibromoethane	102700	10,000	100000	0	103	80-120	99910	2.76	20	
1,2-Dichloroethane	95110	10,000	100000	0	95.1	78-120	96450	1.41	20	
1,4-Dioxane	3983000	200,000	2000000	0	199	50-158	2716000	37.8	20	SR
2-Butanone	239200	20,000	200000	0	120	58-132	228000	4.8	20	
Benzene	137800	10,000	100000	53130	84.6	73-121	135200	1.9	20	
Carbon disulfide	185200	20,000	200000	0	92.6	68-141	197100	6.2	20	
Chlorobenzene	285600	10,000	100000	221200	64.3	80-120	273500	4.3	20	S
Chloroform	126800	10,000	100000	34130	92.7	80-120	123000	3.03	20	
Ethylbenzene	85350	10,000	100000	0	85.3	80-120	85900	0.641	20	
Methyl tert-butyl ether	115000	10,000	100000	0	115	73-121	104700	9.39	20	
Styrene	92540	10,000	100000	0	92.5	80-120	94770	2.39	20	
Tetrachloroethene	80150	10,000	100000	0	80.1	79-120	85870	6.89	20	
Toluene	88750	10,000	100000	0	88.8	80-120	92820	4.48	20	
Trichloroethene	90370	10,000	100000	0	90.4	80-120	90050	0.358	20	
Xylenes, Total	271700	30,000	300000	0	90.6	80-120	273800	0.759	20	
Surr: 1,2-Dichloroethane-d4	*97770*	10,000	*100000*	0	*97.8*	*70-125*	96870	*0.925*	*20*	
Surr: 4-Bromofluorobenzene	*102400*	10,000	*100000*	0	*102*	*72-125*	102700	*0.346*	*20*	
Surr: Dibromofluoromethane	*100900*	10,000	*100000*	0	*101*	*71-125*	100000	*0.884*	*20*	
Surr: Toluene-d8	*101900*	10,000	*100000*	0	*102*	*75-125*	95690	*6.32*	*20*	

The following samples were analyzed in this batch: 12081148-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 12081148
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R134328** Instrument ID **UV-2450** Method: **E335.3** **(Dissolve)**

MBLK Sample ID: **WBLKW1-090512-R134328** Units: **mg/L** Analysis Date: **9/5/2012 11:00 AM**
Client ID: Run ID: **UV-2450_120905D** SeqNo: **2929088** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.004	0.020								J

LCS Sample ID: **WLCSW1-090512-R134328** Units: **mg/L** Analysis Date: **9/5/2012 11:00 AM**
Client ID: Run ID: **UV-2450_120905D** SeqNo: **2929089** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.168	0.020	0.2	0	84	80-120	0			

MS Sample ID: **12081148-01DMS** Units: **mg/L** Analysis Date: **9/5/2012 11:00 AM**
Client ID: **EAST WATER WELL** Run ID: **UV-2450_120905D** SeqNo: **2929091** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.172	0.020	0.2	0.009	81.5	80-120	0			

The following samples were analyzed in this batch: 12081148-01D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 07-Sep-12

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
WorkOrder: **12081148**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **28-Aug-12 09:10**

Work Order: **12081148** Received by: **JBA**

Checklist completed by Johnnie B. Allen (eSignature) 31-Aug-12 (Date) Reviewed by: (eSignature) (Date)

Matrices: 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):	2.7 C/uc	004	
Cooler(s)/Kit(s):	2837		
Date/Time sample(s) sent to storage:	8/28/12 17:00		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS Environmental

Cincinnati, OH +1 513 733 5336
Fort Collins, CO +1 970 490 1511
Everett, WA +1 425 356 2600
Holland, MI +1 616 399 6070

Chain of Custody Form

Page ____ of ____

COC ID: 64367

12081148

NAVAJO REFINING: Navajo Refining Company

Project: Navajo Lea Refinery Semi-Annual

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Lovington Lea Refining SkinnerList	A	VOC (8260) Skinner List
Work Order		Project Number	128809	B	LL SVOC (8270) Skinner List
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (6020/7000) Skinner List
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange	D	Total Cyanide
Address	501 East Main	Address	501 East Main	E	
				F	
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	
Phone	(575) 748-6733	Phone	(575) 748-6733	H	
Fax	(575) 746-5421	Fax	(575) 746-5421	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
23 of 24	East Water Well	8/24/12	8:30am	W		7	✓	✓	✓	✓							
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Andres Sandoval

Shipment Method:

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

Results Due Date:

Relinquished by: James Hodges — Date: 8/24/12 — Time: 8:30am

Received by:

Relinquished by: — Date: — Time:

Received by (Laboratory): 8/25/12 09:10

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

Checked by (Laboratory):

Notes: 10 Day 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 / EDD
- ☐ 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 Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental 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.

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

Date: 8-27-12
Name:
Company:

CUSTODY SEAL
Date: 8-27-12
Time: 2:30 p.m.
Received By: Fedex
Relinquished By: ALS KL

8989 8549 4753

FedEx Express US Airbill

FedEx Express MPS Label

8989 8549 4753 8989 8549 4753

FedEx Tracking Number for Shipper | Form ID No. 0260

10R42 422 4064

Folders Copy

1 From Please print and press hard. Date 8/27/12 Sender's FedEx Account Number 1129-9018-6

Sender's Name CATHY [redacted] TRUETT Phone (575) 396-5821

Company NAVAJO REFINING CO (LEA)

Address 7406 S MAIN ST Dept/Floor/Suite/Room

City LOVINGTON State NM ZIP 88260

2 Your Internal Billing Reference First 24 characters will appear on invoice. August Monthly Samples

3 To Recipient's Name Phone 281.530-5656

Company ALS LAB

HOLD Weekday Print FedEx location address below. NOT available for FedEx First Overnight.

HOLD Saturday Print FedEx location address below. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Address 10450 STANCLIFF RD. STE 210

We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept/Floor/Suite/Room

Address

Print FedEx location address here if HOLD option is selected.

City HOUSTON State TX ZIP 77099-4338

0408719506

4a Express Package Service * To most locations. Packages up to 150 lbs.

- [x] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

4b Express Freight Service ** To most locations. Packages over 150 lbs.

- [ ] FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. CALL 1.800.332.0807 FedEx 1Day Freight Booking No.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [x] Other

6 Special Handling and Delivery Signature Options

- [ ] SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods? One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

- [ ] Cargo Aircraft Only

7 Payment Bill to:

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [x] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Enter FedEx Acct. No. or Credit Card No. below.

FedEx Acct. No. / Credit Card No. 2470 - 7613 - 1 Exp. Date

Total Packages | Total Weight | Total Declared Value†

____ ____ lbs. $ ____ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

553

Schedule a pickup at fedex.com
Simplify your shipping. Manage your account. Access all the tools you need.

10-Oct-2012

Aaron Strange
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 748-6733
Fax: (575) 746-5421

Re: Lovington Lea Refining Skinner List Work Order: **1209957**

Dear Aaron,

ALS Environmental received 2 samples on 27-Sep-2012 11:50 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental 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 Environmental. 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,

Patricia L. Lynch

Electronically approved by: Luke F. Hernandez

Patricia L. Lynch
Project Manager

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 10-Oct-12

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List
Work Order: **1209957**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1209957-01	East Water Well	Water		9/26/2012 07:30	9/27/2012 11:50	☐
1209957-02	Trip Blank	Water		9/26/2012	9/27/2012 11:50	☑

Client:	Navajo Refining Company
Project:	Lovington Lea Refining Skinner List
Work Order:	1209957

Case Narrative

Batch 64608, Low-Level Semivolatile Organics : LCSD RPD was outside the control limits for Pyridine. The individual recoveries were in control.

Batch 64608, Low-Level Semivolatile Organics : LCSD RPD was outside the control limits for Indene. The individual recoveries were in control.

Batch R135992, Volatile Organics, Sample 12091019-03: MS is for an unrelated sample.

Batch R135992, Volatile Organics, Sample 12091019-03 : MS/MSD RPD is for an unrelated sample.

ALS Environmental

Date: *10-Oct-12*

Client: Navajo Refining Company

Project: Lovington Lea Refining Skinner List **Work Order:** 1209957

Sample ID: East Water Well **Lab ID:** 1209957-01

Collection Date: 9/26/2012 07:30 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **9/28/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	9/28/2012 03:55 PM
METALS			**SW6020**		Prep Date: **10/1/2012**	Analyst: **ALR**
Antimony	ND		0.00500	mg/L	1	10/2/2012 04:02 AM
Arsenic	**0.00622**		**0.00500**	**mg/L**	1	10/2/2012 04:02 AM
Barium	**0.220**		**0.00500**	**mg/L**	1	10/2/2012 04:02 AM
Beryllium	ND		0.00200	mg/L	1	10/2/2012 04:02 AM
Cadmium	ND		0.00200	mg/L	1	10/2/2012 04:02 AM
Chromium	**0.0180**		**0.00500**	**mg/L**	1	10/2/2012 04:02 AM
Cobalt	ND		0.00500	mg/L	1	10/2/2012 04:02 AM
Lead	**0.0365**		**0.00500**	**mg/L**	1	10/2/2012 04:02 AM
Nickel	ND		0.00500	mg/L	1	10/2/2012 04:02 AM
Selenium	**0.00518**		**0.00500**	**mg/L**	1	10/2/2012 05:27 PM
Silver	ND		0.00500	mg/L	1	10/2/2012 04:02 AM
Vanadium	**0.0338**		**0.00500**	**mg/L**	1	10/2/2012 04:02 AM
Zinc	**0.268**		**0.00500**	**mg/L**	1	10/2/2012 04:02 AM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **9/29/2012**	Analyst: **ACN**
1,2-Dichlorobenzene	ND		0.20	µg/L	1	10/1/2012 09:33 PM
1,3-Dichlorobenzene	ND		0.20	µg/L	1	10/1/2012 09:33 PM
1,4-Dichlorobenzene	ND		0.20	µg/L	1	10/1/2012 09:33 PM
1-Methylnaphthalene	ND		0.20	µg/L	1	10/1/2012 09:33 PM
2,4-Dimethylphenol	ND		0.20	µg/L	1	10/1/2012 09:33 PM
2,4-Dinitrophenol	ND		1.0	µg/L	1	10/1/2012 09:33 PM
2-Methylphenol	ND		0.20	µg/L	1	10/1/2012 09:33 PM
3&4-Methylphenol	ND		0.20	µg/L	1	10/1/2012 09:33 PM
4-Nitrophenol	ND		1.0	µg/L	1	10/1/2012 09:33 PM
Acenaphthylene	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Anthracene	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Benz(a)anthracene	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Benzenethiol	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Benzo(a)pyrene	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Bis(2-ethylhexyl)phthalate	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Chrysene	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Dibenz(a,h)acridine	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Diethyl phthalate	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Dimethyl phthalate	ND		0.20	µg/L	1	10/1/2012 09:33 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Oct-12*

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List
Work Order: 1209957
Sample ID: East Water Well
Lab ID: 1209957-01
Collection Date: 9/26/2012 07:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Di-n-butyl phthalate	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Fluoranthene	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Fluorene	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Indene	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Naphthalene	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Phenanthrene	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Phenol	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Pyrene	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Pyridine	ND		1.0	µg/L	1	10/1/2012 09:33 PM
Quinoline	ND		0.20	µg/L	1	10/1/2012 09:33 PM
Surr: 2,4,6-Tribromophenol	*37.2*		*34-129*	*%REC*	1	10/1/2012 09:33 PM
Surr: 2-Fluorobiphenyl	*53.9*		*40-125*	*%REC*	1	10/1/2012 09:33 PM
Surr: 2-Fluorophenol	*55.4*		*20-120*	*%REC*	1	10/1/2012 09:33 PM
Surr: 4-Terphenyl-d14	*87.8*		*40-135*	*%REC*	1	10/1/2012 09:33 PM
Surr: Nitrobenzene-d5	*62.1*		*41-120*	*%REC*	1	10/1/2012 09:33 PM
Surr: Phenol-d6	*42.1*		*20-120*	*%REC*	1	10/1/2012 09:33 PM
VOLATILES - SW8260C			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		5.0	µg/L	1	10/1/2012 06:20 PM
1,1-Dichloroethane	ND		5.0	µg/L	1	10/1/2012 06:20 PM
1,2-Dibromoethane	ND		5.0	µg/L	1	10/1/2012 06:20 PM
1,2-Dichloroethane	ND		5.0	µg/L	1	10/1/2012 06:20 PM
1,4-Dioxane	ND		100	µg/L	1	10/1/2012 06:20 PM
2-Butanone	ND		10	µg/L	1	10/1/2012 06:20 PM
Benzene	ND		5.0	µg/L	1	10/1/2012 06:20 PM
Carbon disulfide	ND		10	µg/L	1	10/1/2012 06:20 PM
Chlorobenzene	ND		5.0	µg/L	1	10/1/2012 06:20 PM
Chloroform	ND		5.0	µg/L	1	10/1/2012 06:20 PM
Ethylbenzene	ND		5.0	µg/L	1	10/1/2012 06:20 PM
Methyl tert-butyl ether	ND		5.0	µg/L	1	10/1/2012 06:20 PM
Styrene	ND		5.0	µg/L	1	10/1/2012 06:20 PM
Tetrachloroethene	ND		5.0	µg/L	1	10/1/2012 06:20 PM
Toluene	ND		5.0	µg/L	1	10/1/2012 06:20 PM
Trichloroethene	ND		5.0	µg/L	1	10/1/2012 06:20 PM
Xylenes, Total	ND		15	µg/L	1	10/1/2012 06:20 PM
Surr: 1,2-Dichloroethane-d4	*99.2*		*70-125*	*%REC*	1	10/1/2012 06:20 PM
Surr: 4-Bromofluorobenzene	*101*		*72-125*	*%REC*	1	10/1/2012 06:20 PM
Surr: Dibromofluoromethane	*101*		*71-125*	*%REC*	1	10/1/2012 06:20 PM
Surr: Toluene-d8	*94.6*		*75-125*	*%REC*	1	10/1/2012 06:20 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Oct-12*

Client: Navajo Refining Company

Project: Lovington Lea Refining Skinner List **Work Order:** 1209957

Sample ID: East Water Well **Lab ID:** 1209957-01

Collection Date: 9/26/2012 07:30 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE - SW9014			**SW9014**			Analyst: **EDG**
Cyanide	ND		0.0200	mg/L	1	10/9/2012 10:15 AM
Cyanide, Amenable to Chlorination	ND		0.0200	mg/L	1	10/9/2012 10:15 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Batch ID: **64584** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW1-092812-64584** Units: **mg/L** Analysis Date: **9/28/2012 03:25 PM**

Client ID: Run ID: **MERCURY_120927A** SeqNo: **2962108** Prep Date: **9/28/2012** 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: **GLCSW1-092812-64584** Units: **mg/L** Analysis Date: **9/28/2012 03:33 PM**

Client ID: Run ID: **MERCURY_120927A** SeqNo: **2962109** Prep Date: **9/28/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0047	0.00020	0.005	0	94	85-115	0			

MS Sample ID: **1209930-01BMS** Units: **mg/L** Analysis Date: **9/28/2012 03:44 PM**

Client ID: Run ID: **MERCURY_120927A** SeqNo: **2962112** Prep Date: **9/28/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00448	0.00020	0.005	0	89.6	85-115	0			

MSD Sample ID: **1209930-01BMSD** Units: **mg/L** Analysis Date: **9/28/2012 03:46 PM**

Client ID: Run ID: **MERCURY_120927A** SeqNo: **2962113** Prep Date: **9/28/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00446	0.00020	0.005	0	89.2	85-115	0.00448	0.447	20	

DUP Sample ID: **1209930-01BDUP** Units: **mg/L** Analysis Date: **9/28/2012 03:42 PM**

Client ID: Run ID: **MERCURY_120927A** SeqNo: **2962111** Prep Date: **9/28/2012** 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	0	20	

The following samples were analyzed in this batch: 1209957-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209957
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **64628** Instrument ID **ICPMS03** Method: **SW6020**

MBLK Sample ID: **MBLKW1-100112-64628** Units: **mg/L** Analysis Date: **10/2/2012 02:11 AM**
Client ID: Run ID: **ICPMS03_121001A** SeqNo: **2964686** Prep Date: **10/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.0050								
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Lead	ND	0.0050								
Nickel	ND	0.0050								
Silver	ND	0.0050								
Vanadium	ND	0.0050								
Zinc	0.002591	0.0050								J

MBLK Sample ID: **MBLKW1-100112-64628** Units: **mg/L** Analysis Date: **10/2/2012 03:54 PM**
Client ID: Run ID: **ICPMS03_121002A** SeqNo: **2965818** Prep Date: **10/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.001217	0.0050								J

LCS Sample ID: **MLCSW1-100112-64628** Units: **mg/L** Analysis Date: **10/2/2012 02:16 AM**
Client ID: Run ID: **ICPMS03_121001A** SeqNo: **2964687** Prep Date: **10/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.054	0.0050	0.05	0	108	80-120	0			
Arsenic	0.05353	0.0050	0.05	0	107	80-120	0			
Barium	0.05902	0.0050	0.05	0	118	80-120	0			
Beryllium	0.05286	0.0020	0.05	0	106	80-120	0			
Cadmium	0.05178	0.0020	0.05	0	104	80-120	0			
Chromium	0.05219	0.0050	0.05	0	104	80-120	0			
Cobalt	0.0523	0.0050	0.05	0	105	80-120	0			
Lead	0.05399	0.0050	0.05	0	108	80-120	0			
Nickel	0.05168	0.0050	0.05	0	103	80-120	0			
Silver	0.05362	0.0050	0.05	0	107	80-120	0			
Vanadium	0.05275	0.0050	0.05	0	106	80-120	0			
Zinc	0.05452	0.0050	0.05	0	109	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209957
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **64628** Instrument ID **ICPMS03** Method: **SW6020**

LCS Sample ID: **MLCSW1-100112-64628** Units: **mg/L** Analysis Date: **10/2/2012 03:58 PM**
Client ID: Run ID: **ICPMS03_121002A** SeqNo: **2965820** Prep Date: **10/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.05098	0.0050	0.05	0	102	80-120	0			

MS Sample ID: **12091000-04DMS** Units: **mg/L** Analysis Date: **10/2/2012 02:35 AM**
Client ID: Run ID: **ICPMS03_121001A** SeqNo: **2964691** Prep Date: **10/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05311	0.0050	0.05	-0.000182	107	80-120	0			
Arsenic	0.05363	0.0050	0.05	-0.0001733	108	80-120	0			
Barium	0.05576	0.0050	0.05	-0.0001217	112	80-120	0			
Beryllium	0.05021	0.0020	0.05	0.0003118	99.8	80-120	0			
Cadmium	0.04998	0.0020	0.05	0.0002534	99.5	80-120	0			
Chromium	0.05194	0.0050	0.05	-0.0003362	105	80-120	0			
Cobalt	0.05221	0.0050	0.05	-0.000383	105	80-120	0			
Lead	0.05082	0.0050	0.05	-0.0004451	103	80-120	0			
Nickel	0.05322	0.0050	0.05	-0.00004958	107	80-120	0			
Silver	0.05186	0.0050	0.05	-0.0004337	105	80-120	0			
Vanadium	0.05225	0.0050	0.05	-0.0003731	105	80-120	0			
Zinc	0.05402	0.0050	0.05	0.001728	105	80-120	0			

MS Sample ID: **12091000-04DMS** Units: **mg/L** Analysis Date: **10/2/2012 04:18 PM**
Client ID: Run ID: **ICPMS03_121002A** SeqNo: **2965827** Prep Date: **10/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.04841	0.0050	0.05	0.001162	94.5	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209957
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **64628** Instrument ID **ICPMS03** Method: **SW6020**

MSD Sample ID: **12091000-04DMSD** Units: **mg/L** Analysis Date: **10/2/2012 02:40 AM**
Client ID: Run ID: **ICPMS03_121001A** SeqNo: **2964692** Prep Date: **10/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05402	0.0050	0.05	-0.000182	108	80-120	0.05311	1.7	15	
Arsenic	0.05462	0.0050	0.05	-0.0001733	110	80-120	0.05363	1.83	15	
Barium	0.05863	0.0050	0.05	-0.0001217	118	80-120	0.05576	5.02	15	
Beryllium	0.05426	0.0020	0.05	0.0003118	108	80-120	0.05021	7.75	15	
Cadmium	0.05227	0.0020	0.05	0.0002534	104	80-120	0.04998	4.48	15	
Chromium	0.0525	0.0050	0.05	-0.0003362	106	80-120	0.05194	1.07	15	
Cobalt	0.0527	0.0050	0.05	-0.000383	106	80-120	0.05221	0.934	15	
Lead	0.05446	0.0050	0.05	-0.0004451	110	80-120	0.05082	6.91	15	
Nickel	0.0517	0.0050	0.05	-0.00004958	103	80-120	0.05322	2.9	15	
Silver	0.05494	0.0050	0.05	-0.0004337	111	80-120	0.05186	5.77	15	
Vanadium	0.05284	0.0050	0.05	-0.0003731	106	80-120	0.05225	1.12	15	
Zinc	0.05352	0.0050	0.05	0.001728	104	80-120	0.05402	0.93	15	

MSD Sample ID: **12091000-04DMSD** Units: **mg/L** Analysis Date: **10/2/2012 04:23 PM**
Client ID: Run ID: **ICPMS03_121002A** SeqNo: **2965828** Prep Date: **10/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.05168	0.0050	0.05	0.001162	101	80-120	0.04841	6.53	15	

DUP Sample ID: **12091000-04DDUP** Units: **mg/L** Analysis Date: **10/2/2012 02:25 AM**
Client ID: Run ID: **ICPMS03_121001A** SeqNo: **2964689** Prep Date: **10/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.0050	0	0	0	0-0	-0.000182	0	25	
Arsenic	ND	0.0050	0	0	0	0-0	-0.0001733	0	25	
Barium	ND	0.0050	0	0	0	0-0	-0.0001217	0	25	
Beryllium	ND	0.0020	0	0	0	0-0	0.0003118	0	25	
Cadmium	ND	0.0020	0	0	0	0-0	0.0002534	0	25	
Chromium	ND	0.0050	0	0	0	0-0	-0.0003362	0	25	
Cobalt	ND	0.0050	0	0	0	0-0	-0.000383	0	25	
Lead	ND	0.0050	0	0	0	0-0	-0.0004451	0	25	
Nickel	ND	0.0050	0	0	0	0-0	-0.00004958	0	25	
Silver	ND	0.0050	0	0	0	0-0	-0.0004337	0	25	
Vanadium	ND	0.0050	0	0	0	0-0	-0.0003731	0	25	
Zinc	0.003601	0.0050	0	0	0	0-0	0.001728	0	25	J

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209957
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **64628** Instrument ID **ICPMS03** Method: **SW6020**

DUP Sample ID: **12091000-04DDUP** Units: **mg/L** Analysis Date: **10/2/2012 04:08 PM**

Client ID: Run ID: **ICPMS03_121002A** SeqNo: **2965823** Prep Date: **10/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	ND	0.0050	0	0	0	0-0	0.001162	0	25	

The following samples were analyzed in this batch: 1209957-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209957
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **64608** Instrument ID **SV-4** Method: **SW8270**

MBLK Sample ID: **SBLKW2-120929-64608** Units: **µg/L** Analysis Date: **10/1/2012 06:51 PM**

Client ID: Run ID: **SV-4_120929A** SeqNo: **2966688** Prep Date: **9/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	ND	0.20								
1,3-Dichlorobenzene	ND	0.20								
1,4-Dichlorobenzene	ND	0.20								
1-Methylnaphthalene	ND	0.20								
2,4-Dimethylphenol	ND	0.20								
2,4-Dinitrophenol	ND	1.0								
2-Methylphenol	ND	0.20								
3&4-Methylphenol	ND	0.20								
4-Nitrophenol	ND	1.0								
Acenaphthylene	ND	0.20								
Anthracene	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzenethiol	ND	0.20								
Benzo(a)pyrene	ND	0.20								
Benzo(b)fluoranthene	ND	0.20								
Benzo(k)fluoranthene	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.20								
Chrysene	ND	0.20								
Dibenz(a,h)acridine	ND	0.20								
Dibenz(a,h)anthracene	ND	0.20								
Diethyl phthalate	ND	0.20								
Dimethyl phthalate	ND	0.20								
Di-n-butyl phthalate	ND	0.20								
Fluoranthene	ND	0.20								
Fluorene	ND	0.20								
Indene	ND	0.20								
Indeno(1,2,3-cd)pyrene	ND	0.20								
Naphthalene	ND	0.20								
Phenanthrene	ND	0.20								
Phenol	ND	0.20								
Pyrene	ND	0.20								
Pyridine	ND	1.0								
Quinoline	ND	0.20								
Surr: 2,4,6-Tribromophenol	*2.156*	0.20	*5*	0	*43.1*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*4.33*	0.20	*5*	0	*86.6*	*40-125*	0			
Surr: 2-Fluorophenol	*3.997*	0.20	*5*	0	*79.9*	*20-120*	0			
Surr: 4-Terphenyl-d14	*5.17*	0.20	*5*	0	*103*	*40-135*	0			
Surr: Nitrobenzene-d5	*4.933*	0.20	*5*	0	*98.7*	*41-120*	0			
Surr: Phenol-d6	*4.249*	0.20	*5*	0	*85*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209957
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **64608** Instrument ID **SV-4** Method: **SW8270**

LCS Sample ID: **SLCSW2-120929-64608** Units: **µg/L** Analysis Date: **9/29/2012 03:27 PM**

Client ID: Run ID: **SV-4_120929A** SeqNo: **2966683** Prep Date: **9/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	3.899	0.20	5	0	78	45-120	0			
1,3-Dichlorobenzene	4.001	0.20	5	0	80	45-120	0			
1,4-Dichlorobenzene	3.715	0.20	5	0	74.3	40-120	0			
1-Methylnaphthalene	4.069	0.20	5	0	81.4	45-120	0			
2,4-Dimethylphenol	3.814	0.20	5	0	76.3	35-120	0			
2,4-Dinitrophenol	1.933	1.0	5	0	38.7	15-120	0			
2-Methylphenol	3.832	0.20	5	0	76.6	45-120	0			
3&4-Methylphenol	3.235	0.20	5	0	64.7	35-120	0			
4-Nitrophenol	2.865	1.0	5	0	57.3	30-130	0			
Acenaphthylene	3.785	0.20	5	0	75.7	47-120	0			
Anthracene	4.062	0.20	5	0	81.2	45-120	0			
Benz(a)anthracene	3.834	0.20	5	0	76.7	40-120	0			
Benzo(a)pyrene	4.108	0.20	5	0	82.2	45-120	0			
Benzo(b)fluoranthene	4.758	0.20	5	0	95.2	50-120	0			
Benzo(k)fluoranthene	4.649	0.20	5	0	93	45-127	0			
Bis(2-ethylhexyl)phthalate	3.711	0.20	5	0	74.2	40-139	0			
Chrysene	4.428	0.20	5	0	88.6	43-120	0			
Dibenz(a,h)anthracene	3.554	0.20	5	0	71.1	45-125	0			
Diethyl phthalate	3.84	0.20	5	0	76.8	41-120	0			
Dimethyl phthalate	3.973	0.20	5	0	79.5	40-122	0			
Di-n-butyl phthalate	3.88	0.20	5	0	77.6	45-123	0			
Fluoranthene	4.07	0.20	5	0	81.4	45-125	0			
Fluorene	4.097	0.20	5	0	81.9	49-120	0			
Indeno(1,2,3-cd)pyrene	3.315	0.20	5	0	66.3	41-128	0			
Naphthalene	4	0.20	5	0	80	45-120	0			
Phenanthrene	3.995	0.20	5	0	79.9	45-121	0			
Phenol	3.574	0.20	5	0	71.5	20-124	0			
Pyrene	4.129	0.20	5	0	82.6	40-130	0			
Pyridine	3.221	1.0	5	0	64.4	15-120	0			
Quinoline	3.997	0.20	5	0	79.9	45-120	0			
Surr: 2,4,6-Tribromophenol	*3.759*	0.20	*5*	0	*75.2*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*4.115*	0.20	*5*	0	*82.3*	*40-125*	0			
Surr: 2-Fluorophenol	*3.978*	0.20	*5*	0	*79.6*	*20-120*	0			
Surr: 4-Terphenyl-d14	*4.891*	0.20	*5*	0	*97.8*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.87*	0.20	*5*	0	*77.4*	*41-120*	0			
Surr: Phenol-d6	*3.756*	0.20	*5*	0	*75.1*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **64608** Instrument ID **SV-4** Method: **SW8270**

LCS Sample ID: **SLCSW3-120929-64608** Units: **µg/L** Analysis Date: **9/29/2012 04:07 PM**

Client ID: Run ID: **SV-4_120929A** SeqNo: **2966685** Prep Date: **9/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzenethiol	4.468	0.20	5	0	89.4	11-110	0			
Surr: 2,4,6-Tribromophenol	*2.607*	0.20	*5*	0	*52.1*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*4.586*	0.20	*5*	0	*91.7*	*40-125*	0			
Surr: 2-Fluorophenol	*4.681*	0.20	*5*	0	*93.6*	*20-120*	0			
Surr: 4-Terphenyl-d14	*5.166*	0.20	*5*	0	*103*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.952*	0.20	*5*	0	*79*	*41-120*	0			
Surr: Phenol-d6	*3.723*	0.20	*5*	0	*74.5*	*20-120*	0			

LCS Sample ID: **SLCSW4-120929-64608** Units: **µg/L** Analysis Date: **9/29/2012 04:48 PM**

Client ID: Run ID: **SV-4_120929A** SeqNo: **2966687** Prep Date: **9/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibenz(a,h)acridine	3.524	0.20	5	0	70.5	35-140	0			
Indene	2.94	0.20	5	0	58.8	40-130	0			
Surr: 2,4,6-Tribromophenol	*1.8*	0.20	*5*	0	*36*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.815*	0.20	*5*	0	*76.3*	*40-125*	0			
Surr: 2-Fluorophenol	*3.476*	0.20	*5*	0	*69.5*	*20-120*	0			
Surr: 4-Terphenyl-d14	*4.488*	0.20	*5*	0	*89.8*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.628*	0.20	*5*	0	*72.6*	*41-120*	0			
Surr: Phenol-d6	*3.212*	0.20	*5*	0	*64.2*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209957
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **64608** Instrument ID **SV-4** Method: **SW8270**

LCSD Sample ID: **SLCSDW2-120929-64608** Units: **µg/L** Analysis Date: **9/29/2012 03:47 PM**

Client ID: Run ID: **SV-4_120929A** SeqNo: **2966684** Prep Date: **9/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	4.008	0.20	5	0	80.2	45-120	3.899	2.76	20	
1,3-Dichlorobenzene	4.046	0.20	5	0	80.9	45-120	4.001	1.12	20	
1,4-Dichlorobenzene	3.988	0.20	5	0	79.8	40-120	3.715	7.09	20	
1-Methylnaphthalene	4.119	0.20	5	0	82.4	45-120	4.069	1.22	20	
2,4-Dimethylphenol	3.895	0.20	5	0	77.9	35-120	3.814	2.08	20	
2,4-Dinitrophenol	2.059	1.0	5	0	41.2	15-120	1.933	6.32	50	
2-Methylphenol	3.867	0.20	5	0	77.3	45-120	3.832	0.891	20	
3&4-Methylphenol	3.557	0.20	5	0	71.1	35-120	3.235	9.47	20	
4-Nitrophenol	2.514	1.0	5	0	50.3	30-130	2.865	13.1	20	
Acenaphthylene	3.856	0.20	5	0	77.1	47-120	3.785	1.86	20	
Anthracene	3.937	0.20	5	0	78.7	45-120	4.062	3.14	20	
Benz(a)anthracene	3.853	0.20	5	0	77.1	40-120	3.834	0.503	20	
Benzo(a)pyrene	4.158	0.20	5	0	83.2	45-120	4.108	1.21	20	
Benzo(b)fluoranthene	4.889	0.20	5	0	97.8	50-120	4.758	2.71	20	
Benzo(k)fluoranthene	4.454	0.20	5	0	89.1	45-127	4.649	4.29	20	
Bis(2-ethylhexyl)phthalate	3.692	0.20	5	0	73.8	40-139	3.711	0.518	20	
Chrysene	4.461	0.20	5	0	89.2	43-120	4.428	0.724	20	
Dibenz(a,h)anthracene	3.53	0.20	5	0	70.6	45-125	3.554	0.685	20	
Diethyl phthalate	3.84	0.20	5	0	76.8	41-120	3.84	0.00068	20	
Dimethyl phthalate	3.913	0.20	5	0	78.3	40-122	3.973	1.52	20	
Di-n-butyl phthalate	3.708	0.20	5	0	74.2	45-123	3.88	4.53	20	
Fluoranthene	4.051	0.20	5	0	81	45-125	4.07	0.468	20	
Fluorene	4.081	0.20	5	0	81.6	49-120	4.097	0.396	20	
Indeno(1,2,3-cd)pyrene	3.26	0.20	5	0	65.2	41-128	3.315	1.68	20	
Naphthalene	4.059	0.20	5	0	81.2	45-120	4	1.47	20	
Phenanthrene	3.781	0.20	5	0	75.6	45-121	3.995	5.51	20	
Phenol	3.627	0.20	5	0	72.5	20-124	3.574	1.46	20	
Pyrene	4.201	0.20	5	0	84	40-130	4.129	1.73	20	
Pyridine	4.121	1.0	5	0	82.4	15-120	3.221	24.5	20	R
Quinoline	4.098	0.20	5	0	82	45-120	3.997	2.49	20	
Surr: 2,4,6-Tribromophenol	*3.331*	0.20	*5*	0	*66.6*	*34-129*	3.759	*12.1*	*0*	
Surr: 2-Fluorobiphenyl	*4.101*	0.20	*5*	0	*82*	*40-125*	4.115	*0.352*	*0*	
Surr: 2-Fluorophenol	*4.104*	0.20	*5*	0	*82.1*	*20-120*	3.978	*3.12*	*0*	
Surr: 4-Terphenyl-d14	*4.827*	0.20	*5*	0	*96.5*	*40-135*	4.891	*1.31*	*0*	
Surr: Nitrobenzene-d5	*3.728*	0.20	*5*	0	*74.6*	*41-120*	3.87	*3.76*	*0*	
Surr: Phenol-d6	*3.988*	0.20	*5*	0	*79.8*	*20-120*	3.756	*5.97*	*0*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209957
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **64608** Instrument ID **SV-4** Method: **SW8270**

LCSD Sample ID: **SLCSDW3-120929-64608** Units: **µg/L** Analysis Date: **9/29/2012 04:27 PM**

Client ID: Run ID: **SV-4_120929A** SeqNo: **2966686** Prep Date: **9/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzenethiol	3.318	0.20	5	0	66.4	11-110	4.468	29.6	30	
Surr: 2,4,6-Tribromophenol	*3.852*	0.20	*5*	0	*77*	*34-129*	2.607	*38.6*	*0*	
Surr: 2-Fluorobiphenyl	*4.77*	0.20	*5*	0	*95.4*	*40-125*	4.586	*3.94*	*0*	
Surr: 2-Fluorophenol	*3.824*	0.20	*5*	0	*76.5*	*20-120*	4.681	*20.2*	*0*	
Surr: 4-Terphenyl-d14	*4.416*	0.20	*5*	0	*88.3*	*40-135*	5.166	*15.6*	*0*	
Surr: Nitrobenzene-d5	*4.091*	0.20	*5*	0	*81.8*	*41-120*	3.952	*3.46*	*0*	
Surr: Phenol-d6	*3.825*	0.20	*5*	0	*76.5*	*20-120*	3.723	*2.71*	*0*	

LCSD Sample ID: **SLCSDW4-120929-64608** Units: **µg/L** Analysis Date: **10/1/2012 07:11 PM**

Client ID: Run ID: **SV-4_120929A** SeqNo: **2966689** Prep Date: **9/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibenz(a,h)acridine	3.184	0.20	5	0	63.7	35-140	3.524	10.1	20	
Indene	3.846	0.20	5	0	76.9	40-130	2.94	26.7	20	R
Surr: 2,4,6-Tribromophenol	*ND*	0.20	*5*	0	*0*	*34-129*	1.8	*0*	*0*	*S*
Surr: 2-Fluorobiphenyl	*4.974*	0.20	*5*	0	*99.5*	*40-125*	3.815	*26.4*	*0*	
Surr: 2-Fluorophenol	*3.892*	0.20	*5*	0	*77.8*	*20-120*	3.476	*11.3*	*0*	
Surr: 4-Terphenyl-d14	*2.621*	0.20	*5*	0	*52.4*	*40-135*	4.488	*52.5*	*0*	
Surr: Nitrobenzene-d5	*5.932*	0.20	*5*	0	*119*	*41-120*	3.628	*48.2*	*0*	
Surr: Phenol-d6	*4.228*	0.20	*5*	0	*84.6*	*20-120*	3.212	*27.3*	*0*	

The following samples were analyzed in this batch: 1209957-01D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209957
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R135992** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-100112-R135992** Units: **µg/L** Analysis Date: **10/1/2012 11:02 AM**

Client ID: Run ID: **VOA1_121001A** SeqNo: **2964881** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dioxane	ND	100								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon disulfide	ND	10								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Ethylbenzene	ND	5.0								
Methyl tert-butyl ether	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
Trichloroethene	ND	5.0								
Xylenes, Total	ND	15								
Surr: 1,2-Dichloroethane-d4	*48.28*	5.0	*50*	0	*96.6*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.19*	5.0	*50*	0	*100*	*72-125*	0			
Surr: Dibromofluoromethane	*50.37*	5.0	*50*	0	*101*	*71-125*	0			
Surr: Toluene-d8	*53.13*	5.0	*50*	0	*106*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209957
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R135992** Instrument ID **VOA1** Method: **SW8260**

LCS Sample ID: **VLCSW-100112-R135992** Units: **µg/L** Analysis Date: **10/1/2012 10:11 AM**

Client ID: Run ID: **VOA1_121001A** SeqNo: **2964880** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	51.53	5.0	50	0	103	80-120	0			
1,1-Dichloroethane	50.22	5.0	50	0	100	76-120	0			
1,2-Dibromoethane	52.09	5.0	50	0	104	80-120	0			
1,2-Dichloroethane	52.34	5.0	50	0	105	78-120	0			
1,4-Dioxane	922.1	100	1000	0	92.2	50-158	0			
2-Butanone	103.2	10	100	0	103	58-132	0			
Benzene	53.41	5.0	50	0	107	73-121	0			
Carbon disulfide	98.43	10	100	0	98.4	68-141	0			
Chlorobenzene	49.74	5.0	50	0	99.5	80-120	0			
Chloroform	50.74	5.0	50	0	101	80-120	0			
Ethylbenzene	54.53	5.0	50	0	109	80-120	0			
Methyl tert-butyl ether	51.84	5.0	50	0	104	73-121	0			
Styrene	55.77	5.0	50	0	112	80-120	0			
Tetrachloroethene	51	5.0	50	0	102	79-120	0			
Toluene	50.52	5.0	50	0	101	80-120	0			
Trichloroethene	54.11	5.0	50	0	108	80-120	0			
Xylenes, Total	165.5	15	150	0	110	80-120	0			
Surr: 1,2-Dichloroethane-d4	*49.61*	5.0	*50*	0	*99.2*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*51.89*	5.0	*50*	0	*104*	*72-125*	0			
Surr: Dibromofluoromethane	*49.94*	5.0	*50*	0	*99.9*	*71-125*	0			
Surr: Toluene-d8	*49.27*	5.0	*50*	0	*98.5*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209957
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R135992** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **12091019-03ZMS** Units: **µg/L** Analysis Date: **10/1/2012 04:37 PM**

Client ID: Run ID: **VOA1_121001A** SeqNo: **2964887** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	48.57	5.0	50	0	97.1	80-120	0			
1,1-Dichloroethane	51.42	5.0	50	0	103	76-120	0			
1,2-Dibromoethane	55.04	5.0	50	0	110	80-120	0			
1,2-Dichloroethane	49.8	5.0	50	0	99.6	78-120	0			
1,4-Dioxane	889.7	100	1000	0	89	50-158	0			
2-Butanone	103.6	10	100	0	104	58-132	0			
Benzene	52.15	5.0	50	0	104	73-121	0			
Carbon disulfide	98.28	10	100	0	98.3	68-141	0			
Chlorobenzene	52.52	5.0	50	0	105	80-120	0			
Chloroform	53.17	5.0	50	0	106	80-120	0			
Ethylbenzene	53.8	5.0	50	0	108	80-120	0			
Methyl tert-butyl ether	51.71	5.0	50	0	103	73-121	0			
Styrene	56.44	5.0	50	0	113	80-120	0			
Tetrachloroethene	50.4	5.0	50	0	101	79-120	0			
Toluene	54.84	5.0	50	0	110	80-120	0			
Trichloroethene	62.39	5.0	50	0	125	80-120	0			S
Xylenes, Total	162.9	15	150	0	109	80-120	0			
Surr: 1,2-Dichloroethane-d4	*50.02*	5.0	*50*	0	*100*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*54.56*	5.0	*50*	0	*109*	*72-125*	0			
Surr: Dibromofluoromethane	*50.39*	5.0	*50*	0	*101*	*71-125*	0			
Surr: Toluene-d8	*52.57*	5.0	*50*	0	*105*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209957
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R135992** Instrument ID **VOA1** Method: **SW8260**

MSD Sample ID: **12091019-03ZMSD** Units: **µg/L** Analysis Date: **10/1/2012 05:03 PM**

Client ID: Run ID: **VOA1_121001A** SeqNo: **2964888** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	45.32	5.0	50	0	90.6	80-120	48.57	6.94	20	
1,1-Dichloroethane	47.45	5.0	50	0	94.9	76-120	51.42	8.04	20	
1,2-Dibromoethane	51.84	5.0	50	0	104	80-120	55.04	5.99	20	
1,2-Dichloroethane	47.95	5.0	50	0	95.9	78-120	49.8	3.78	20	
1,4-Dioxane	1180	100	1000	0	118	50-158	889.7	28	20	R
2-Butanone	104.5	10	100	0	105	58-132	103.6	0.831	20	
Benzene	45.63	5.0	50	0	91.3	73-121	52.15	13.3	20	
Carbon disulfide	91.51	10	100	0	91.5	68-141	98.28	7.13	20	
Chlorobenzene	47.25	5.0	50	0	94.5	80-120	52.52	10.6	20	
Chloroform	48.67	5.0	50	0	97.3	80-120	53.17	8.85	20	
Ethylbenzene	46.64	5.0	50	0	93.3	80-120	53.8	14.3	20	
Methyl tert-butyl ether	55.57	5.0	50	0	111	73-121	51.71	7.21	20	
Styrene	52.44	5.0	50	0	105	80-120	56.44	7.35	20	
Tetrachloroethene	43.2	5.0	50	0	86.4	79-120	50.4	15.4	20	
Toluene	49.21	5.0	50	0	98.4	80-120	54.84	10.8	20	
Trichloroethene	49.23	5.0	50	0	98.5	80-120	62.39	23.6	20	R
Xylenes, Total	143.2	15	150	0	95.5	80-120	162.9	12.9	20	
Surr: 1,2-Dichloroethane-d4	*51.31*	5.0	*50*	0	*103*	*70-125*	50.02	*2.54*	*20*	
Surr: 4-Bromofluorobenzene	*52.75*	5.0	*50*	0	*106*	*72-125*	54.56	*3.37*	*20*	
Surr: Dibromofluoromethane	*52.42*	5.0	*50*	0	*105*	*71-125*	50.39	*3.96*	*20*	
Surr: Toluene-d8	*51.87*	5.0	*50*	0	*104*	*75-125*	52.57	*1.33*	*20*	

The following samples were analyzed in this batch: 1209957-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209957
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R136455** Instrument ID **UV-2450** Method: **SW9014** **(Dissolve)**

MBLK Sample ID: **WBLKW1-100912-R136455** Units: **mg/L** Analysis Date: **10/9/2012 10:15 AM**
Client ID: Run ID: **UV-2450_121009A** SeqNo: **2975614** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	ND	0.020								
Cyanide, Amenable to Chlorination	ND	0.020								

LCS Sample ID: **WLCSW1-100912-R136455** Units: **mg/L** Analysis Date: **10/9/2012 10:15 AM**
Client ID: Run ID: **UV-2450_121009A** SeqNo: **2975615** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.173	0.020	0.2	0	86.5	80-120	0			

LCSD Sample ID: **WLCSDW1-100912-R136455** Units: **mg/L** Analysis Date: **10/9/2012 10:15 AM**
Client ID: Run ID: **UV-2450_121009A** SeqNo: **2975620** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.169	0.020	0.2	0	84.5	80-120	0.173	2.34	20	

MS Sample ID: **1210196-01FMSZ** Units: **mg/L** Analysis Date: **10/9/2012 10:15 AM**
Client ID: Run ID: **UV-2450_121009A** SeqNo: **2975625** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.196	0.020	0.2	0.009	93.5	80-120	0			

The following samples were analyzed in this batch: 1209957-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 10-Oct-12

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List
WorkOrder: **1209957**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **27-Sep-12 11:50**

Work Order: **1209957** Received by: **NDR**

Checklist completed by Robert D. Harris (eSignature) 27-Sep-12 (Date) Reviewed by: Sonia West (eSignature) 01-Oct-12 (Date)

Matrices: Waters
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):	5.3c c/u	004	
Cooler(s)/Kit(s):	4830		
Date/Time sample(s) sent to storage:	9/27/12 19:52		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes: Trip blank not on COC; logged in without analysis.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

ALS Environmental

Cincinnati, OH +1 513 733 5336 | Fort Collins, CO +1 970 490 1511
Everett, WA +1 425 356 2600 | Holland, MI +1 616 399 6070

Chain of Custody Form

Page _____ of _____

COC ID: 68378

1209957

NAVAJO REFINING: Navajo Refining Company

Project: Lovington Lea Refining Skinner List

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Lovington Lea Refining SkinnerList	A	VOC (8260) Skinner List
Work Order		Project Number	123809	B	LL SVOC (8270) Skinner List
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (6020/7000) Skinner List
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange	D	Total Cyanide
Address	501 East Main	Address	501 East Main	E	
				F	
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	
Phone	(575) 748-6733	Phone	(575) 748-6733	H	
Fax	(575) 746-5421	Fax	(575) 746-5421	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 (24 of 25)	East Water Well	9-26-12	7:30 am	W		7	✓	✓	✓	✓							
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Andres Sandoval

Shipment Method:

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

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
Andres Sandoval	9-26-12	7:30 am	
Relinquished by:	Date:	Time:	Received by (Laboratory):
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):
	9/27/12	11:50AM	

Notes: 10 Day TAT

Cooler ID	Cooler Temp.
4830	

QC Package: (Check One Box Below)

☑ Level II Std QC ☐ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other / EDD

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 Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental 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.

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1209457

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

4830

CUSTODY SEAL

Date: 9.26.12 Time: 9-26-12
Name: Andrea Janeba
Company: ALS

Seal Broken By: NR
Date: 9/27/12

FedEx. 4 of 4
MPS# 0260 8989 8549 4536
Mstr# 8703 0116 6650 0215

AB SGRA

THU - 27 SEP A1
PRIORITY OVERNIGHT

77099
TX-US
IAH

Emps 811691 26SEP12 HOBA 516C1/0D3A/AA44

03-Oct-2012

Aaron Strange
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 748-6733
Fax: (575) 746-5421

Re: Lovington Lea Refining Skinner List Work Order: **1209956**

Dear Aaron,

ALS Environmental received 2 samples on 27-Sep-2012 11:50 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental 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 Environmental. 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,

Patricia L. Lynch

Electronically approved by: Luke F. Hernandez

Patricia L. Lynch
Project Manager

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 03-Oct-12

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List
Work Order: **1209956**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1209956-01	1210 Tank	Water		9/26/2012 07:30	9/27/2012 11:50	☐
1209956-02	Trip Blank	Water		9/26/2012	9/27/2012 11:50	☑

Client:	Navajo Refining Company
Project:	Lovington Lea Refining Skinner List
Work Order:	1209956

Case Narrative

Batch 64608, Low-Level Semivolatile Organics : LCSD RPD was outside the control limits for Pyridine. The individual recoveries were in control.

Batch 64608, Low- Level Semivolatile Organics : LCSD RPD was outside the control limits for Indene. The individual recoveries were in control.

Batch R135992, Volatile Organics, Sample 12091019-03: MS is for an unrelated sample.

Batch R135992, Volatile Organics, Sample 12091019-03: MS/MSD RPD is for an unrelated sample.

ALS Environmental

Date: *03-Oct-12*

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List
Work Order: 1209956
Sample ID: 1210 Tank
Lab ID: 1209956-01
Collection Date: 9/26/2012 07:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **9/28/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	9/28/2012 03:53 PM
METALS			**SW6020**		Prep Date: **10/1/2012**	Analyst: **ALR**
Antimony	ND		0.00500	mg/L	1	10/2/2012 03:57 AM
Arsenic	**0.00532**		**0.00500**	**mg/L**	1	10/2/2012 03:57 AM
Barium	**0.109**		**0.00500**	**mg/L**	1	10/2/2012 03:57 AM
Beryllium	ND		0.00200	mg/L	1	10/2/2012 03:57 AM
Cadmium	ND		0.00200	mg/L	1	10/2/2012 03:57 AM
Chromium	**0.0112**		**0.00500**	**mg/L**	1	10/2/2012 03:57 AM
Cobalt	ND		0.00500	mg/L	1	10/2/2012 03:57 AM
Lead	ND		0.00500	mg/L	1	10/2/2012 03:57 AM
Nickel	ND		0.00500	mg/L	1	10/2/2012 03:57 AM
Selenium	**0.00531**		**0.00500**	**mg/L**	1	10/2/2012 05:22 PM
Silver	ND		0.00500	mg/L	1	10/2/2012 03:57 AM
Vanadium	**0.0283**		**0.00500**	**mg/L**	1	10/2/2012 03:57 AM
Zinc	**0.0300**		**0.00500**	**mg/L**	1	10/2/2012 03:57 AM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **9/29/2012**	Analyst: **ACN**
1,2-Dichlorobenzene	ND		0.20	µg/L	1	9/29/2012 06:30 PM
1,3-Dichlorobenzene	ND		0.20	µg/L	1	9/29/2012 06:30 PM
1,4-Dichlorobenzene	ND		0.20	µg/L	1	9/29/2012 06:30 PM
1-Methylnaphthalene	ND		0.20	µg/L	1	9/29/2012 06:30 PM
2,4-Dimethylphenol	ND		0.20	µg/L	1	9/29/2012 06:30 PM
2,4-Dinitrophenol	ND		1.0	µg/L	1	9/29/2012 06:30 PM
2-Methylphenol	ND		0.20	µg/L	1	9/29/2012 06:30 PM
3&4-Methylphenol	ND		0.20	µg/L	1	9/29/2012 06:30 PM
4-Nitrophenol	ND		1.0	µg/L	1	9/29/2012 06:30 PM
Acenaphthylene	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Anthracene	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Benz(a)anthracene	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Benzenethiol	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Benzo(a)pyrene	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Bis(2-ethylhexyl)phthalate	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Chrysene	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Dibenz(a,h)acridine	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Diethyl phthalate	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Dimethyl phthalate	ND		0.20	µg/L	1	9/29/2012 06:30 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Oct-12*

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List
Work Order: 1209956
Sample ID: 1210 Tank
Lab ID: 1209956-01
Collection Date: 9/26/2012 07:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Di-n-butyl phthalate	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Fluoranthene	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Fluorene	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Indene	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Naphthalene	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Phenanthrene	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Phenol	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Pyrene	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Pyridine	ND		1.0	µg/L	1	9/29/2012 06:30 PM
Quinoline	ND		0.20	µg/L	1	9/29/2012 06:30 PM
Surr: 2,4,6-Tribromophenol	*46.6*		*34-129*	*%REC*	1	9/29/2012 06:30 PM
Surr: 2-Fluorobiphenyl	*60.4*		*40-125*	*%REC*	1	9/29/2012 06:30 PM
Surr: 2-Fluorophenol	*64.4*		*20-120*	*%REC*	1	9/29/2012 06:30 PM
Surr: 4-Terphenyl-d14	*71.5*		*40-135*	*%REC*	1	9/29/2012 06:30 PM
Surr: Nitrobenzene-d5	*66.8*		*41-120*	*%REC*	1	9/29/2012 06:30 PM
Surr: Phenol-d6	*56.6*		*20-120*	*%REC*	1	9/29/2012 06:30 PM
VOLATILES - SW8260C			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		5.0	µg/L	1	10/1/2012 05:54 PM
1,1-Dichloroethane	ND		5.0	µg/L	1	10/1/2012 05:54 PM
1,2-Dibromoethane	ND		5.0	µg/L	1	10/1/2012 05:54 PM
1,2-Dichloroethane	ND		5.0	µg/L	1	10/1/2012 05:54 PM
1,4-Dioxane	ND		100	µg/L	1	10/1/2012 05:54 PM
2-Butanone	ND		10	µg/L	1	10/1/2012 05:54 PM
Benzene	ND		5.0	µg/L	1	10/1/2012 05:54 PM
Carbon disulfide	ND		10	µg/L	1	10/1/2012 05:54 PM
Chlorobenzene	ND		5.0	µg/L	1	10/1/2012 05:54 PM
Chloroform	ND		5.0	µg/L	1	10/1/2012 05:54 PM
Ethylbenzene	ND		5.0	µg/L	1	10/1/2012 05:54 PM
Methyl tert-butyl ether	ND		5.0	µg/L	1	10/1/2012 05:54 PM
Styrene	ND		5.0	µg/L	1	10/1/2012 05:54 PM
Tetrachloroethene	ND		5.0	µg/L	1	10/1/2012 05:54 PM
Toluene	ND		5.0	µg/L	1	10/1/2012 05:54 PM
Trichloroethene	ND		5.0	µg/L	1	10/1/2012 05:54 PM
Xylenes, Total	ND		15	µg/L	1	10/1/2012 05:54 PM
Surr: 1,2-Dichloroethane-d4	*99.5*		*70-125*	*%REC*	1	10/1/2012 05:54 PM
Surr: 4-Bromofluorobenzene	*99.0*		*72-125*	*%REC*	1	10/1/2012 05:54 PM
Surr: Dibromofluoromethane	*99.4*		*71-125*	*%REC*	1	10/1/2012 05:54 PM
Surr: Toluene-d8	*102*		*75-125*	*%REC*	1	10/1/2012 05:54 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *03-Oct-12*

Client: Navajo Refining Company

Project: Lovington Lea Refining Skinner List **Work Order:** 1209956

Sample ID: 1210 Tank **Lab ID:** 1209956-01

Collection Date: 9/26/2012 07:30 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE - SW9014			**SW9014**			Analyst: **EDG**
Cyanide	ND		0.0200	mg/L	1	10/3/2012 11:00 AM
Cyanide, Amenable to Chlorination	ND		0.0200	mg/L	1	10/3/2012 11:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 03-Oct-12

Client: Navajo Refining Company

Work Order: 1209956

Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **64584** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW1-092812-64584** Units: **mg/L** Analysis Date: **9/28/2012 03:25 PM**

Client ID: Run ID: **MERCURY_120927A** SeqNo: **2962108** Prep Date: **9/28/2012** 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: **GLCSW1-092812-64584** Units: **mg/L** Analysis Date: **9/28/2012 03:33 PM**

Client ID: Run ID: **MERCURY_120927A** SeqNo: **2962109** Prep Date: **9/28/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0047	0.00020	0.005	0	94	85-115	0			

MS Sample ID: **1209930-01BMS** Units: **mg/L** Analysis Date: **9/28/2012 03:44 PM**

Client ID: Run ID: **MERCURY_120927A** SeqNo: **2962112** Prep Date: **9/28/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00448	0.00020	0.005	0	89.6	85-115	0			

MSD Sample ID: **1209930-01BMSD** Units: **mg/L** Analysis Date: **9/28/2012 03:46 PM**

Client ID: Run ID: **MERCURY_120927A** SeqNo: **2962113** Prep Date: **9/28/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00446	0.00020	0.005	0	89.2	85-115	0.00448	0.447	20	

DUP Sample ID: **1209930-01BDUP** Units: **mg/L** Analysis Date: **9/28/2012 03:42 PM**

Client ID: Run ID: **MERCURY_120927A** SeqNo: **2962111** Prep Date: **9/28/2012** 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	0	20	

The following samples were analyzed in this batch: 1209956-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209956
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **64628** Instrument ID **ICPMS03** Method: **SW6020**

MBLK Sample ID: **MBLKW1-100112-64628** Units: **mg/L** Analysis Date: **10/2/2012 02:11 AM**
Client ID: Run ID: **ICPMS03_121001A** SeqNo: **2964686** Prep Date: **10/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.0050								
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Lead	ND	0.0050								
Nickel	ND	0.0050								
Silver	ND	0.0050								
Vanadium	ND	0.0050								
Zinc	0.002591	0.0050								J

MBLK Sample ID: **MBLKW1-100112-64628** Units: **mg/L** Analysis Date: **10/2/2012 03:54 PM**
Client ID: Run ID: **ICPMS03_121002A** SeqNo: **2965818** Prep Date: **10/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.001217	0.0050								J

LCS Sample ID: **MLCSW1-100112-64628** Units: **mg/L** Analysis Date: **10/2/2012 02:16 AM**
Client ID: Run ID: **ICPMS03_121001A** SeqNo: **2964687** Prep Date: **10/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.054	0.0050	0.05	0	108	80-120	0			
Arsenic	0.05353	0.0050	0.05	0	107	80-120	0			
Barium	0.05902	0.0050	0.05	0	118	80-120	0			
Beryllium	0.05286	0.0020	0.05	0	106	80-120	0			
Cadmium	0.05178	0.0020	0.05	0	104	80-120	0			
Chromium	0.05219	0.0050	0.05	0	104	80-120	0			
Cobalt	0.0523	0.0050	0.05	0	105	80-120	0			
Lead	0.05399	0.0050	0.05	0	108	80-120	0			
Nickel	0.05168	0.0050	0.05	0	103	80-120	0			
Silver	0.05362	0.0050	0.05	0	107	80-120	0			
Vanadium	0.05275	0.0050	0.05	0	106	80-120	0			
Zinc	0.05452	0.0050	0.05	0	109	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209956
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **64628** Instrument ID **ICPMS03** Method: **SW6020**

LCS Sample ID: **MLCSW1-100112-64628** Units: **mg/L** Analysis Date: **10/2/2012 03:58 PM**
Client ID: Run ID: **ICPMS03_121002A** SeqNo: **2965820** Prep Date: **10/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.05098	0.0050	0.05	0	102	80-120	0			

MS Sample ID: **12091000-04DMS** Units: **mg/L** Analysis Date: **10/2/2012 02:35 AM**
Client ID: Run ID: **ICPMS03_121001A** SeqNo: **2964691** Prep Date: **10/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05311	0.0050	0.05	-0.000182	107	80-120	0			
Arsenic	0.05363	0.0050	0.05	-0.0001733	108	80-120	0			
Barium	0.05576	0.0050	0.05	-0.0001217	112	80-120	0			
Beryllium	0.05021	0.0020	0.05	0.0003118	99.8	80-120	0			
Cadmium	0.04998	0.0020	0.05	0.0002534	99.5	80-120	0			
Chromium	0.05194	0.0050	0.05	-0.0003362	105	80-120	0			
Cobalt	0.05221	0.0050	0.05	-0.000383	105	80-120	0			
Lead	0.05082	0.0050	0.05	-0.0004451	103	80-120	0			
Nickel	0.05322	0.0050	0.05	-0.00004958	107	80-120	0			
Silver	0.05186	0.0050	0.05	-0.0004337	105	80-120	0			
Vanadium	0.05225	0.0050	0.05	-0.0003731	105	80-120	0			
Zinc	0.05402	0.0050	0.05	0.001728	105	80-120	0			

MS Sample ID: **12091000-04DMS** Units: **mg/L** Analysis Date: **10/2/2012 04:18 PM**
Client ID: Run ID: **ICPMS03_121002A** SeqNo: **2965827** Prep Date: **10/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.04841	0.0050	0.05	0.001162	94.5	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209956
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **64628** Instrument ID **ICPMS03** Method: **SW6020**

MSD Sample ID: **12091000-04DMSD** Units: **mg/L** Analysis Date: **10/2/2012 02:40 AM**
Client ID: Run ID: **ICPMS03_121001A** SeqNo: **2964692** Prep Date: **10/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05402	0.0050	0.05	-0.000182	108	80-120	0.05311	1.7	15	
Arsenic	0.05462	0.0050	0.05	-0.0001733	110	80-120	0.05363	1.83	15	
Barium	0.05863	0.0050	0.05	-0.0001217	118	80-120	0.05576	5.02	15	
Beryllium	0.05426	0.0020	0.05	0.0003118	108	80-120	0.05021	7.75	15	
Cadmium	0.05227	0.0020	0.05	0.0002534	104	80-120	0.04998	4.48	15	
Chromium	0.0525	0.0050	0.05	-0.0003362	106	80-120	0.05194	1.07	15	
Cobalt	0.0527	0.0050	0.05	-0.000383	106	80-120	0.05221	0.934	15	
Lead	0.05446	0.0050	0.05	-0.0004451	110	80-120	0.05082	6.91	15	
Nickel	0.0517	0.0050	0.05	-0.00004958	103	80-120	0.05322	2.9	15	
Silver	0.05494	0.0050	0.05	-0.0004337	111	80-120	0.05186	5.77	15	
Vanadium	0.05284	0.0050	0.05	-0.0003731	106	80-120	0.05225	1.12	15	
Zinc	0.05352	0.0050	0.05	0.001728	104	80-120	0.05402	0.93	15	

MSD Sample ID: **12091000-04DMSD** Units: **mg/L** Analysis Date: **10/2/2012 04:23 PM**
Client ID: Run ID: **ICPMS03_121002A** SeqNo: **2965828** Prep Date: **10/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.05168	0.0050	0.05	0.001162	101	80-120	0.04841	6.53	15	

DUP Sample ID: **12091000-04DDUP** Units: **mg/L** Analysis Date: **10/2/2012 02:25 AM**
Client ID: Run ID: **ICPMS03_121001A** SeqNo: **2964689** Prep Date: **10/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.0050	0	0	0	0-0	-0.000182	0	25	
Arsenic	ND	0.0050	0	0	0	0-0	-0.0001733	0	25	
Barium	ND	0.0050	0	0	0	0-0	-0.0001217	0	25	
Beryllium	ND	0.0020	0	0	0	0-0	0.0003118	0	25	
Cadmium	ND	0.0020	0	0	0	0-0	0.0002534	0	25	
Chromium	ND	0.0050	0	0	0	0-0	-0.0003362	0	25	
Cobalt	ND	0.0050	0	0	0	0-0	-0.000383	0	25	
Lead	ND	0.0050	0	0	0	0-0	-0.0004451	0	25	
Nickel	ND	0.0050	0	0	0	0-0	-0.00004958	0	25	
Silver	ND	0.0050	0	0	0	0-0	-0.0004337	0	25	
Vanadium	ND	0.0050	0	0	0	0-0	-0.0003731	0	25	
Zinc	0.003601	0.0050	0	0	0	0-0	0.001728	0	25	J

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209956
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **64628** Instrument ID **ICPMS03** Method: **SW6020**

DUP Sample ID: **12091000-04DDUP** Units: **mg/L** Analysis Date: **10/2/2012 04:08 PM**

Client ID: Run ID: **ICPMS03_121002A** SeqNo: **2965823** Prep Date: **10/1/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	ND	0.0050	0	0	0	0-0	0.001162	0	25	

The following samples were analyzed in this batch: 1209956-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209956
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **64608** Instrument ID **SV-4** Method: **SW8270**

MBLK Sample ID: **SBLKW2-120929-64608** Units: **µg/L** Analysis Date: **10/1/2012 06:51 PM**

Client ID: Run ID: **SV-4_120929A** SeqNo: **2966688** Prep Date: **9/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	ND	0.20								
1,3-Dichlorobenzene	ND	0.20								
1,4-Dichlorobenzene	ND	0.20								
1-Methylnaphthalene	ND	0.20								
2,4-Dimethylphenol	ND	0.20								
2,4-Dinitrophenol	ND	1.0								
2-Methylphenol	ND	0.20								
3&4-Methylphenol	ND	0.20								
4-Nitrophenol	ND	1.0								
Acenaphthylene	ND	0.20								
Anthracene	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzenethiol	ND	0.20								
Benzo(a)pyrene	ND	0.20								
Benzo(b)fluoranthene	ND	0.20								
Benzo(k)fluoranthene	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.20								
Chrysene	ND	0.20								
Dibenz(a,h)acridine	ND	0.20								
Dibenz(a,h)anthracene	ND	0.20								
Diethyl phthalate	ND	0.20								
Dimethyl phthalate	ND	0.20								
Di-n-butyl phthalate	ND	0.20								
Fluoranthene	ND	0.20								
Fluorene	ND	0.20								
Indene	ND	0.20								
Indeno(1,2,3-cd)pyrene	ND	0.20								
Naphthalene	ND	0.20								
Phenanthrene	ND	0.20								
Phenol	ND	0.20								
Pyrene	ND	0.20								
Pyridine	ND	1.0								
Quinoline	ND	0.20								
Surr: 2,4,6-Tribromophenol	*2.156*	0.20	*5*	0	*43.1*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*4.33*	0.20	*5*	0	*86.6*	*40-125*	0			
Surr: 2-Fluorophenol	*3.997*	0.20	*5*	0	*79.9*	*20-120*	0			
Surr: 4-Terphenyl-d14	*5.17*	0.20	*5*	0	*103*	*40-135*	0			
Surr: Nitrobenzene-d5	*4.933*	0.20	*5*	0	*98.7*	*41-120*	0			
Surr: Phenol-d6	*4.249*	0.20	*5*	0	*85*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209956
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **64608** Instrument ID **SV-4** Method: **SW8270**

LCS Sample ID: **SLCSW2-120929-64608** Units: **µg/L** Analysis Date: **9/29/2012 03:27 PM**

Client ID: Run ID: **SV-4_120929A** SeqNo: **2966683** Prep Date: **9/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	3.899	0.20	5	0	78	45-120	0			
1,3-Dichlorobenzene	4.001	0.20	5	0	80	45-120	0			
1,4-Dichlorobenzene	3.715	0.20	5	0	74.3	40-120	0			
1-Methylnaphthalene	4.069	0.20	5	0	81.4	45-120	0			
2,4-Dimethylphenol	3.814	0.20	5	0	76.3	35-120	0			
2,4-Dinitrophenol	1.933	1.0	5	0	38.7	15-120	0			
2-Methylphenol	3.832	0.20	5	0	76.6	45-120	0			
3&4-Methylphenol	3.235	0.20	5	0	64.7	35-120	0			
4-Nitrophenol	2.865	1.0	5	0	57.3	30-130	0			
Acenaphthylene	3.785	0.20	5	0	75.7	47-120	0			
Anthracene	4.062	0.20	5	0	81.2	45-120	0			
Benz(a)anthracene	3.834	0.20	5	0	76.7	40-120	0			
Benzo(a)pyrene	4.108	0.20	5	0	82.2	45-120	0			
Benzo(b)fluoranthene	4.758	0.20	5	0	95.2	50-120	0			
Benzo(k)fluoranthene	4.649	0.20	5	0	93	45-127	0			
Bis(2-ethylhexyl)phthalate	3.711	0.20	5	0	74.2	40-139	0			
Chrysene	4.428	0.20	5	0	88.6	43-120	0			
Dibenz(a,h)anthracene	3.554	0.20	5	0	71.1	45-125	0			
Diethyl phthalate	3.84	0.20	5	0	76.8	41-120	0			
Dimethyl phthalate	3.973	0.20	5	0	79.5	40-122	0			
Di-n-butyl phthalate	3.88	0.20	5	0	77.6	45-123	0			
Fluoranthene	4.07	0.20	5	0	81.4	45-125	0			
Fluorene	4.097	0.20	5	0	81.9	49-120	0			
Indeno(1,2,3-cd)pyrene	3.315	0.20	5	0	66.3	41-128	0			
Naphthalene	4	0.20	5	0	80	45-120	0			
Phenanthrene	3.995	0.20	5	0	79.9	45-121	0			
Phenol	3.574	0.20	5	0	71.5	20-124	0			
Pyrene	4.129	0.20	5	0	82.6	40-130	0			
Pyridine	3.221	1.0	5	0	64.4	15-120	0			
Quinoline	3.997	0.20	5	0	79.9	45-120	0			
Surr: 2,4,6-Tribromophenol	*3.759*	0.20	*5*	0	*75.2*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*4.115*	0.20	*5*	0	*82.3*	*40-125*	0			
Surr: 2-Fluorophenol	*3.978*	0.20	*5*	0	*79.6*	*20-120*	0			
Surr: 4-Terphenyl-d14	*4.891*	0.20	*5*	0	*97.8*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.87*	0.20	*5*	0	*77.4*	*41-120*	0			
Surr: Phenol-d6	*3.756*	0.20	*5*	0	*75.1*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209956
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **64608** Instrument ID **SV-4** Method: **SW8270**

LCS Sample ID: **SLCSW3-120929-64608** Units: **µg/L** Analysis Date: **9/29/2012 04:07 PM**

Client ID: Run ID: **SV-4_120929A** SeqNo: **2966685** Prep Date: **9/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzenethiol	4.468	0.20	5	0	89.4	11-110	0			
Surr: 2,4,6-Tribromophenol	*2.607*	0.20	*5*	0	*52.1*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*4.586*	0.20	*5*	0	*91.7*	*40-125*	0			
Surr: 2-Fluorophenol	*4.681*	0.20	*5*	0	*93.6*	*20-120*	0			
Surr: 4-Terphenyl-d14	*5.166*	0.20	*5*	0	*103*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.952*	0.20	*5*	0	*79*	*41-120*	0			
Surr: Phenol-d6	*3.723*	0.20	*5*	0	*74.5*	*20-120*	0			

LCS Sample ID: **SLCSW4-120929-64608** Units: **µg/L** Analysis Date: **9/29/2012 04:48 PM**

Client ID: Run ID: **SV-4_120929A** SeqNo: **2966687** Prep Date: **9/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibenz(a,h)acridine	3.524	0.20	5	0	70.5	35-140	0			
Indene	2.94	0.20	5	0	58.8	40-130	0			
Surr: 2,4,6-Tribromophenol	*1.8*	0.20	*5*	0	*36*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.815*	0.20	*5*	0	*76.3*	*40-125*	0			
Surr: 2-Fluorophenol	*3.476*	0.20	*5*	0	*69.5*	*20-120*	0			
Surr: 4-Terphenyl-d14	*4.488*	0.20	*5*	0	*89.8*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.628*	0.20	*5*	0	*72.6*	*41-120*	0			
Surr: Phenol-d6	*3.212*	0.20	*5*	0	*64.2*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209956
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **64608** Instrument ID **SV-4** Method: **SW8270**

LCSD Sample ID: **SLCSDW2-120929-64608** Units: **µg/L** Analysis Date: **9/29/2012 03:47 PM**

Client ID: Run ID: **SV-4_120929A** SeqNo: **2966684** Prep Date: **9/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	4.008	0.20	5	0	80.2	45-120	3.899	2.76	20	
1,3-Dichlorobenzene	4.046	0.20	5	0	80.9	45-120	4.001	1.12	20	
1,4-Dichlorobenzene	3.988	0.20	5	0	79.8	40-120	3.715	7.09	20	
1-Methylnaphthalene	4.119	0.20	5	0	82.4	45-120	4.069	1.22	20	
2,4-Dimethylphenol	3.895	0.20	5	0	77.9	35-120	3.814	2.08	20	
2,4-Dinitrophenol	2.059	1.0	5	0	41.2	15-120	1.933	6.32	50	
2-Methylphenol	3.867	0.20	5	0	77.3	45-120	3.832	0.891	20	
3&4-Methylphenol	3.557	0.20	5	0	71.1	35-120	3.235	9.47	20	
4-Nitrophenol	2.514	1.0	5	0	50.3	30-130	2.865	13.1	20	
Acenaphthylene	3.856	0.20	5	0	77.1	47-120	3.785	1.86	20	
Anthracene	3.937	0.20	5	0	78.7	45-120	4.062	3.14	20	
Benz(a)anthracene	3.853	0.20	5	0	77.1	40-120	3.834	0.503	20	
Benzo(a)pyrene	4.158	0.20	5	0	83.2	45-120	4.108	1.21	20	
Benzo(b)fluoranthene	4.889	0.20	5	0	97.8	50-120	4.758	2.71	20	
Benzo(k)fluoranthene	4.454	0.20	5	0	89.1	45-127	4.649	4.29	20	
Bis(2-ethylhexyl)phthalate	3.692	0.20	5	0	73.8	40-139	3.711	0.518	20	
Chrysene	4.461	0.20	5	0	89.2	43-120	4.428	0.724	20	
Dibenz(a,h)anthracene	3.53	0.20	5	0	70.6	45-125	3.554	0.685	20	
Diethyl phthalate	3.84	0.20	5	0	76.8	41-120	3.84	0.00068	20	
Dimethyl phthalate	3.913	0.20	5	0	78.3	40-122	3.973	1.52	20	
Di-n-butyl phthalate	3.708	0.20	5	0	74.2	45-123	3.88	4.53	20	
Fluoranthene	4.051	0.20	5	0	81	45-125	4.07	0.468	20	
Fluorene	4.081	0.20	5	0	81.6	49-120	4.097	0.396	20	
Indeno(1,2,3-cd)pyrene	3.26	0.20	5	0	65.2	41-128	3.315	1.68	20	
Naphthalene	4.059	0.20	5	0	81.2	45-120	4	1.47	20	
Phenanthrene	3.781	0.20	5	0	75.6	45-121	3.995	5.51	20	
Phenol	3.627	0.20	5	0	72.5	20-124	3.574	1.46	20	
Pyrene	4.201	0.20	5	0	84	40-130	4.129	1.73	20	
Pyridine	4.121	1.0	5	0	82.4	15-120	3.221	24.5	20	R
Quinoline	4.098	0.20	5	0	82	45-120	3.997	2.49	20	
Surr: 2,4,6-Tribromophenol	*3.331*	0.20	*5*	0	*66.6*	*34-129*	3.759	*12.1*	*0*	
Surr: 2-Fluorobiphenyl	*4.101*	0.20	*5*	0	*82*	*40-125*	4.115	*0.352*	*0*	
Surr: 2-Fluorophenol	*4.104*	0.20	*5*	0	*82.1*	*20-120*	3.978	*3.12*	*0*	
Surr: 4-Terphenyl-d14	*4.827*	0.20	*5*	0	*96.5*	*40-135*	4.891	*1.31*	*0*	
Surr: Nitrobenzene-d5	*3.728*	0.20	*5*	0	*74.6*	*41-120*	3.87	*3.76*	*0*	
Surr: Phenol-d6	*3.988*	0.20	*5*	0	*79.8*	*20-120*	3.756	*5.97*	*0*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209956
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **64608** Instrument ID **SV-4** Method: **SW8270**

LCSD Sample ID: **SLCSDW3-120929-64608** Units: **µg/L** Analysis Date: **9/29/2012 04:27 PM**

Client ID: Run ID: **SV-4_120929A** SeqNo: **2966686** Prep Date: **9/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzenethiol	3.318	0.20	5	0	66.4	11-110	4.468	29.6	30	
Surr: 2,4,6-Tribromophenol	*3.852*	0.20	*5*	0	*77*	*34-129*	2.607	*38.6*	*0*	
Surr: 2-Fluorobiphenyl	*4.77*	0.20	*5*	0	*95.4*	*40-125*	4.586	*3.94*	*0*	
Surr: 2-Fluorophenol	*3.824*	0.20	*5*	0	*76.5*	*20-120*	4.681	*20.2*	*0*	
Surr: 4-Terphenyl-d14	*4.416*	0.20	*5*	0	*88.3*	*40-135*	5.166	*15.6*	*0*	
Surr: Nitrobenzene-d5	*4.091*	0.20	*5*	0	*81.8*	*41-120*	3.952	*3.46*	*0*	
Surr: Phenol-d6	*3.825*	0.20	*5*	0	*76.5*	*20-120*	3.723	*2.71*	*0*	

LCSD Sample ID: **SLCSDW4-120929-64608** Units: **µg/L** Analysis Date: **10/1/2012 07:11 PM**

Client ID: Run ID: **SV-4_120929A** SeqNo: **2966689** Prep Date: **9/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibenz(a,h)acridine	3.184	0.20	5	0	63.7	35-140	3.524	10.1	20	
Indene	3.846	0.20	5	0	76.9	40-130	2.94	26.7	20	R
Surr: 2,4,6-Tribromophenol	*ND*	0.20	*5*	0	*0*	*34-129*	1.8	*0*	*0*	*S*
Surr: 2-Fluorobiphenyl	*4.974*	0.20	*5*	0	*99.5*	*40-125*	3.815	*26.4*	*0*	
Surr: 2-Fluorophenol	*3.892*	0.20	*5*	0	*77.8*	*20-120*	3.476	*11.3*	*0*	
Surr: 4-Terphenyl-d14	*2.621*	0.20	*5*	0	*52.4*	*40-135*	4.488	*52.5*	*0*	
Surr: Nitrobenzene-d5	*5.932*	0.20	*5*	0	*119*	*41-120*	3.628	*48.2*	*0*	
Surr: Phenol-d6	*4.228*	0.20	*5*	0	*84.6*	*20-120*	3.212	*27.3*	*0*	

The following samples were analyzed in this batch: 1209956-01D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209956
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R135992** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-100112-R135992** Units: **µg/L** Analysis Date: **10/1/2012 11:02 AM**

Client ID: Run ID: **VOA1_121001A** SeqNo: **2964881** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dioxane	ND	100								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon disulfide	ND	10								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Ethylbenzene	ND	5.0								
Methyl tert-butyl ether	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
Trichloroethene	ND	5.0								
Xylenes, Total	ND	15								
Surr: 1,2-Dichloroethane-d4	*48.28*	5.0	*50*	0	*96.6*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.19*	5.0	*50*	0	*100*	*72-125*	0			
Surr: Dibromofluoromethane	*50.37*	5.0	*50*	0	*101*	*71-125*	0			
Surr: Toluene-d8	*53.13*	5.0	*50*	0	*106*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209956
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R135992** Instrument ID **VOA1** Method: **SW8260**

LCS Sample ID: **VLCSW-100112-R135992** Units: **µg/L** Analysis Date: **10/1/2012 10:11 AM**

Client ID: Run ID: **VOA1_121001A** SeqNo: **2964880** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	51.53	5.0	50	0	103	80-120	0			
1,1-Dichloroethane	50.22	5.0	50	0	100	76-120	0			
1,2-Dibromoethane	52.09	5.0	50	0	104	80-120	0			
1,2-Dichloroethane	52.34	5.0	50	0	105	78-120	0			
1,4-Dioxane	922.1	100	1000	0	92.2	50-158	0			
2-Butanone	103.2	10	100	0	103	58-132	0			
Benzene	53.41	5.0	50	0	107	73-121	0			
Carbon disulfide	98.43	10	100	0	98.4	68-141	0			
Chlorobenzene	49.74	5.0	50	0	99.5	80-120	0			
Chloroform	50.74	5.0	50	0	101	80-120	0			
Ethylbenzene	54.53	5.0	50	0	109	80-120	0			
Methyl tert-butyl ether	51.84	5.0	50	0	104	73-121	0			
Styrene	55.77	5.0	50	0	112	80-120	0			
Tetrachloroethene	51	5.0	50	0	102	79-120	0			
Toluene	50.52	5.0	50	0	101	80-120	0			
Trichloroethene	54.11	5.0	50	0	108	80-120	0			
Xylenes, Total	165.5	15	150	0	110	80-120	0			
Surr: 1,2-Dichloroethane-d4	*49.61*	5.0	*50*	0	*99.2*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*51.89*	5.0	*50*	0	*104*	*72-125*	0			
Surr: Dibromofluoromethane	*49.94*	5.0	*50*	0	*99.9*	*71-125*	0			
Surr: Toluene-d8	*49.27*	5.0	*50*	0	*98.5*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209956
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R135992** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **12091019-03ZMS** Units: **µg/L** Analysis Date: **10/1/2012 04:37 PM**

Client ID: Run ID: **VOA1_121001A** SeqNo: **2964887** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	48.57	5.0	50	0	97.1	80-120	0			
1,1-Dichloroethane	51.42	5.0	50	0	103	76-120	0			
1,2-Dibromoethane	55.04	5.0	50	0	110	80-120	0			
1,2-Dichloroethane	49.8	5.0	50	0	99.6	78-120	0			
1,4-Dioxane	889.7	100	1000	0	89	50-158	0			
2-Butanone	103.6	10	100	0	104	58-132	0			
Benzene	52.15	5.0	50	0	104	73-121	0			
Carbon disulfide	98.28	10	100	0	98.3	68-141	0			
Chlorobenzene	52.52	5.0	50	0	105	80-120	0			
Chloroform	53.17	5.0	50	0	106	80-120	0			
Ethylbenzene	53.8	5.0	50	0	108	80-120	0			
Methyl tert-butyl ether	51.71	5.0	50	0	103	73-121	0			
Styrene	56.44	5.0	50	0	113	80-120	0			
Tetrachloroethene	50.4	5.0	50	0	101	79-120	0			
Toluene	54.84	5.0	50	0	110	80-120	0			
Trichloroethene	62.39	5.0	50	0	125	80-120	0			S
Xylenes, Total	162.9	15	150	0	109	80-120	0			
Surr: 1,2-Dichloroethane-d4	*50.02*	5.0	*50*	0	*100*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*54.56*	5.0	*50*	0	*109*	*72-125*	0			
Surr: Dibromofluoromethane	*50.39*	5.0	*50*	0	*101*	*71-125*	0			
Surr: Toluene-d8	*52.57*	5.0	*50*	0	*105*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209956
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R135992** Instrument ID **VOA1** Method: **SW8260**

MSD Sample ID: **12091019-03ZMSD** Units: **µg/L** Analysis Date: **10/1/2012 05:03 PM**

Client ID: Run ID: **VOA1_121001A** SeqNo: **2964888** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	45.32	5.0	50	0	90.6	80-120	48.57	6.94	20	
1,1-Dichloroethane	47.45	5.0	50	0	94.9	76-120	51.42	8.04	20	
1,2-Dibromoethane	51.84	5.0	50	0	104	80-120	55.04	5.99	20	
1,2-Dichloroethane	47.95	5.0	50	0	95.9	78-120	49.8	3.78	20	
1,4-Dioxane	1180	100	1000	0	118	50-158	889.7	28	20	R
2-Butanone	104.5	10	100	0	105	58-132	103.6	0.831	20	
Benzene	45.63	5.0	50	0	91.3	73-121	52.15	13.3	20	
Carbon disulfide	91.51	10	100	0	91.5	68-141	98.28	7.13	20	
Chlorobenzene	47.25	5.0	50	0	94.5	80-120	52.52	10.6	20	
Chloroform	48.67	5.0	50	0	97.3	80-120	53.17	8.85	20	
Ethylbenzene	46.64	5.0	50	0	93.3	80-120	53.8	14.3	20	
Methyl tert-butyl ether	55.57	5.0	50	0	111	73-121	51.71	7.21	20	
Styrene	52.44	5.0	50	0	105	80-120	56.44	7.35	20	
Tetrachloroethene	43.2	5.0	50	0	86.4	79-120	50.4	15.4	20	
Toluene	49.21	5.0	50	0	98.4	80-120	54.84	10.8	20	
Trichloroethene	49.23	5.0	50	0	98.5	80-120	62.39	23.6	20	R
Xylenes, Total	143.2	15	150	0	95.5	80-120	162.9	12.9	20	
Surr: 1,2-Dichloroethane-d4	*51.31*	5.0	*50*	0	*103*	*70-125*	50.02	*2.54*	*20*	
Surr: 4-Bromofluorobenzene	*52.75*	5.0	*50*	0	*106*	*72-125*	54.56	*3.37*	*20*	
Surr: Dibromofluoromethane	*52.42*	5.0	*50*	0	*105*	*71-125*	50.39	*3.96*	*20*	
Surr: Toluene-d8	*51.87*	5.0	*50*	0	*104*	*75-125*	52.57	*1.33*	*20*	

The following samples were analyzed in this batch: 1209956-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1209956
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R136091** Instrument ID **UV-2450** Method: **SW9014** **(Dissolve)**

MBLK Sample ID: **WBLKW1-100312-R136091** Units: **mg/L** Analysis Date: **10/3/2012 11:00 AM**
Client ID: Run ID: **UV-2450_121003A** SeqNo: **2967138** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.004	0.020								J
Cyanide, Amenable to Chlorination	ND	0.020								

LCS Sample ID: **WLCSW1-100312-R136091** Units: **mg/L** Analysis Date: **10/3/2012 11:00 AM**
Client ID: Run ID: **UV-2450_121003A** SeqNo: **2967139** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.166	0.020	0.2	0	83	80-120	0			

LCSD Sample ID: **WLCSDW1-100312-R136091** Units: **mg/L** Analysis Date: **10/3/2012 11:00 AM**
Client ID: Run ID: **UV-2450_121003A** SeqNo: **2967158** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.169	0.020	0.2	0	84.5	80-120	0.166	1.79	20	

MS Sample ID: **1209956-01BMS** Units: **mg/L** Analysis Date: **10/3/2012 11:00 AM**
Client ID: **1210 Tank** Run ID: **UV-2450_121003A** SeqNo: **2967157** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.182	0.020	0.2	0.008	87	80-120	0			

The following samples were analyzed in this batch: 1209956-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 03-Oct-12

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List
WorkOrder: **1209956**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **27-Sep-12 11:50**

Work Order: **1209956** Received by: **NDR**

Checklist completed by Robert D. Harris (eSignature) 27-Sep-12 (Date) Reviewed by: Sonia West (eSignature) 01-Oct-12 (Date)

Matrices: Waters
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):	5.6c c/u	004	
Cooler(s)/Kit(s):	4767		
Date/Time sample(s) sent to storage:	9/27/12 19:45		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes: Trip blank not on COC; logged in without analysis.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Cincinnati, OH +1 513 733 5336
Fort Collins, CO +1 970 490 1511
Everett, WA +1 425 356 2600
Holland, MI +1 616 399 6070

ALS Environmental

Chain of Custody Form

Page _____ of _____

COC ID: 68376

1209956

NAVAJO REFINING: Navajo Refining Company

Project: Lovington Lea Refining Skinner List

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Lovington Lea Refining SkinnerList	A	VOC (8260) Skinner List
Work Order		Project Number	123809	B	LL SVOC (8270) Skinner List
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (6020/7000) Skinner List
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange	D	Total Cyanide
Address	501 East Main	Address	501 East Main	E	
				F	
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	
Phone	(575) 748-6733	Phone	(575) 748-6733	H	
Fax	(575) 746-5421	Fax	(575) 746-5421	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	1210 Tank	9-26-12	7:30am	W	-	7	✓	✓	✓	✓							
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Andres Saldana

Shipment Method:

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

Results Due Date:

	Date	Time		Notes: 10 Day TAT
Relinquished by: Andres Saldana	9-26-12	7:30am	Received by:	
Relinquished by:	09/27/12	11:50am	Received by (Laboratory):	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Cooler ID	Cooler Temp.
4767	

QC Package: (Check One Box Below)

☑ Level II Std QC ☐ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other / EDD

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 Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental 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.

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1204956

Cooler

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

4767

CUSTODY SEAL

Date: 4-26-12 Time: 4:30 a.m.
Name: Andrea Sanchez
Company: NRC

Seal Broken By: NR
Date: 9/27

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

ate 9/26/12 FedEx Tracking Number 870301166650

ender's ame CATHY [redacted] TRUETT Phone 575 396-3621

Company NAVAJO REFINING CO (USA)

Address 7406 S MAIN ST

ity LOVINGTON Dept./Floor/Suite/Room

State NM ZIP 88260

our Internal Billing Reference Sept. Water Samples

THU - 27 SEP A1
PRIORITY OVERNIGHT

RK# 8703 0116 6650
0215

77099
TX-US
IAH

43 SGRA

891941 27Sep 01:18 AFWH 512C1/0D3A/CF60

30-Oct-2012

Aaron Strange
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 748-6733
Fax: (575) 746-5421

Re: Lovington Lea Refining Skinner List Work Order: **1210908**

Dear Aaron,

ALS Environmental received 2 samples on 23-Oct-2012 09:20 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental 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 Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 24.

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

Sincerely,

Patricia L. Lynch

Electronically approved by: Luke F. Hernandez

Patricia L. Lynch
Project Manager

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 30-Oct-12

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List
Work Order: **1210908**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1210908-01	1210 Tank	Water		10/22/2012 07:30	10/23/2012 09:20	☐
1210908-02	Trip Blank - 081712-26	Water		10/22/2012	10/23/2012 09:20	☐

Client:	Navajo Refining Company
Project:	Lovington Lea Refining Skinner List
Work Order:	1210908

Case Narrative

Batch 65325, Method 8270: Insufficient sample for MS/MSD.

ALS Environmental

Date: *30-Oct-12*

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List
Work Order: 1210908
Sample ID: 1210 Tank
Lab ID: 1210908-01
Collection Date: 10/22/2012 07:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **10/25/2012**	Analyst: **OFO**
Mercury	ND		0.000200	mg/L	1	10/25/2012 07:31 PM
METALS			**SW6020**		Prep Date: **10/24/2012**	Analyst: **IGF**
Antimony	ND		0.00500	mg/L	1	10/24/2012 05:03 PM
Arsenic	ND		0.00500	mg/L	1	10/24/2012 05:03 PM
Barium	**0.109**		**0.00500**	**mg/L**	1	10/24/2012 05:03 PM
Beryllium	ND		0.00200	mg/L	1	10/24/2012 05:03 PM
Cadmium	ND		0.00200	mg/L	1	10/24/2012 05:03 PM
Chromium	**0.00930**		**0.00500**	**mg/L**	1	10/24/2012 05:03 PM
Cobalt	ND		0.00500	mg/L	1	10/24/2012 05:03 PM
Lead	ND		0.00500	mg/L	1	10/24/2012 05:03 PM
Nickel	ND		0.00500	mg/L	1	10/24/2012 05:03 PM
Selenium	ND		0.00500	mg/L	1	10/24/2012 05:03 PM
Silver	ND		0.00500	mg/L	1	10/24/2012 05:03 PM
Vanadium	**0.0241**		**0.00500**	**mg/L**	1	10/24/2012 05:03 PM
Zinc	ND		0.00500	mg/L	1	10/24/2012 05:03 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **10/26/2012**	Analyst: **LG**
1,2-Dichlorobenzene	ND		0.20	µg/L	1	10/26/2012 07:39 PM
1,3-Dichlorobenzene	ND		0.20	µg/L	1	10/26/2012 07:39 PM
1,4-Dichlorobenzene	ND		0.20	µg/L	1	10/26/2012 07:39 PM
1-Methylnaphthalene	ND		0.20	µg/L	1	10/26/2012 07:39 PM
2,4-Dimethylphenol	ND		0.20	µg/L	1	10/26/2012 07:39 PM
2,4-Dinitrophenol	ND		1.0	µg/L	1	10/26/2012 07:39 PM
2-Methylphenol	ND		0.20	µg/L	1	10/26/2012 07:39 PM
3&4-Methylphenol	ND		0.20	µg/L	1	10/26/2012 07:39 PM
4-Nitrophenol	ND		1.0	µg/L	1	10/26/2012 07:39 PM
Acenaphthylene	ND		0.20	µg/L	1	10/26/2012 07:39 PM
Anthracene	ND		0.20	µg/L	1	10/26/2012 07:39 PM
Benz(a)anthracene	ND		0.20	µg/L	1	10/26/2012 07:39 PM
Benzenethiol	ND		0.20	µg/L	1	10/26/2012 07:39 PM
Benzo(a)pyrene	ND		0.20	µg/L	1	10/26/2012 07:39 PM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	10/26/2012 07:39 PM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	10/26/2012 07:39 PM
Bis(2-ethylhexyl)phthalate	**0.56**		**0.20**	**µg/L**	1	10/26/2012 07:39 PM
Chrysene	ND		0.20	µg/L	1	10/26/2012 07:39 PM
Dibenz(a,h)acridine	ND		0.20	µg/L	1	10/26/2012 07:39 PM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	10/26/2012 07:39 PM
Diethyl phthalate	ND		0.20	µg/L	1	10/26/2012 07:39 PM
Dimethyl phthalate	ND		0.20	µg/L	1	10/26/2012 07:39 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company

Project: Lovington Lea Refining Skinner List **Work Order:** 1210908

Sample ID: 1210 Tank **Lab ID:** 1210908-01

Collection Date: 10/22/2012 07:30 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Di-n-butyl phthalate	ND		0.20	µg/L	1	10/26/2012 07:39 PM
Fluoranthene	ND		0.20	µg/L	1	10/26/2012 07:39 PM
Fluorene	ND		0.20	µg/L	1	10/26/2012 07:39 PM
Indene	ND		0.20	µg/L	1	10/26/2012 07:39 PM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	10/26/2012 07:39 PM
Naphthalene	ND		0.20	µg/L	1	10/26/2012 07:39 PM
Phenanthrene	ND		0.20	µg/L	1	10/26/2012 07:39 PM
Phenol	ND		0.20	µg/L	1	10/26/2012 07:39 PM
Pyrene	ND		0.20	µg/L	1	10/26/2012 07:39 PM
Pyridine	ND		1.0	µg/L	1	10/26/2012 07:39 PM
Quinoline	ND		0.20	µg/L	1	10/26/2012 07:39 PM
Surr: 2,4,6-Tribromophenol	*79.1*		*34-129*	*%REC*	1	10/26/2012 07:39 PM
Surr: 2-Fluorobiphenyl	*80.9*		*40-125*	*%REC*	1	10/26/2012 07:39 PM
Surr: 2-Fluorophenol	*76.8*		*20-120*	*%REC*	1	10/26/2012 07:39 PM
Surr: 4-Terphenyl-d14	*103*		*40-135*	*%REC*	1	10/26/2012 07:39 PM
Surr: Nitrobenzene-d5	*78.7*		*41-120*	*%REC*	1	10/26/2012 07:39 PM
Surr: Phenol-d6	*81.6*		*20-120*	*%REC*	1	10/26/2012 07:39 PM
VOLATILES - SW8260C			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		5.0	µg/L	1	10/29/2012 06:47 PM
1,1-Dichloroethane	ND		5.0	µg/L	1	10/29/2012 06:47 PM
1,2-Dibromoethane	ND		5.0	µg/L	1	10/29/2012 06:47 PM
1,2-Dichloroethane	ND		5.0	µg/L	1	10/29/2012 06:47 PM
1,4-Dioxane	ND		100	µg/L	1	10/29/2012 06:47 PM
2-Butanone	ND		10	µg/L	1	10/29/2012 06:47 PM
Benzene	ND		5.0	µg/L	1	10/29/2012 06:47 PM
Carbon disulfide	ND		10	µg/L	1	10/29/2012 06:47 PM
Chlorobenzene	ND		5.0	µg/L	1	10/29/2012 06:47 PM
Chloroform	ND		5.0	µg/L	1	10/29/2012 06:47 PM
Ethylbenzene	ND		5.0	µg/L	1	10/29/2012 06:47 PM
Methyl tert-butyl ether	ND		5.0	µg/L	1	10/29/2012 06:47 PM
Styrene	ND		5.0	µg/L	1	10/29/2012 06:47 PM
Tetrachloroethene	ND		5.0	µg/L	1	10/29/2012 06:47 PM
Toluene	ND		5.0	µg/L	1	10/29/2012 06:47 PM
Trichloroethene	ND		5.0	µg/L	1	10/29/2012 06:47 PM
Xylenes, Total	ND		15	µg/L	1	10/29/2012 06:47 PM
Surr: 1,2-Dichloroethane-d4	*104*		*70-125*	*%REC*	1	10/29/2012 06:47 PM
Surr: 4-Bromofluorobenzene	*107*		*72-125*	*%REC*	1	10/29/2012 06:47 PM
Surr: Dibromofluoromethane	*107*		*71-125*	*%REC*	1	10/29/2012 06:47 PM
Surr: Toluene-d8	*93.7*		*75-125*	*%REC*	1	10/29/2012 06:47 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *30-Oct-12*

Client: Navajo Refining Company

Project: Lovington Lea Refining Skinner List **Work Order:** 1210908

Sample ID: 1210 Tank **Lab ID:** 1210908-01

Collection Date: 10/22/2012 07:30 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE - SM4500CN E			**M4500CN E&G**			Analyst: **EDG**
Cyanide	ND		0.0200	mg/L	1	10/29/2012 10:45 AM
Cyanide, Amenable to Chlorination	ND		0.0200	mg/L	1	10/29/2012 10:45 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Batch ID: **65267** Instrument ID **ICPMS04** Method: **SW6020**

MBLK Sample ID: **MBLKW2-102412-65267** Units: **mg/L** Analysis Date: **10/24/2012 03:44 PM**

Client ID: Run ID: **ICPMS04_121024A** SeqNo: **2995445** Prep Date: **10/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.0050								
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Lead	ND	0.0050								
Nickel	ND	0.0050								
Selenium	ND	0.0050								
Silver	ND	0.0050								
Vanadium	ND	0.0050								
Zinc	ND	0.0050								

LCS Sample ID: **MLCSW2-102412-65267** Units: **mg/L** Analysis Date: **10/24/2012 03:49 PM**

Client ID: Run ID: **ICPMS04_121024A** SeqNo: **2995446** Prep Date: **10/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04871	0.0050	0.05	0	97.4	80-120	0			
Arsenic	0.04901	0.0050	0.05	0	98	80-120	0			
Barium	0.04876	0.0050	0.05	0	97.5	80-120	0			
Beryllium	0.04917	0.0020	0.05	0	98.3	80-120	0			
Cadmium	0.04783	0.0020	0.05	0	95.7	80-120	0			
Chromium	0.04894	0.0050	0.05	0	97.9	80-120	0			
Cobalt	0.0496	0.0050	0.05	0	99.2	80-120	0			
Lead	0.0491	0.0050	0.05	0	98.2	80-120	0			
Nickel	0.04959	0.0050	0.05	0	99.2	80-120	0			
Selenium	0.0482	0.0050	0.05	0	96.4	80-120	0			
Silver	0.04934	0.0050	0.05	0	98.7	80-120	0			
Vanadium	0.04768	0.0050	0.05	0	95.4	80-120	0			
Zinc	0.05092	0.0050	0.05	0	102	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210908
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **65267** Instrument ID **ICPMS04** Method: **SW6020**

MS Sample ID: **1210910-01AMS** Units: **mg/L** Analysis Date: **10/24/2012 04:21 PM**

Client ID: Run ID: **ICPMS04_121024A** SeqNo: **2995452** Prep Date: **10/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04806	0.0050	0.05	0.00035	95.4	80-120	0			
Arsenic	0.05688	0.0050	0.05	0.008092	97.6	80-120	0			
Barium	0.09752	0.0050	0.05	0.04384	107	80-120	0			
Cadmium	0.05011	0.0020	0.05	0.000098	100	80-120	0			
Chromium	0.04915	0.0050	0.05	0.001244	95.8	80-120	0			
Cobalt	0.04847	0.0050	0.05	0.000876	95.2	80-120	0			
Lead	0.04976	0.0050	0.05	0.000641	98.2	80-120	0			
Nickel	0.05243	0.0050	0.05	0.005371	94.1	80-120	0			
Selenium	0.05393	0.0050	0.05	0.004442	99	80-120	0			
Silver	0.0484	0.0050	0.05	0.00004	96.7	80-120	0			
Vanadium	0.07051	0.0050	0.05	0.02157	97.9	80-120	0			
Zinc	0.06807	0.0050	0.05	0.0144	107	80-120	0			

MS Sample ID: **1210910-01AMS** Units: **mg/L** Analysis Date: **10/24/2012 06:45 PM**

Client ID: Run ID: **ICPMS04_121024A** SeqNo: **2995610** Prep Date: **10/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.05297	0.0020	0.05	0.00005	106	80-120	0			

MSD Sample ID: **1210910-01AMSD** Units: **mg/L** Analysis Date: **10/24/2012 04:25 PM**

Client ID: Run ID: **ICPMS04_121024A** SeqNo: **2995453** Prep Date: **10/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04908	0.0050	0.05	0.00035	97.5	80-120	0.04806	2.1	15	
Arsenic	0.05794	0.0050	0.05	0.008092	99.7	80-120	0.05688	1.85	15	
Barium	0.09348	0.0050	0.05	0.04384	99.3	80-120	0.09752	4.23	15	
Cadmium	0.04879	0.0020	0.05	0.000098	97.4	80-120	0.05011	2.67	15	
Chromium	0.05188	0.0050	0.05	0.001244	101	80-120	0.04915	5.42	15	
Cobalt	0.0487	0.0050	0.05	0.000876	95.6	80-120	0.04847	0.465	15	
Lead	0.04849	0.0050	0.05	0.000641	95.7	80-120	0.04976	2.58	15	
Nickel	0.05248	0.0050	0.05	0.005371	94.2	80-120	0.05243	0.0877	15	
Selenium	0.05332	0.0050	0.05	0.004442	97.8	80-120	0.05393	1.13	15	
Silver	0.04758	0.0050	0.05	0.00004	95.1	80-120	0.0484	1.71	15	
Vanadium	0.07182	0.0050	0.05	0.02157	101	80-120	0.07051	1.84	15	
Zinc	0.06273	0.0050	0.05	0.0144	96.7	80-120	0.06807	8.15	15	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210908
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **65267** Instrument ID **ICPMS04** Method: **SW6020**

MSD Sample ID: **1210910-01AMSD** Units: **mg/L** Analysis Date: **10/24/2012 06:50 PM**
Client ID: Run ID: **ICPMS04_121024A** SeqNo: **2995611** Prep Date: **10/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.05098	0.0020	0.05	0.00005	102	80-120	0.05297	3.82	15	

DUP Sample ID: **1210910-01ADUP** Units: **mg/L** Analysis Date: **10/24/2012 04:16 PM**
Client ID: Run ID: **ICPMS04_121024A** SeqNo: **2995451** Prep Date: **10/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.0050	0	0	0	0-0	0.00035	0	25	
Arsenic	0.007749	0.0050	0	0	0	0-0	0.008092	4.33	25	
Barium	0.0427	0.0050	0	0	0	0-0	0.04384	2.63	25	
Cadmium	ND	0.0020	0	0	0	0-0	0.000098	0	25	
Chromium	0.001639	0.0050	0	0	0	0-0	0.001244	0	25	J
Cobalt	0.000854	0.0050	0	0	0	0-0	0.000876	0	25	J
Lead	ND	0.0050	0	0	0	0-0	0.000641	0	25	
Nickel	0.005239	0.0050	0	0	0	0-0	0.005371	2.49	25	
Selenium	0.003206	0.0050	0	0	0	0-0	0.004442	0	25	J
Silver	ND	0.0050	0	0	0	0-0	0.00004	0	25	
Vanadium	0.02294	0.0050	0	0	0	0-0	0.02157	6.16	25	
Zinc	0.0123	0.0050	0	0	0	0-0	0.0144	15.7	25	

DUP Sample ID: **1210910-01ADUP** Units: **mg/L** Analysis Date: **10/24/2012 06:40 PM**
Client ID: Run ID: **ICPMS04_121024A** SeqNo: **2995609** Prep Date: **10/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	ND	0.0020	0	0	0	0-0	0.00005	0	25	

The following samples were analyzed in this batch: 1210908-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210908
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **65317** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW2-102512-65317** Units: **mg/L** Analysis Date: **10/25/2012 07:14 PM**
Client ID: Run ID: **MERCURY_121025A** SeqNo: **2997208** Prep Date: **10/25/2012** 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: **GLCSW2-102512-65317** Units: **mg/L** Analysis Date: **10/25/2012 07:16 PM**
Client ID: Run ID: **MERCURY_121025A** SeqNo: **2997209** Prep Date: **10/25/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00483	0.00020	0.005	0	96.6	85-115	0			

MS Sample ID: **1210880-01DMS** Units: **mg/L** Analysis Date: **10/25/2012 07:25 PM**
Client ID: Run ID: **MERCURY_121025A** SeqNo: **2997212** Prep Date: **10/25/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0051	0.00020	0.005	0	102	85-115	0			

MSD Sample ID: **1210880-01DMSD** Units: **mg/L** Analysis Date: **10/25/2012 07:27 PM**
Client ID: Run ID: **MERCURY_121025A** SeqNo: **2997213** Prep Date: **10/25/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00506	0.00020	0.005	-0.000022	102	85-115	0			

DUP Sample ID: **1210880-01DDUP** Units: **mg/L** Analysis Date: **10/25/2012 07:20 PM**
Client ID: Run ID: **MERCURY_121025A** SeqNo: **2997211** Prep Date: **10/25/2012** 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	-0.000022	0	20	

The following samples were analyzed in this batch: 1210908-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210908
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **65325** Instrument ID **SV-6** Method: **SW8270**

MBLK Sample ID: **SBLKW1-121026-65325** Units: **µg/L** Analysis Date: **10/26/2012 05:05 PM**

Client ID: Run ID: **SV-6_121026A** SeqNo: **2999036** Prep Date: **10/26/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	ND	0.20								
1,3-Dichlorobenzene	ND	0.20								
1,4-Dichlorobenzene	ND	0.20								
1-Methylnaphthalene	ND	0.20								
2,4-Dimethylphenol	ND	0.20								
2,4-Dinitrophenol	ND	1.0								
2-Methylphenol	ND	0.20								
3&4-Methylphenol	ND	0.20								
4-Nitrophenol	ND	1.0								
Acenaphthylene	ND	0.20								
Anthracene	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzenethiol	ND	0.20								
Benzo(a)pyrene	ND	0.20								
Benzo(b)fluoranthene	ND	0.20								
Benzo(k)fluoranthene	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.20								
Chrysene	ND	0.20								
Dibenz(a,h)acridine	ND	0.20								
Dibenz(a,h)anthracene	ND	0.20								
Diethyl phthalate	ND	0.20								
Dimethyl phthalate	ND	0.20								
Di-n-butyl phthalate	ND	0.20								
Fluoranthene	ND	0.20								
Fluorene	ND	0.20								
Indene	ND	0.20								
Indeno(1,2,3-cd)pyrene	ND	0.20								
Naphthalene	ND	0.20								
Phenanthrene	ND	0.20								
Phenol	ND	0.20								
Pyrene	ND	0.20								
Pyridine	ND	1.0								
Quinoline	ND	0.20								
Surr: 2,4,6-Tribromophenol	*4.747*	0.20	*5*	0	*94.9*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*5.387*	0.20	*5*	0	*108*	*40-125*	0			
Surr: 2-Fluorophenol	*5.308*	0.20	*5*	0	*106*	*20-120*	0			
Surr: 4-Terphenyl-d14	*6.052*	0.20	*5*	0	*121*	*40-135*	0			
Surr: Nitrobenzene-d5	*5.283*	0.20	*5*	0	*106*	*41-120*	0			
Surr: Phenol-d6	*5.566*	0.20	*5*	0	*111*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210908
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **65325** Instrument ID **SV-6** Method: **SW8270**

LCS Sample ID: **SLCSW1-121026-65325** Units: **µg/L** Analysis Date: **10/26/2012 05:25 PM**

Client ID: Run ID: **SV-6_121026A** SeqNo: **2999037** Prep Date: **10/26/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	5.48	0.20	5	0	110	45-120	0			
1,3-Dichlorobenzene	5.43	0.20	5	0	109	45-120	0			
1,4-Dichlorobenzene	5.43	0.20	5	0	109	40-120	0			
1-Methylnaphthalene	5.395	0.20	5	0	108	45-120	0			
2,4-Dimethylphenol	5.435	0.20	5	0	109	35-120	0			
2,4-Dinitrophenol	5.02	1.0	5	0	100	15-120	0			
2-Methylphenol	5.517	0.20	5	0	110	45-120	0			
3&4-Methylphenol	5.51	0.20	5	0	110	35-120	0			
4-Nitrophenol	4.878	1.0	5	0	97.6	30-130	0			
Acenaphthylene	5.401	0.20	5	0	108	47-120	0			
Anthracene	5.662	0.20	5	0	113	45-120	0			
Benz(a)anthracene	5.371	0.20	5	0	107	40-120	0			
Benzo(a)pyrene	5.312	0.20	5	0	106	45-120	0			
Benzo(b)fluoranthene	5.947	0.20	5	0	119	50-120	0			
Benzo(k)fluoranthene	5.382	0.20	5	0	108	45-127	0			
Bis(2-ethylhexyl)phthalate	5.749	0.20	5	0	115	40-139	0			
Chrysene	5.262	0.20	5	0	105	43-120	0			
Dibenz(a,h)anthracene	5.425	0.20	5	0	109	45-125	0			
Diethyl phthalate	5.32	0.20	5	0	106	41-120	0			
Dimethyl phthalate	5.305	0.20	5	0	106	40-122	0			
Di-n-butyl phthalate	5.752	0.20	5	0	115	45-123	0			
Fluoranthene	5.651	0.20	5	0	113	45-125	0			
Fluorene	5.354	0.20	5	0	107	49-120	0			
Indeno(1,2,3-cd)pyrene	5.456	0.20	5	0	109	41-128	0			
Naphthalene	5.408	0.20	5	0	108	45-120	0			
Phenanthrene	5.531	0.20	5	0	111	45-121	0			
Phenol	5.38	0.20	5	0	108	20-124	0			
Pyrene	5.461	0.20	5	0	109	40-130	0			
Pyridine	5.008	1.0	5	0	100	15-120	0			
Quinoline	5.489	0.20	5	0	110	45-120	0			
Surr: 2,4,6-Tribromophenol	*5.095*	0.20	*5*	0	*102*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*5.366*	0.20	*5*	0	*107*	*40-125*	0			
Surr: 2-Fluorophenol	*5.354*	0.20	*5*	0	*107*	*20-120*	0			
Surr: 4-Terphenyl-d14	*5.915*	0.20	*5*	0	*118*	*40-135*	0			
Surr: Nitrobenzene-d5	*5.182*	0.20	*5*	0	*104*	*41-120*	0			
Surr: Phenol-d6	*5.406*	0.20	*5*	0	*108*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210908
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **65325** Instrument ID **SV-6** Method: **SW8270**

LCS Sample ID: **SLCSW2-121026-65325** Units: **µg/L** Analysis Date: **10/26/2012 06:03 PM**

Client ID: Run ID: **SV-6_121026A** SeqNo: **2999039** Prep Date: **10/26/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzenethiol	5.352	0.20	5	0	107	11-110	0			
Surr: 2,4,6-Tribromophenol	*4.727*	0.20	*5*	0	*94.5*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*5.464*	0.20	*5*	0	*109*	*40-125*	0			
Surr: 2-Fluorophenol	*5.456*	0.20	*5*	0	*109*	*20-120*	0			
Surr: 4-Terphenyl-d14	*6.21*	0.20	*5*	0	*124*	*40-135*	0			
Surr: Nitrobenzene-d5	*5.34*	0.20	*5*	0	*107*	*41-120*	0			
Surr: Phenol-d6	*5.629*	0.20	*5*	0	*113*	*20-120*	0			

LCS Sample ID: **SLCSW3-121026-65325** Units: **µg/L** Analysis Date: **10/26/2012 06:41 PM**

Client ID: Run ID: **SV-6_121026A** SeqNo: **2999041** Prep Date: **10/26/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibenz(a,h)acridine	5.737	0.20	5	0	115	35-140	0			
Indene	6.086	0.20	5	0	122	40-130	0			
Surr: 2,4,6-Tribromophenol	*4.343*	0.20	*5*	0	*86.9*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*4.991*	0.20	*5*	0	*99.8*	*40-125*	0			
Surr: 2-Fluorophenol	*5.158*	0.20	*5*	0	*103*	*20-120*	0			
Surr: 4-Terphenyl-d14	*5.548*	0.20	*5*	0	*111*	*40-135*	0			
Surr: Nitrobenzene-d5	*4.906*	0.20	*5*	0	*98.1*	*41-120*	0			
Surr: Phenol-d6	*5.154*	0.20	*5*	0	*103*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210908
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **65325** Instrument ID **SV-6** Method: **SW8270**

LCSD Sample ID: **SLCSDW1-121026-65325** Units: **µg/L** Analysis Date: **10/26/2012 05:44 PM**

Client ID: Run ID: **SV-6_121026A** SeqNo: **2999038** Prep Date: **10/26/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	5.525	0.20	5	0	111	45-120	5.48	0.822	20	
1,3-Dichlorobenzene	5.536	0.20	5	0	111	45-120	5.43	1.93	20	
1,4-Dichlorobenzene	5.526	0.20	5	0	111	40-120	5.43	1.74	20	
1-Methylnaphthalene	5.441	0.20	5	0	109	45-120	5.395	0.863	20	
2,4-Dimethylphenol	5.497	0.20	5	0	110	35-120	5.435	1.13	20	
2,4-Dinitrophenol	4.873	1.0	5	0	97.5	15-120	5.02	2.97	50	
2-Methylphenol	5.605	0.20	5	0	112	45-120	5.517	1.57	20	
3&4-Methylphenol	5.534	0.20	5	0	111	35-120	5.51	0.433	20	
4-Nitrophenol	4.943	1.0	5	0	98.9	30-130	4.878	1.32	20	
Acenaphthylene	5.383	0.20	5	0	108	47-120	5.401	0.335	20	
Anthracene	5.628	0.20	5	0	113	45-120	5.662	0.611	20	
Benz(a)anthracene	5.57	0.20	5	0	111	40-120	5.371	3.64	20	
Benzo(a)pyrene	5.351	0.20	5	0	107	45-120	5.312	0.736	20	
Benzo(b)fluoranthene	5.649	0.20	5	0	113	50-120	5.947	5.14	20	
Benzo(k)fluoranthene	4.837	0.20	5	0	96.7	45-127	5.382	10.7	20	
Bis(2-ethylhexyl)phthalate	5.796	0.20	5	0	116	40-139	5.749	0.812	20	
Chrysene	5.405	0.20	5	0	108	43-120	5.262	2.69	20	
Dibenz(a,h)anthracene	5.457	0.20	5	0	109	45-125	5.425	0.584	20	
Diethyl phthalate	5.286	0.20	5	0	106	41-120	5.32	0.64	20	
Dimethyl phthalate	5.341	0.20	5	0	107	40-122	5.305	0.674	20	
Di-n-butyl phthalate	5.677	0.20	5	0	114	45-123	5.752	1.31	20	
Fluoranthene	5.566	0.20	5	0	111	45-125	5.651	1.51	20	
Fluorene	5.369	0.20	5	0	107	49-120	5.354	0.274	20	
Indeno(1,2,3-cd)pyrene	5.51	0.20	5	0	110	41-128	5.456	0.971	20	
Naphthalene	5.469	0.20	5	0	109	45-120	5.408	1.14	20	
Phenanthrene	5.52	0.20	5	0	110	45-121	5.531	0.203	20	
Phenol	5.503	0.20	5	0	110	20-124	5.38	2.27	20	
Pyrene	5.408	0.20	5	0	108	40-130	5.461	0.982	20	
Pyridine	5.125	1.0	5	0	103	15-120	5.008	2.3	20	
Quinoline	5.556	0.20	5	0	111	45-120	5.489	1.21	20	
Surr: 2,4,6-Tribromophenol	*5.01*	0.20	*5*	0	*100*	*34-129*	5.095	*1.68*	*0*	
Surr: 2-Fluorobiphenyl	*5.243*	0.20	*5*	0	*105*	*40-125*	5.366	*2.33*	*0*	
Surr: 2-Fluorophenol	*5.328*	0.20	*5*	0	*107*	*20-120*	5.354	*0.495*	*0*	
Surr: 4-Terphenyl-d14	*5.834*	0.20	*5*	0	*117*	*40-135*	5.915	*1.39*	*0*	
Surr: Nitrobenzene-d5	*5.226*	0.20	*5*	0	*105*	*41-120*	5.182	*0.857*	*0*	
Surr: Phenol-d6	*5.45*	0.20	*5*	0	*109*	*20-120*	5.406	*0.809*	*0*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210908
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **65325** Instrument ID **SV-6** Method: **SW8270**

LCSD Sample ID: **SLCSDW2-121026-65325** Units: **µg/L** Analysis Date: **10/26/2012 06:22 PM**

Client ID: Run ID: **SV-6_121026A** SeqNo: **2999040** Prep Date: **10/26/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzenethiol	5.319	0.20	5	0	106	11-110	5.352	0.616	30	
Surr: 2,4,6-Tribromophenol	*4.819*	0.20	*5*	0	*96.4*	*34-129*	4.727	*1.94*	*0*	
Surr: 2-Fluorobiphenyl	*5.365*	0.20	*5*	0	*107*	*40-125*	5.464	*1.83*	*0*	
Surr: 2-Fluorophenol	*5.416*	0.20	*5*	0	*108*	*20-120*	5.456	*0.733*	*0*	
Surr: 4-Terphenyl-d14	*6.055*	0.20	*5*	0	*121*	*40-135*	6.21	*2.52*	*0*	
Surr: Nitrobenzene-d5	*5.283*	0.20	*5*	0	*106*	*41-120*	5.34	*1.08*	*0*	
Surr: Phenol-d6	*5.518*	0.20	*5*	0	*110*	*20-120*	5.629	*1.99*	*0*	

LCSD Sample ID: **SLCSDW3-121026-65325** Units: **µg/L** Analysis Date: **10/26/2012 07:00 PM**

Client ID: Run ID: **SV-6_121026A** SeqNo: **2999042** Prep Date: **10/26/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibenz(a,h)acridine	5.769	0.20	5	0	115	35-140	5.737	0.551	20	
Indene	6.23	0.20	5	0	125	40-130	6.086	2.35	20	
Surr: 2,4,6-Tribromophenol	*4.619*	0.20	*5*	0	*92.4*	*34-129*	4.343	*6.15*	*0*	
Surr: 2-Fluorobiphenyl	*5.162*	0.20	*5*	0	*103*	*40-125*	4.991	*3.36*	*0*	
Surr: 2-Fluorophenol	*5.365*	0.20	*5*	0	*107*	*20-120*	5.158	*3.93*	*0*	
Surr: 4-Terphenyl-d14	*5.681*	0.20	*5*	0	*114*	*40-135*	5.548	*2.37*	*0*	
Surr: Nitrobenzene-d5	*5.046*	0.20	*5*	0	*101*	*41-120*	4.906	*2.8*	*0*	
Surr: Phenol-d6	*5.387*	0.20	*5*	0	*108*	*20-120*	5.154	*4.43*	*0*	

The following samples were analyzed in this batch: 1210908-01D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210908
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R137549** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-121029-R137549** Units: **µg/L** Analysis Date: **10/29/2012 12:48 PM**

Client ID: Run ID: **VOA1_121029A** SeqNo: **2999750** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dioxane	ND	100								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon disulfide	ND	10								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Ethylbenzene	ND	5.0								
Methyl tert-butyl ether	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
Trichloroethene	ND	5.0								
Xylenes, Total	ND	15								
Surr: 1,2-Dichloroethane-d4	*48.55*	5.0	*50*	0	*97.1*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*51.43*	5.0	*50*	0	*103*	*72-125*	0			
Surr: Dibromofluoromethane	*48.48*	5.0	*50*	0	*97*	*71-125*	0			
Surr: Toluene-d8	*45.34*	5.0	*50*	0	*90.7*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210908
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R137549** Instrument ID **VOA1** Method: **SW8260**

LCS Sample ID: **VLCSW-102912-R137549** Units: **µg/L** Analysis Date: **10/29/2012 11:30 AM**

Client ID: Run ID: **VOA1_121029A** SeqNo: **2999749** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	54.36	5.0	50	0	109	80-120	0			
1,1-Dichloroethane	56.21	5.0	50	0	112	76-120	0			
1,2-Dibromoethane	51.65	5.0	50	0	103	80-120	0			
1,2-Dichloroethane	54.34	5.0	50	0	109	78-120	0			
1,4-Dioxane	1150	100	1000	0	115	50-158	0			
2-Butanone	107.4	10	100	0	107	58-132	0			
Benzene	54.2	5.0	50	0	108	73-121	0			
Carbon disulfide	103.4	10	100	0	103	68-141	0			
Chlorobenzene	49.04	5.0	50	0	98.1	80-120	0			
Chloroform	55.69	5.0	50	0	111	80-120	0			
Ethylbenzene	46.72	5.0	50	0	93.4	80-120	0			
Methyl tert-butyl ether	53.35	5.0	50	0	107	73-121	0			
Styrene	53.21	5.0	50	0	106	80-120	0			
Tetrachloroethene	48.79	5.0	50	0	97.6	79-120	0			
Toluene	48.13	5.0	50	0	96.3	80-120	0			
Trichloroethene	56.44	5.0	50	0	113	80-120	0			
Xylenes, Total	143.7	15	150	0	95.8	80-120	0			
Surr: 1,2-Dichloroethane-d4	*45.4*	5.0	*50*	0	*90.8*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*52.94*	5.0	*50*	0	*106*	*72-125*	0			
Surr: Dibromofluoromethane	*47.71*	5.0	*50*	0	*95.4*	*71-125*	0			
Surr: Toluene-d8	*47.76*	5.0	*50*	0	*95.5*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210908
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R137549** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **1210965-04AMS** Units: **µg/L** Analysis Date: **10/29/2012 02:31 PM**

Client ID: Run ID: **VOA1_121029A** SeqNo: **3000058** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	56.11	5.0	50	0	112	80-120	0			
1,1-Dichloroethane	56.48	5.0	50	0	113	76-120	0			
1,2-Dibromoethane	51.18	5.0	50	0	102	80-120	0			
1,2-Dichloroethane	56.75	5.0	50	0	114	78-120	0			
1,4-Dioxane	1412	100	1000	0	141	50-158	0			
2-Butanone	111.9	10	100	0	112	58-132	0			
Benzene	55.1	5.0	50	0	110	73-121	0			
Carbon disulfide	101.8	10	100	0	102	68-141	0			
Chlorobenzene	47.92	5.0	50	0	95.8	80-120	0			
Chloroform	55.23	5.0	50	0	110	80-120	0			
Ethylbenzene	50.89	5.0	50	0	102	80-120	0			
Methyl tert-butyl ether	56.02	5.0	50	0	112	73-121	0			
Styrene	52.69	5.0	50	0	105	80-120	0			
Tetrachloroethene	48.75	5.0	50	0	97.5	79-120	0			
Toluene	48.68	5.0	50	0	97.4	80-120	0			
Trichloroethene	57.84	5.0	50	0	116	80-120	0			
Xylenes, Total	147.2	15	150	0	98.1	80-120	0			
Surr: 1,2-Dichloroethane-d4	*49.08*	5.0	*50*	0	*98.2*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*52.16*	5.0	*50*	0	*104*	*72-125*	0			
Surr: Dibromofluoromethane	*50.2*	5.0	*50*	0	*100*	*71-125*	0			
Surr: Toluene-d8	*44.38*	5.0	*50*	0	*88.8*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210908
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R137549** Instrument ID **VOA1** Method: **SW8260**

MSD Sample ID: **1210965-04AMSD** Units: **µg/L** Analysis Date: **10/29/2012 03:47 PM**

Client ID: Run ID: **VOA1_121029A** SeqNo: **3000059** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	50.92	5.0	50	0	102	80-120	56.11	9.7	20	
1,1-Dichloroethane	54.91	5.0	50	0	110	76-120	56.48	2.81	20	
1,2-Dibromoethane	48.35	5.0	50	0	96.7	80-120	51.18	5.68	20	
1,2-Dichloroethane	53.56	5.0	50	0	107	78-120	56.75	5.79	20	
1,4-Dioxane	1579	100	1000	0	158	50-158	1412	11.2	20	
2-Butanone	105.7	10	100	0	106	58-132	111.9	5.69	20	
Benzene	53.04	5.0	50	0	106	73-121	55.1	3.82	20	
Carbon disulfide	101.3	10	100	0	101	68-141	101.8	0.539	20	
Chlorobenzene	45.19	5.0	50	0	90.4	80-120	47.92	5.85	20	
Chloroform	58.46	5.0	50	0	117	80-120	55.23	5.69	20	
Ethylbenzene	42.94	5.0	50	0	85.9	80-120	50.89	16.9	20	
Methyl tert-butyl ether	56.12	5.0	50	0	112	73-121	56.02	0.174	20	
Styrene	48.13	5.0	50	0	96.3	80-120	52.69	9.04	20	
Tetrachloroethene	42.61	5.0	50	0	85.2	79-120	48.75	13.4	20	
Toluene	44.83	5.0	50	0	89.7	80-120	48.68	8.24	20	
Trichloroethene	54.95	5.0	50	0	110	80-120	57.84	5.13	20	
Xylenes, Total	132.7	15	150	0	88.4	80-120	147.2	10.4	20	
Surr: 1,2-Dichloroethane-d4	*48.73*	5.0	*50*	0	*97.5*	*70-125*	49.08	*0.726*	*20*	
Surr: 4-Bromofluorobenzene	*52.92*	5.0	*50*	0	*106*	*72-125*	52.16	*1.45*	*20*	
Surr: Dibromofluoromethane	*52.45*	5.0	*50*	0	*105*	*71-125*	50.2	*4.37*	*20*	
Surr: Toluene-d8	*42.19*	5.0	*50*	0	*84.4*	*75-125*	44.38	*5.07*	*20*	

The following samples were analyzed in this batch: 1210908-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210908
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R137555** Instrument ID **UV-2450** Method: **M4500CN E&G (Dissolve)**

MBLK Sample ID: **WBLKW1-102912-R137555** Units: **mg/L** Analysis Date: **10/29/2012 10:45 AM**
Client ID: Run ID: **UV-2450_121029B** SeqNo: **2999886** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	ND	0.020								
Cyanide, Amenable to Chlorination	ND	0.020								

LCS Sample ID: **WLCSW1-102912-R137555** Units: **mg/L** Analysis Date: **10/29/2012 10:45 AM**
Client ID: Run ID: **UV-2450_121029B** SeqNo: **2999887** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.176	0.020	0.2	0	88	80-120	0			

LCSD Sample ID: **WLCSDW1-102912-R137555** Units: **mg/L** Analysis Date: **10/29/2012 10:45 AM**
Client ID: Run ID: **UV-2450_121029B** SeqNo: **2999896** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.178	0.020	0.2	0	89	80-120	0.176	1.13	20	

MS Sample ID: **1210966-01DMS** Units: **mg/L** Analysis Date: **10/29/2012 10:45 AM**
Client ID: Run ID: **UV-2450_121029B** SeqNo: **2999895** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.172	0.020	0.2	0.005	83.5	80-120	0			

The following samples were analyzed in this batch: 1210908-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 30-Oct-12

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List
WorkOrder: **1210908**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **23-Oct-12 09:20**

Work Order: **1210908** Received by: **RNG**

Checklist completed by Paresh M. Giga (eSignature) 23-Oct-12 (Date) Reviewed by: (eSignature) (Date)

Matrices: 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):	1.7c C/U	005	
Cooler(s)/Kit(s):	7883		
Date/Time sample(s) sent to storage:	10/23/12 16:35		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

ALS Environmental

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Everett, WA +1 425 356 2600 | Holland, MI +1 616 399 6070

Chain of Custody For

Page _____ of _____

COC ID: 62606

1210908

NAVAJO REFINING: Navajo Refining Company

Project: Lovington Lea Refining Skinner List

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Lovington Lea Refining SkinnerList	A	VOC (8260) Skinner List
Work Order		Project Number	128809	B	LL SVOC (8270) Skinner List
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (6020/7000) Skinner List
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange	D	Total Cyanide
Address	501 East Main	Address	501 East Main	E	
				F	
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	
Phone	(575) 748-6733	Phone	(575) 748-6733	H	
Fax	(575) 746-5421	Fax	(575) 746-5421	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	1210 Tank	10-22-12	7:30a.m.	W	-	7	✓	✓	✓	✓							
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Andres Gonzalez

Shipment Method:

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

Results Due Date:

Relinquished by: Andres Gonzalez	Date: 10-22-12	Time: 7:30	Received by:	
Relinquished by:	Date:	Time:	Received by (Laboratory):	10/23/12 09:21
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Notes: 10 Day 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 / EDD
- ☐ 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 Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental 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.

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

Date:
Name:
Compa

Time: 3:00
Date:

SEAL

Seal Broken By:

8989 8549 4503

FedEx Express US Airbill

1 From Please print and press hard.
Date 10/22/12 Sender's FedEx Account Number 1129-9018-6
Sender's Name CATHY [redacted] TRUETT Phone (575) 396-5821
Company NAVAJO REFINING CO (LEA)
Address 7406 S MAIN ST Dept./Floor/Suite/Room
City LOVINGTON State NM ZIP 88260

2 Your Internal Billing Reference
First 24 characters will appear on invoice. October Monthly

3 To
Recipient's Name Phone 281,530-5656
Company ALS LAB
HOLD Weekday Print FedEx location address below. NOT available for FedEx First Overnight.
HOLD Saturday Print FedEx location address below. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.
Address 10450 STANDCLIFF RD.
We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room
Address STE 210
Print FedEx location address here if HOLD option is selected.
City HOUSTON State TX ZIP 77099-4338

0408719506

fedex.com 1.800.GoFedEx 1.800.463.3339

8989 8549 4503

FedEx Express MPS Label

8989 8549 4503 8989 8549 4503

FedEx Tracking Number for Shipper Form ID No. 0260

4a Express Package Service * To most locations. Packages up to 150 lbs.
- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

4b Express Freight Service ** To most locations. Packages over 150 lbs.
- [ ] FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. FedEx 1Day Freight Booking No. CALL 1.800.332.0808
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.
- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

6 Special Handling and Delivery Signature Options
- [ ] SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?
One box must be checked.
- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg
- [ ] Cargo Aircraft Only

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

7 Payment Bill to: Enter FedEx Acct. No. or Credit Card No. below.
- [ ] Sender — Acct. No. in Section 1 will be billed.
- [X] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. 2470-7613-1 Exp Date

Total Packages 4 Total Weight ____ lbs. Total Declared Value† $ ____ .00

29-Oct-2012

Aaron Strange
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 748-6733
Fax: (575) 746-5421

Re: Lovington Lea Refining Skinner List Work Order: **1210906**

Dear Aaron,

ALS Environmental received 2 samples on 23-Oct-2012 09:20 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental 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 Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 24.

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

Sincerely,

Patricia L. Lynch

Electronically approved by: Luke F. Hernandez

Patricia L. Lynch
Project Manager

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 29-Oct-12

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List
Work Order: **1210906**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1210906-01	East Water Well	Water		10/22/2012 07:30	10/23/2012 09:20	☐
1210906-02	Trip blank - 081712-27	Water		10/22/2012	10/23/2012 09:20	☐

Client:	Navajo Refining Company
Project:	Lovington Lea Refining Skinner List
Work Order:	1210906

Case Narrative

Batch 65325, Method 8270: Insufficient sample for MS/MSD.

ALS Environmental

Date: *29-Oct-12*

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List
Work Order: 1210906
Sample ID: East Water Well
Lab ID: 1210906-01
Collection Date: 10/22/2012 07:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **10/25/2012**	Analyst: **OFO**
Mercury	ND		0.000200	mg/L	1	10/25/2012 07:29 PM
METALS			**SW6020**		Prep Date: **10/24/2012**	Analyst: **IGF**
Antimony	ND		0.00500	mg/L	1	10/24/2012 04:59 PM
Arsenic	ND		0.00500	mg/L	1	10/24/2012 04:59 PM
Barium	**0.110**		**0.00500**	**mg/L**	1	10/24/2012 04:59 PM
Beryllium	ND		0.00200	mg/L	1	10/24/2012 04:59 PM
Cadmium	ND		0.00200	mg/L	1	10/24/2012 04:59 PM
Chromium	**0.0157**		**0.00500**	**mg/L**	1	10/24/2012 04:59 PM
Cobalt	ND		0.00500	mg/L	1	10/24/2012 04:59 PM
Lead	**0.0353**		**0.00500**	**mg/L**	1	10/24/2012 04:59 PM
Nickel	ND		0.00500	mg/L	1	10/24/2012 04:59 PM
Selenium	ND		0.00500	mg/L	1	10/24/2012 04:59 PM
Silver	ND		0.00500	mg/L	1	10/24/2012 04:59 PM
Vanadium	**0.0274**		**0.00500**	**mg/L**	1	10/24/2012 04:59 PM
Zinc	**0.194**		**0.00500**	**mg/L**	1	10/24/2012 04:59 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **10/26/2012**	Analyst: **LG**
1,2-Dichlorobenzene	ND		0.20	µg/L	1	10/26/2012 11:48 PM
1,3-Dichlorobenzene	ND		0.20	µg/L	1	10/26/2012 11:48 PM
1,4-Dichlorobenzene	ND		0.20	µg/L	1	10/26/2012 11:48 PM
1-Methylnaphthalene	ND		0.20	µg/L	1	10/26/2012 11:48 PM
2,4-Dimethylphenol	ND		0.20	µg/L	1	10/26/2012 11:48 PM
2,4-Dinitrophenol	ND		1.0	µg/L	1	10/26/2012 11:48 PM
2-Methylphenol	ND		0.20	µg/L	1	10/26/2012 11:48 PM
3&4-Methylphenol	ND		0.20	µg/L	1	10/26/2012 11:48 PM
4-Nitrophenol	ND		1.0	µg/L	1	10/26/2012 11:48 PM
Acenaphthylene	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Anthracene	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Benz(a)anthracene	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Benzenethiol	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Benzo(a)pyrene	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Bis(2-ethylhexyl)phthalate	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Chrysene	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Dibenz(a,h)acridine	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Diethyl phthalate	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Dimethyl phthalate	ND		0.20	µg/L	1	10/26/2012 11:48 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List **Work Order:** 1210906
Sample ID: East Water Well **Lab ID:** 1210906-01
Collection Date: 10/22/2012 07:30 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Di-n-butyl phthalate	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Fluoranthene	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Fluorene	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Indene	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Naphthalene	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Phenanthrene	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Phenol	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Pyrene	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Pyridine	ND		1.0	µg/L	1	10/26/2012 11:48 PM
Quinoline	ND		0.20	µg/L	1	10/26/2012 11:48 PM
Surr: 2,4,6-Tribromophenol	*67.3*		*34-129*	*%REC*	1	10/26/2012 11:48 PM
Surr: 2-Fluorobiphenyl	*73.9*		*40-125*	*%REC*	1	10/26/2012 11:48 PM
Surr: 2-Fluorophenol	*70.9*		*20-120*	*%REC*	1	10/26/2012 11:48 PM
Surr: 4-Terphenyl-d14	*87.9*		*40-135*	*%REC*	1	10/26/2012 11:48 PM
Surr: Nitrobenzene-d5	*74.8*		*41-120*	*%REC*	1	10/26/2012 11:48 PM
Surr: Phenol-d6	*72.1*		*20-120*	*%REC*	1	10/26/2012 11:48 PM
VOLATILES - SW8260C			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		5.0	µg/L	1	10/28/2012 12:59 PM
1,1-Dichloroethane	ND		5.0	µg/L	1	10/28/2012 12:59 PM
1,2-Dibromoethane	ND		5.0	µg/L	1	10/28/2012 12:59 PM
1,2-Dichloroethane	ND		5.0	µg/L	1	10/28/2012 12:59 PM
1,4-Dioxane	ND		100	µg/L	1	10/28/2012 12:59 PM
2-Butanone	ND		10	µg/L	1	10/28/2012 12:59 PM
Benzene	ND		5.0	µg/L	1	10/28/2012 12:59 PM
Carbon disulfide	ND		10	µg/L	1	10/28/2012 12:59 PM
Chlorobenzene	ND		5.0	µg/L	1	10/28/2012 12:59 PM
Chloroform	ND		5.0	µg/L	1	10/28/2012 12:59 PM
Ethylbenzene	ND		5.0	µg/L	1	10/28/2012 12:59 PM
Methyl tert-butyl ether	ND		5.0	µg/L	1	10/28/2012 12:59 PM
Styrene	ND		5.0	µg/L	1	10/28/2012 12:59 PM
Tetrachloroethene	ND		5.0	µg/L	1	10/28/2012 12:59 PM
Toluene	ND		5.0	µg/L	1	10/28/2012 12:59 PM
Trichloroethene	ND		5.0	µg/L	1	10/28/2012 12:59 PM
Xylenes, Total	ND		15	µg/L	1	10/28/2012 12:59 PM
Surr: 1,2-Dichloroethane-d4	*94.2*		*70-125*	*%REC*	1	10/28/2012 12:59 PM
Surr: 4-Bromofluorobenzene	*102*		*72-125*	*%REC*	1	10/28/2012 12:59 PM
Surr: Dibromofluoromethane	*98.2*		*71-125*	*%REC*	1	10/28/2012 12:59 PM
Surr: Toluene-d8	*93.2*		*75-125*	*%REC*	1	10/28/2012 12:59 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *29-Oct-12*

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List
Work Order: 1210906
Sample ID: East Water Well
Lab ID: 1210906-01
Collection Date: 10/22/2012 07:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE - SM4500CN E			**M4500CN E&G**			Analyst: **EDG**
Cyanide	ND		0.0200	mg/L	1	10/29/2012 10:45 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Batch ID: **65267** Instrument ID **ICPMS04** Method: **SW6020**

MBLK Sample ID: **MBLKW2-102412-65267** Units: **mg/L** Analysis Date: **10/24/2012 03:44 PM**

Client ID: Run ID: **ICPMS04_121024A** SeqNo: **2995445** Prep Date: **10/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.0050								
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Lead	ND	0.0050								
Nickel	ND	0.0050								
Selenium	ND	0.0050								
Silver	ND	0.0050								
Vanadium	ND	0.0050								
Zinc	ND	0.0050								

LCS Sample ID: **MLCSW2-102412-65267** Units: **mg/L** Analysis Date: **10/24/2012 03:49 PM**

Client ID: Run ID: **ICPMS04_121024A** SeqNo: **2995446** Prep Date: **10/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04871	0.0050	0.05	0	97.4	80-120	0			
Arsenic	0.04901	0.0050	0.05	0	98	80-120	0			
Barium	0.04876	0.0050	0.05	0	97.5	80-120	0			
Beryllium	0.04917	0.0020	0.05	0	98.3	80-120	0			
Cadmium	0.04783	0.0020	0.05	0	95.7	80-120	0			
Chromium	0.04894	0.0050	0.05	0	97.9	80-120	0			
Cobalt	0.0496	0.0050	0.05	0	99.2	80-120	0			
Lead	0.0491	0.0050	0.05	0	98.2	80-120	0			
Nickel	0.04959	0.0050	0.05	0	99.2	80-120	0			
Selenium	0.0482	0.0050	0.05	0	96.4	80-120	0			
Silver	0.04934	0.0050	0.05	0	98.7	80-120	0			
Vanadium	0.04768	0.0050	0.05	0	95.4	80-120	0			
Zinc	0.05092	0.0050	0.05	0	102	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210906
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **65267** Instrument ID **ICPMS04** Method: **SW6020**

MS Sample ID: **1210910-01AMS** Units: **mg/L** Analysis Date: **10/24/2012 04:21 PM**
Client ID: Run ID: **ICPMS04_121024A** SeqNo: **2995452** Prep Date: **10/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04806	0.0050	0.05	0.00035	95.4	80-120	0			
Arsenic	0.05688	0.0050	0.05	0.008092	97.6	80-120	0			
Barium	0.09752	0.0050	0.05	0.04384	107	80-120	0			
Cadmium	0.05011	0.0020	0.05	0.000098	100	80-120	0			
Chromium	0.04915	0.0050	0.05	0.001244	95.8	80-120	0			
Cobalt	0.04847	0.0050	0.05	0.000876	95.2	80-120	0			
Lead	0.04976	0.0050	0.05	0.000641	98.2	80-120	0			
Nickel	0.05243	0.0050	0.05	0.005371	94.1	80-120	0			
Selenium	0.05393	0.0050	0.05	0.004442	99	80-120	0			
Silver	0.0484	0.0050	0.05	0.00004	96.7	80-120	0			
Vanadium	0.07051	0.0050	0.05	0.02157	97.9	80-120	0			
Zinc	0.06807	0.0050	0.05	0.0144	107	80-120	0			

MS Sample ID: **1210910-01AMS** Units: **mg/L** Analysis Date: **10/24/2012 06:45 PM**
Client ID: Run ID: **ICPMS04_121024A** SeqNo: **2995610** Prep Date: **10/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.05297	0.0020	0.05	0.00005	106	80-120	0			

MSD Sample ID: **1210910-01AMSD** Units: **mg/L** Analysis Date: **10/24/2012 04:25 PM**
Client ID: Run ID: **ICPMS04_121024A** SeqNo: **2995453** Prep Date: **10/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04908	0.0050	0.05	0.00035	97.5	80-120	0.04806	2.1	15	
Arsenic	0.05794	0.0050	0.05	0.008092	99.7	80-120	0.05688	1.85	15	
Barium	0.09348	0.0050	0.05	0.04384	99.3	80-120	0.09752	4.23	15	
Cadmium	0.04879	0.0020	0.05	0.000098	97.4	80-120	0.05011	2.67	15	
Chromium	0.05188	0.0050	0.05	0.001244	101	80-120	0.04915	5.42	15	
Cobalt	0.0487	0.0050	0.05	0.000876	95.6	80-120	0.04847	0.465	15	
Lead	0.04849	0.0050	0.05	0.000641	95.7	80-120	0.04976	2.58	15	
Nickel	0.05248	0.0050	0.05	0.005371	94.2	80-120	0.05243	0.0877	15	
Selenium	0.05332	0.0050	0.05	0.004442	97.8	80-120	0.05393	1.13	15	
Silver	0.04758	0.0050	0.05	0.00004	95.1	80-120	0.0484	1.71	15	
Vanadium	0.07182	0.0050	0.05	0.02157	101	80-120	0.07051	1.84	15	
Zinc	0.06273	0.0050	0.05	0.0144	96.7	80-120	0.06807	8.15	15	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210906
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **65267** Instrument ID **ICPMS04** Method: **SW6020**

MSD Sample ID: **1210910-01AMSD** Units: **mg/L** Analysis Date: **10/24/2012 06:50 PM**
Client ID: Run ID: **ICPMS04_121024A** SeqNo: **2995611** Prep Date: **10/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.05098	0.0020	0.05	0.00005	102	80-120	0.05297	3.82	15	

DUP Sample ID: **1210910-01ADUP** Units: **mg/L** Analysis Date: **10/24/2012 04:16 PM**
Client ID: Run ID: **ICPMS04_121024A** SeqNo: **2995451** Prep Date: **10/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.0050	0	0	0	0-0	0.00035	0	25	
Arsenic	0.007749	0.0050	0	0	0	0-0	0.008092	4.33	25	
Barium	0.0427	0.0050	0	0	0	0-0	0.04384	2.63	25	
Cadmium	ND	0.0020	0	0	0	0-0	0.000098	0	25	
Chromium	0.001639	0.0050	0	0	0	0-0	0.001244	0	25	J
Cobalt	0.000854	0.0050	0	0	0	0-0	0.000876	0	25	J
Lead	ND	0.0050	0	0	0	0-0	0.000641	0	25	
Nickel	0.005239	0.0050	0	0	0	0-0	0.005371	2.49	25	
Selenium	0.003206	0.0050	0	0	0	0-0	0.004442	0	25	J
Silver	ND	0.0050	0	0	0	0-0	0.00004	0	25	
Vanadium	0.02294	0.0050	0	0	0	0-0	0.02157	6.16	25	
Zinc	0.0123	0.0050	0	0	0	0-0	0.0144	15.7	25	

DUP Sample ID: **1210910-01ADUP** Units: **mg/L** Analysis Date: **10/24/2012 06:40 PM**
Client ID: Run ID: **ICPMS04_121024A** SeqNo: **2995609** Prep Date: **10/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	ND	0.0020	0	0	0	0-0	0.00005	0	25	

The following samples were analyzed in this batch: 1210906-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210906
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **65317** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW2-102512-65317** Units: **mg/L** Analysis Date: **10/25/2012 07:14 PM**
Client ID: Run ID: **MERCURY_121025A** SeqNo: **2997208** Prep Date: **10/25/2012** 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: **GLCSW2-102512-65317** Units: **mg/L** Analysis Date: **10/25/2012 07:16 PM**
Client ID: Run ID: **MERCURY_121025A** SeqNo: **2997209** Prep Date: **10/25/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00483	0.00020	0.005	0	96.6	85-115	0			

MS Sample ID: **1210880-01DMS** Units: **mg/L** Analysis Date: **10/25/2012 07:25 PM**
Client ID: Run ID: **MERCURY_121025A** SeqNo: **2997212** Prep Date: **10/25/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0051	0.00020	0.005	0	102	85-115	0			

MSD Sample ID: **1210880-01DMSD** Units: **mg/L** Analysis Date: **10/25/2012 07:27 PM**
Client ID: Run ID: **MERCURY_121025A** SeqNo: **2997213** Prep Date: **10/25/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00506	0.00020	0.005	-0.000022	102	85-115	0			

DUP Sample ID: **1210880-01DDUP** Units: **mg/L** Analysis Date: **10/25/2012 07:20 PM**
Client ID: Run ID: **MERCURY_121025A** SeqNo: **2997211** Prep Date: **10/25/2012** 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	-0.000022	0	20	

The following samples were analyzed in this batch: 1210906-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210906
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **65325** Instrument ID **SV-6** Method: **SW8270**

MBLK Sample ID: **SBLKW1-121026-65325** Units: **µg/L** Analysis Date: **10/26/2012 05:05 PM**

Client ID: Run ID: **SV-6_121026A** SeqNo: **2999036** Prep Date: **10/26/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	ND	0.20								
1,3-Dichlorobenzene	ND	0.20								
1,4-Dichlorobenzene	ND	0.20								
1-Methylnaphthalene	ND	0.20								
2,4-Dimethylphenol	ND	0.20								
2,4-Dinitrophenol	ND	1.0								
2-Methylphenol	ND	0.20								
3&4-Methylphenol	ND	0.20								
4-Nitrophenol	ND	1.0								
Acenaphthylene	ND	0.20								
Anthracene	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzenethiol	ND	0.20								
Benzo(a)pyrene	ND	0.20								
Benzo(b)fluoranthene	ND	0.20								
Benzo(k)fluoranthene	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.20								
Chrysene	ND	0.20								
Dibenz(a,h)acridine	ND	0.20								
Dibenz(a,h)anthracene	ND	0.20								
Diethyl phthalate	ND	0.20								
Dimethyl phthalate	ND	0.20								
Di-n-butyl phthalate	ND	0.20								
Fluoranthene	ND	0.20								
Fluorene	ND	0.20								
Indene	ND	0.20								
Indeno(1,2,3-cd)pyrene	ND	0.20								
Naphthalene	ND	0.20								
Phenanthrene	ND	0.20								
Phenol	ND	0.20								
Pyrene	ND	0.20								
Pyridine	ND	1.0								
Quinoline	ND	0.20								
Surr: 2,4,6-Tribromophenol	*4.747*	0.20	*5*	0	*94.9*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*5.387*	0.20	*5*	0	*108*	*40-125*	0			
Surr: 2-Fluorophenol	*5.308*	0.20	*5*	0	*106*	*20-120*	0			
Surr: 4-Terphenyl-d14	*6.052*	0.20	*5*	0	*121*	*40-135*	0			
Surr: Nitrobenzene-d5	*5.283*	0.20	*5*	0	*106*	*41-120*	0			
Surr: Phenol-d6	*5.566*	0.20	*5*	0	*111*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210906
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **65325** Instrument ID **SV-6** Method: **SW8270**

LCS Sample ID: **SLCSW1-121026-65325** Units: **µg/L** Analysis Date: **10/26/2012 05:25 PM**

Client ID: Run ID: **SV-6_121026A** SeqNo: **2999037** Prep Date: **10/26/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	5.48	0.20	5	0	110	45-120	0			
1,3-Dichlorobenzene	5.43	0.20	5	0	109	45-120	0			
1,4-Dichlorobenzene	5.43	0.20	5	0	109	40-120	0			
1-Methylnaphthalene	5.395	0.20	5	0	108	45-120	0			
2,4-Dimethylphenol	5.435	0.20	5	0	109	35-120	0			
2,4-Dinitrophenol	5.02	1.0	5	0	100	15-120	0			
2-Methylphenol	5.517	0.20	5	0	110	45-120	0			
3&4-Methylphenol	5.51	0.20	5	0	110	35-120	0			
4-Nitrophenol	4.878	1.0	5	0	97.6	30-130	0			
Acenaphthylene	5.401	0.20	5	0	108	47-120	0			
Anthracene	5.662	0.20	5	0	113	45-120	0			
Benz(a)anthracene	5.371	0.20	5	0	107	40-120	0			
Benzo(a)pyrene	5.312	0.20	5	0	106	45-120	0			
Benzo(b)fluoranthene	5.947	0.20	5	0	119	50-120	0			
Benzo(k)fluoranthene	5.382	0.20	5	0	108	45-127	0			
Bis(2-ethylhexyl)phthalate	5.749	0.20	5	0	115	40-139	0			
Chrysene	5.262	0.20	5	0	105	43-120	0			
Dibenz(a,h)anthracene	5.425	0.20	5	0	109	45-125	0			
Diethyl phthalate	5.32	0.20	5	0	106	41-120	0			
Dimethyl phthalate	5.305	0.20	5	0	106	40-122	0			
Di-n-butyl phthalate	5.752	0.20	5	0	115	45-123	0			
Fluoranthene	5.651	0.20	5	0	113	45-125	0			
Fluorene	5.354	0.20	5	0	107	49-120	0			
Indeno(1,2,3-cd)pyrene	5.456	0.20	5	0	109	41-128	0			
Naphthalene	5.408	0.20	5	0	108	45-120	0			
Phenanthrene	5.531	0.20	5	0	111	45-121	0			
Phenol	5.38	0.20	5	0	108	20-124	0			
Pyrene	5.461	0.20	5	0	109	40-130	0			
Pyridine	5.008	1.0	5	0	100	15-120	0			
Quinoline	5.489	0.20	5	0	110	45-120	0			
Surr: 2,4,6-Tribromophenol	*5.095*	0.20	*5*	0	*102*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*5.366*	0.20	*5*	0	*107*	*40-125*	0			
Surr: 2-Fluorophenol	*5.354*	0.20	*5*	0	*107*	*20-120*	0			
Surr: 4-Terphenyl-d14	*5.915*	0.20	*5*	0	*118*	*40-135*	0			
Surr: Nitrobenzene-d5	*5.182*	0.20	*5*	0	*104*	*41-120*	0			
Surr: Phenol-d6	*5.406*	0.20	*5*	0	*108*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210906
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **65325** Instrument ID **SV-6** Method: **SW8270**

LCS Sample ID: **SLCSW2-121026-65325** Units: **µg/L** Analysis Date: **10/26/2012 06:03 PM**

Client ID: Run ID: **SV-6_121026A** SeqNo: **2999039** Prep Date: **10/26/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzenethiol	5.352	0.20	5	0	107	11-110	0			
Surr: 2,4,6-Tribromophenol	*4.727*	0.20	*5*	0	*94.5*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*5.464*	0.20	*5*	0	*109*	*40-125*	0			
Surr: 2-Fluorophenol	*5.456*	0.20	*5*	0	*109*	*20-120*	0			
Surr: 4-Terphenyl-d14	*6.21*	0.20	*5*	0	*124*	*40-135*	0			
Surr: Nitrobenzene-d5	*5.34*	0.20	*5*	0	*107*	*41-120*	0			
Surr: Phenol-d6	*5.629*	0.20	*5*	0	*113*	*20-120*	0			

LCS Sample ID: **SLCSW3-121026-65325** Units: **µg/L** Analysis Date: **10/26/2012 06:41 PM**

Client ID: Run ID: **SV-6_121026A** SeqNo: **2999041** Prep Date: **10/26/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibenz(a,h)acridine	5.737	0.20	5	0	115	35-140	0			
Indene	6.086	0.20	5	0	122	40-130	0			
Surr: 2,4,6-Tribromophenol	*4.343*	0.20	*5*	0	*86.9*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*4.991*	0.20	*5*	0	*99.8*	*40-125*	0			
Surr: 2-Fluorophenol	*5.158*	0.20	*5*	0	*103*	*20-120*	0			
Surr: 4-Terphenyl-d14	*5.548*	0.20	*5*	0	*111*	*40-135*	0			
Surr: Nitrobenzene-d5	*4.906*	0.20	*5*	0	*98.1*	*41-120*	0			
Surr: Phenol-d6	*5.154*	0.20	*5*	0	*103*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210906
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **65325** Instrument ID **SV-6** Method: **SW8270**

LCSD Sample ID: **SLCSDW1-121026-65325** Units: **µg/L** Analysis Date: **10/26/2012 05:44 PM**

Client ID: Run ID: **SV-6_121026A** SeqNo: **2999038** Prep Date: **10/26/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	5.525	0.20	5	0	111	45-120	5.48	0.822	20	
1,3-Dichlorobenzene	5.536	0.20	5	0	111	45-120	5.43	1.93	20	
1,4-Dichlorobenzene	5.526	0.20	5	0	111	40-120	5.43	1.74	20	
1-Methylnaphthalene	5.441	0.20	5	0	109	45-120	5.395	0.863	20	
2,4-Dimethylphenol	5.497	0.20	5	0	110	35-120	5.435	1.13	20	
2,4-Dinitrophenol	4.873	1.0	5	0	97.5	15-120	5.02	2.97	50	
2-Methylphenol	5.605	0.20	5	0	112	45-120	5.517	1.57	20	
3&4-Methylphenol	5.534	0.20	5	0	111	35-120	5.51	0.433	20	
4-Nitrophenol	4.943	1.0	5	0	98.9	30-130	4.878	1.32	20	
Acenaphthylene	5.383	0.20	5	0	108	47-120	5.401	0.335	20	
Anthracene	5.628	0.20	5	0	113	45-120	5.662	0.611	20	
Benz(a)anthracene	5.57	0.20	5	0	111	40-120	5.371	3.64	20	
Benzo(a)pyrene	5.351	0.20	5	0	107	45-120	5.312	0.736	20	
Benzo(b)fluoranthene	5.649	0.20	5	0	113	50-120	5.947	5.14	20	
Benzo(k)fluoranthene	4.837	0.20	5	0	96.7	45-127	5.382	10.7	20	
Bis(2-ethylhexyl)phthalate	5.796	0.20	5	0	116	40-139	5.749	0.812	20	
Chrysene	5.405	0.20	5	0	108	43-120	5.262	2.69	20	
Dibenz(a,h)anthracene	5.457	0.20	5	0	109	45-125	5.425	0.584	20	
Diethyl phthalate	5.286	0.20	5	0	106	41-120	5.32	0.64	20	
Dimethyl phthalate	5.341	0.20	5	0	107	40-122	5.305	0.674	20	
Di-n-butyl phthalate	5.677	0.20	5	0	114	45-123	5.752	1.31	20	
Fluoranthene	5.566	0.20	5	0	111	45-125	5.651	1.51	20	
Fluorene	5.369	0.20	5	0	107	49-120	5.354	0.274	20	
Indeno(1,2,3-cd)pyrene	5.51	0.20	5	0	110	41-128	5.456	0.971	20	
Naphthalene	5.469	0.20	5	0	109	45-120	5.408	1.14	20	
Phenanthrene	5.52	0.20	5	0	110	45-121	5.531	0.203	20	
Phenol	5.503	0.20	5	0	110	20-124	5.38	2.27	20	
Pyrene	5.408	0.20	5	0	108	40-130	5.461	0.982	20	
Pyridine	5.125	1.0	5	0	103	15-120	5.008	2.3	20	
Quinoline	5.556	0.20	5	0	111	45-120	5.489	1.21	20	
Surr: 2,4,6-Tribromophenol	*5.01*	0.20	*5*	0	*100*	*34-129*	5.095	*1.68*	*0*	
Surr: 2-Fluorobiphenyl	*5.243*	0.20	*5*	0	*105*	*40-125*	5.366	*2.33*	*0*	
Surr: 2-Fluorophenol	*5.328*	0.20	*5*	0	*107*	*20-120*	5.354	*0.495*	*0*	
Surr: 4-Terphenyl-d14	*5.834*	0.20	*5*	0	*117*	*40-135*	5.915	*1.39*	*0*	
Surr: Nitrobenzene-d5	*5.226*	0.20	*5*	0	*105*	*41-120*	5.182	*0.857*	*0*	
Surr: Phenol-d6	*5.45*	0.20	*5*	0	*109*	*20-120*	5.406	*0.809*	*0*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210906
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **65325** Instrument ID **SV-6** Method: **SW8270**

LCSD Sample ID: **SLCSDW2-121026-65325** Units: **µg/L** Analysis Date: **10/26/2012 06:22 PM**

Client ID: Run ID: **SV-6_121026A** SeqNo: **2999040** Prep Date: **10/26/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzenethiol	5.319	0.20	5	0	106	11-110	5.352	0.616	30	
Surr: 2,4,6-Tribromophenol	*4.819*	0.20	*5*	0	*96.4*	*34-129*	4.727	*1.94*	*0*	
Surr: 2-Fluorobiphenyl	*5.365*	0.20	*5*	0	*107*	*40-125*	5.464	*1.83*	*0*	
Surr: 2-Fluorophenol	*5.416*	0.20	*5*	0	*108*	*20-120*	5.456	*0.733*	*0*	
Surr: 4-Terphenyl-d14	*6.055*	0.20	*5*	0	*121*	*40-135*	6.21	*2.52*	*0*	
Surr: Nitrobenzene-d5	*5.283*	0.20	*5*	0	*106*	*41-120*	5.34	*1.08*	*0*	
Surr: Phenol-d6	*5.518*	0.20	*5*	0	*110*	*20-120*	5.629	*1.99*	*0*	

LCSD Sample ID: **SLCSDW3-121026-65325** Units: **µg/L** Analysis Date: **10/26/2012 07:00 PM**

Client ID: Run ID: **SV-6_121026A** SeqNo: **2999042** Prep Date: **10/26/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibenz(a,h)acridine	5.769	0.20	5	0	115	35-140	5.737	0.551	20	
Indene	6.23	0.20	5	0	125	40-130	6.086	2.35	20	
Surr: 2,4,6-Tribromophenol	*4.619*	0.20	*5*	0	*92.4*	*34-129*	4.343	*6.15*	*0*	
Surr: 2-Fluorobiphenyl	*5.162*	0.20	*5*	0	*103*	*40-125*	4.991	*3.36*	*0*	
Surr: 2-Fluorophenol	*5.365*	0.20	*5*	0	*107*	*20-120*	5.158	*3.93*	*0*	
Surr: 4-Terphenyl-d14	*5.681*	0.20	*5*	0	*114*	*40-135*	5.548	*2.37*	*0*	
Surr: Nitrobenzene-d5	*5.046*	0.20	*5*	0	*101*	*41-120*	4.906	*2.8*	*0*	
Surr: Phenol-d6	*5.387*	0.20	*5*	0	*108*	*20-120*	5.154	*4.43*	*0*	

The following samples were analyzed in this batch: 1210906-01D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210906
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R137536** Instrument ID **VOA6** Method: **SW8260**

MBLK Sample ID: **VBLKW-121028-R137536** Units: **µg/L** Analysis Date: **10/28/2012 12:32 PM**

Client ID: Run ID: **VOA6_121028A** SeqNo: **2999499** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dioxane	ND	100								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon disulfide	ND	10								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Ethylbenzene	ND	5.0								
Methyl tert-butyl ether	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
Trichloroethene	ND	5.0								
Xylenes, Total	ND	15								
Surr: 1,2-Dichloroethane-d4	*47.82*	5.0	*50*	0	*95.6*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.22*	5.0	*50*	0	*100*	*72-125*	0			
Surr: Dibromofluoromethane	*49.03*	5.0	*50*	0	*98.1*	*71-125*	0			
Surr: Toluene-d8	*45.83*	5.0	*50*	0	*91.7*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210906
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R137536** Instrument ID **VOA6** Method: **SW8260**

LCS Sample ID: **VLCSW-102812-R137536** Units: **µg/L** Analysis Date: **10/28/2012 11:39 AM**

Client ID: Run ID: **VOA6_121028A** SeqNo: **2999498** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	44.06	5.0	50	0	88.1	80-120	0			
1,1-Dichloroethane	42.31	5.0	50	0	84.6	76-120	0			
1,2-Dibromoethane	43.98	5.0	50	0	88	80-120	0			
1,2-Dichloroethane	42.93	5.0	50	0	85.9	78-120	0			
1,4-Dioxane	1036	100	1000	0	104	50-158	0			
2-Butanone	88.08	10	100	0	88.1	58-132	0			
Benzene	42.14	5.0	50	0	84.3	73-121	0			
Carbon disulfide	88.29	10	100	0	88.3	68-141	0			
Chlorobenzene	42.26	5.0	50	0	84.5	80-120	0			
Chloroform	44.77	5.0	50	0	89.5	80-120	0			
Ethylbenzene	41.46	5.0	50	0	82.9	80-120	0			
Methyl tert-butyl ether	45.85	5.0	50	0	91.7	73-121	0			
Styrene	42.69	5.0	50	0	85.4	80-120	0			
Tetrachloroethene	43.62	5.0	50	0	87.2	79-120	0			
Toluene	41.15	5.0	50	0	82.3	80-120	0			
Trichloroethene	49.23	5.0	50	0	98.5	80-120	0			
Xylenes, Total	125.8	15	150	0	83.9	80-120	0			
Surr: 1,2-Dichloroethane-d4	*47.37*	5.0	*50*	0	*94.7*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.73*	5.0	*50*	0	*99.5*	*72-125*	0			
Surr: Dibromofluoromethane	*50.05*	5.0	*50*	0	*100*	*71-125*	0			
Surr: Toluene-d8	*46.73*	5.0	*50*	0	*93.5*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210906
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R137536** Instrument ID **VOA6** Method: **SW8260**

MS Sample ID: **1210906-01AMS** Units: **µg/L** Analysis Date: **10/28/2012 01:52 PM**

Client ID: **East Water Well** Run ID: **VOA6_121028A** SeqNo: **2999502** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	41.72	5.0	50	0	83.4	80-120	0			
1,1-Dichloroethane	42.5	5.0	50	0	85	76-120	0			
1,2-Dibromoethane	44.53	5.0	50	0	89.1	80-120	0			
1,2-Dichloroethane	45.69	5.0	50	0	91.4	78-120	0			
1,4-Dioxane	875.7	100	1000	0	87.6	50-158	0			
2-Butanone	80.6	10	100	0	80.6	58-132	0			
Benzene	43.42	5.0	50	0	86.8	73-121	0			
Carbon disulfide	84.75	10	100	0	84.8	68-141	0			
Chlorobenzene	44.01	5.0	50	0	88	80-120	0			
Chloroform	44.45	5.0	50	0	88.9	80-120	0			
Ethylbenzene	42.73	5.0	50	0	85.5	80-120	0			
Methyl tert-butyl ether	43.65	5.0	50	0	87.3	73-121	0			
Styrene	44.02	5.0	50	0	88	80-120	0			
Tetrachloroethene	42.93	5.0	50	0	85.9	79-120	0			
Toluene	42.56	5.0	50	0	85.1	80-120	0			
Trichloroethene	48.9	5.0	50	0	97.8	80-120	0			
Xylenes, Total	129	15	150	0	86	80-120	0			
Surr: 1,2-Dichloroethane-d4	*47.11*	5.0	*50*	0	*94.2*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.87*	5.0	*50*	0	*97.7*	*72-125*	0			
Surr: Dibromofluoromethane	*49.06*	5.0	*50*	0	*98.1*	*71-125*	0			
Surr: Toluene-d8	*47.82*	5.0	*50*	0	*95.6*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210906
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R137536** Instrument ID **VOA6** Method: **SW8260**

MSD Sample ID: **1210906-01AMSD** Units: **µg/L** Analysis Date: **10/28/2012 02:19 PM**

Client ID: **East Water Well** Run ID: **VOA6_121028A** SeqNo: **2999503** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	43.04	5.0	50	0	86.1	80-120	41.72	3.13	20	
1,1-Dichloroethane	42.12	5.0	50	0	84.2	76-120	42.5	0.914	20	
1,2-Dibromoethane	45.37	5.0	50	0	90.7	80-120	44.53	1.85	20	
1,2-Dichloroethane	45.61	5.0	50	0	91.2	78-120	45.69	0.156	20	
1,4-Dioxane	969.7	100	1000	0	97	50-158	875.7	10.2	20	
2-Butanone	82.34	10	100	0	82.3	58-132	80.6	2.13	20	
Benzene	43.28	5.0	50	0	86.6	73-121	43.42	0.332	20	
Carbon disulfide	83.18	10	100	0	83.2	68-141	84.75	1.87	20	
Chlorobenzene	44.55	5.0	50	0	89.1	80-120	44.01	1.23	20	
Chloroform	44.49	5.0	50	0	89	80-120	44.45	0.0874	20	
Ethylbenzene	43.91	5.0	50	0	87.8	80-120	42.73	2.72	20	
Methyl tert-butyl ether	45.25	5.0	50	0	90.5	73-121	43.65	3.61	20	
Styrene	44.39	5.0	50	0	88.8	80-120	44.02	0.83	20	
Tetrachloroethene	44.74	5.0	50	0	89.5	79-120	42.93	4.14	20	
Toluene	43.06	5.0	50	0	86.1	80-120	42.56	1.18	20	
Trichloroethene	47.21	5.0	50	0	94.4	80-120	48.9	3.51	20	
Xylenes, Total	131.3	15	150	0	87.5	80-120	129	1.74	20	
Surr: 1,2-Dichloroethane-d4	*47.32*	5.0	*50*	0	*94.6*	*70-125*	47.11	*0.449*	*20*	
Surr: 4-Bromofluorobenzene	*49.21*	5.0	*50*	0	*98.4*	*72-125*	48.87	*0.69*	*20*	
Surr: Dibromofluoromethane	*48.46*	5.0	*50*	0	*96.9*	*71-125*	49.06	*1.23*	*20*	
Surr: Toluene-d8	*48.57*	5.0	*50*	0	*97.1*	*75-125*	47.82	*1.56*	*20*	

The following samples were analyzed in this batch: 1210906-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1210906
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R137555** Instrument ID **UV-2450** Method: **M4500CN E&G (Dissolve)**

MBLK Sample ID: **WBLKW1-102912-R137555** Units: **mg/L** Analysis Date: **10/29/2012 10:45 AM**
Client ID: Run ID: **UV-2450_121029B** SeqNo: **2999886** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	ND	0.020								

LCS Sample ID: **WLCSW1-102912-R137555** Units: **mg/L** Analysis Date: **10/29/2012 10:45 AM**
Client ID: Run ID: **UV-2450_121029B** SeqNo: **2999887** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.176	0.020	0.2	0	88	80-120	0			

LCSD Sample ID: **WLCSDW1-102912-R137555** Units: **mg/L** Analysis Date: **10/29/2012 10:45 AM**
Client ID: Run ID: **UV-2450_121029B** SeqNo: **2999896** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.178	0.020	0.2	0	89	80-120	0.176	1.13	20	

MS Sample ID: **1210966-01DMS** Units: **mg/L** Analysis Date: **10/29/2012 10:45 AM**
Client ID: Run ID: **UV-2450_121029B** SeqNo: **2999895** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.172	0.020	0.2	0.005	83.5	80-120	0			

The following samples were analyzed in this batch: 1210906-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 29-Oct-12

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List
WorkOrder: **1210906**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **23-Oct-12 09:20**

Work Order: **1210906** Received by: **RNG**

Checklist completed by Paresh M. Giga (eSignature) 23-Oct-12 (Date) Reviewed by: (eSignature) (Date)

Matrices: 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):	2.2c C/U	005	
Cooler(s)/Kit(s):	4854		
Date/Time sample(s) sent to storage:	10/23/12 16:20		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes: Chain incomplete - Sampling Dates/Times taken off bottles

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

ALS Environmental

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Chain of Custody Form

Page 1 of 1

COC ID: 62604

1210906

WV

NAVAJO REFINING: Navajo Refining Company

Project: Lovington Lea Refining Skinner List

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Lovington Lea Refining SkinnerList	A	VOC (8260) Skinner List
Work Order		Project Number	128809	B	LL SVOC (8270) Skinner List
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (6020/7000) Skinner List
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange	D	Total Cyanide
Address	501 East Main	Address	501 East Main	E	
				F	
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	
Phone	(575) 748-6733	Phone	(575) 748-6733	H	
Fax	(575) 746-5421	Fax	(575) 746-5421	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
23 of 24	East Water Well			W	N/A	7	✓	✓	✓	✓							
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sample(s) Please Print & Sign: Andres Sandoval

Shipment Method:

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

Results Due Date:

Relinquished by: Andres Sandoval	Date: 10-27-12	Time: 7:30 am	Received by:	
Relinquished by:	Date:	Time:	Received by (Laboratory):	10/23/12 09:20
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Notes: 10 Day TAT

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)

☑ Level II Std QC ☐ TRRP CheckList

☐ Level III Std QC/Raw Data ☐ TRRP Level IV

☐ Level IV SW846/CLP

☐ Other / EDD

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 Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental 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.

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

Da
Na
Co

CUSTODY SEAL

te: 10-22-12 Time: 1700
ne: Andrea Sowder
mpany: ALS

Received By:
Date 10/23/12

8989 8549 4488

FedEx Express US Airbill

FedEx Express MPS Label

8989 8549 4488 8989 8549 4488

FedEx Tracking Number for Shipper

Form ID No. 0260

1 From Please print and press hard.
Date 10/22/12 Sender's FedEx Account Number 1129-9018-6
Sender's Name CATHY [redacted] TRUETT Phone (575) 396-5821
Company NAVAJO REFINING CO (LEA)
Address 7406 S MAIN ST Dept/Floor/Suite/Room
City LOVINGTON State NM ZIP 88260

2 Your Internal Billing Reference
First 24 characters will appear on invoice. October Monthly

3 To
Recipient's Name Phone 281 530-5656
Company ALS LAB
HOLD Weekday Print FedEx location address below. NOT available for FedEx First Overnight.
HOLD Saturday Print FedEx location address below. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.
Address 10450 STANCLIFF RD.
We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept/Floor/Suite/Room
Address STE 210
Print FedEx location address here if HOLD option is selected.
City HOUSTON State TX ZIP 77099-4338

0408719506

4a Express Package Service * To most locations. Packages up to 150 lbs.
X FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
☐ FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
☐ FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

4b Express Freight Service ** To most locations. Packages over 150 lbs.
☐ FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. FedEx 1Day Freight Booking No. CALL 1.800.332.0947
☐ FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.
☐ FedEx Envelope* ☐ FedEx Pak* Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak. ☐ FedEx Box ☐ FedEx Tube X Other

6 Special Handling and Delivery Signature Options
☐ SATURDAY Delivery NOT available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
☐ No Signature Required — Package may be left without obtaining a signature for delivery.
☐ Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?
One box must be checked.
X No ☐ Yes As per attached Shipper's Declaration. ☐ Yes Shipper's Declaration not required. ☐ Dry Ice Dry Ice, 9, UN 1845 ____ x ____ kg
Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.
☐ Cargo Aircraft Only

7 Payment Bill to:
☐ Sender Acct. No. in Section 1 will be billed. X Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check
Enter FedEx Acct. No. or Credit Card No. below.
FedEx Acct. No. / Credit Card No. 2470-7613-1 Exp. Date

Total Packages 4 Total Weight ____ lbs. Total Declared Value† $ ____ .00

fedex.com 1.800.GoFedEx 1.800.463.3339

14-Dec-2012

Aaron Strange
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 748-6733
Fax: (575) 746-5421

Re: Lovington Lea Refining-Monthly Work Order: **1211770**

Dear Aaron,

ALS Environmental received 2 samples on 21-Nov-2012 09:15 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental 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 Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 24.

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

Sincerely,

Patricia L. Lynch

Electronically approved by: Jumoke M. Lawal

Patricia L. Lynch
Project Manager

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 14-Dec-12

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: **1211770**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1211770-01	1210 Tank	Water		11/20/2012 07:00	11/21/2012 09:15	☐
1211770-02	Trip Blank	Water		11/20/2012	11/21/2012 09:15	☐

Client:	Navajo Refining Company
Project:	Lovington Lea Refining-Monthly
Work Order:	1211770

Case Narrative

Batch 66095, Metals, Sample 1211868-03: MS/MSD is for an unrelated sample.

ALS Environmental

Date: *14-Dec-12*

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1211770
Sample ID: 1210 Tank
Lab ID: 1211770-01
Collection Date: 11/20/2012 07:00 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **11/26/2012**	Analyst: **OFO**
Mercury	ND		0.000200	mg/L	1	11/26/2012 01:55 PM
METALS			**SW6020**		Prep Date: **11/28/2012**	Analyst: **ALR**
Antimony	ND		0.00500	mg/L	1	11/29/2012 08:06 PM
Arsenic	**0.00523**		**0.00500**	**mg/L**	1	11/29/2012 08:06 PM
Barium	**0.106**		**0.00500**	**mg/L**	1	11/29/2012 08:06 PM
Beryllium	ND		0.00200	mg/L	1	11/29/2012 08:06 PM
Cadmium	ND		0.00200	mg/L	1	11/29/2012 08:06 PM
Chromium	ND		0.00500	mg/L	1	11/29/2012 08:06 PM
Cobalt	ND		0.00500	mg/L	1	11/29/2012 08:06 PM
Lead	ND		0.00500	mg/L	1	11/29/2012 08:06 PM
Nickel	ND		0.00500	mg/L	1	11/29/2012 08:06 PM
Selenium	**0.00524**		**0.00500**	**mg/L**	1	11/29/2012 08:06 PM
Silver	ND		0.00500	mg/L	1	11/29/2012 08:06 PM
Vanadium	**0.0248**		**0.00500**	**mg/L**	1	11/29/2012 08:06 PM
Zinc	**0.351**		**0.00500**	**mg/L**	1	11/29/2012 08:06 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **11/23/2012**	Analyst: **LG**
1,2-Dichlorobenzene	ND		0.20	µg/L	1	11/26/2012 11:14 PM
1,3-Dichlorobenzene	ND		0.20	µg/L	1	11/26/2012 11:14 PM
1,4-Dichlorobenzene	ND		0.20	µg/L	1	11/26/2012 11:14 PM
1-Methylnaphthalene	ND		0.20	µg/L	1	11/26/2012 11:14 PM
2,4-Dimethylphenol	ND		0.20	µg/L	1	11/26/2012 11:14 PM
2,4-Dinitrophenol	ND		1.0	µg/L	1	11/26/2012 11:14 PM
2-Methylphenol	ND		0.20	µg/L	1	11/26/2012 11:14 PM
3&4-Methylphenol	ND		0.20	µg/L	1	11/26/2012 11:14 PM
4-Nitrophenol	ND		1.0	µg/L	1	11/26/2012 11:14 PM
Acenaphthylene	ND		0.20	µg/L	1	11/26/2012 11:14 PM
Anthracene	ND		0.20	µg/L	1	11/26/2012 11:14 PM
Benz(a)anthracene	ND		0.20	µg/L	1	11/26/2012 11:14 PM
Benzenethiol	ND		0.20	µg/L	1	11/26/2012 11:14 PM
Benzo(a)pyrene	ND		0.20	µg/L	1	11/26/2012 11:14 PM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	11/26/2012 11:14 PM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	11/26/2012 11:14 PM
Bis(2-ethylhexyl)phthalate	**0.36**		**0.20**	**µg/L**	1	11/26/2012 11:14 PM
Chrysene	ND		0.20	µg/L	1	11/26/2012 11:14 PM
Dibenz(a,h)acridine	ND		0.20	µg/L	1	11/26/2012 11:14 PM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	11/26/2012 11:14 PM
Diethyl phthalate	ND		0.20	µg/L	1	11/26/2012 11:14 PM
Dimethyl phthalate	ND		0.20	µg/L	1	11/26/2012 11:14 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly **Work Order:** 1211770
Sample ID: 1210 Tank **Lab ID:** 1211770-01
Collection Date: 11/20/2012 07:00 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Di-n-butyl phthalate	ND		0.20	µg/L	1	11/26/2012 11:14 PM
Fluoranthene	ND		0.20	µg/L	1	11/26/2012 11:14 PM
Fluorene	ND		0.20	µg/L	1	11/26/2012 11:14 PM
Indene	ND		0.20	µg/L	1	11/26/2012 11:14 PM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	11/26/2012 11:14 PM
Naphthalene	ND		0.20	µg/L	1	11/26/2012 11:14 PM
Phenanthrene	ND		0.20	µg/L	1	11/26/2012 11:14 PM
Phenol	ND		0.20	µg/L	1	11/26/2012 11:14 PM
Pyrene	ND		0.20	µg/L	1	11/26/2012 11:14 PM
Pyridine	ND		1.0	µg/L	1	11/26/2012 11:14 PM
Quinoline	ND		0.20	µg/L	1	11/26/2012 11:14 PM
Surr: 2,4,6-Tribromophenol	*87.6*		*34-129*	*%REC*	1	11/26/2012 11:14 PM
Surr: 2-Fluorobiphenyl	*83.6*		*40-125*	*%REC*	1	11/26/2012 11:14 PM
Surr: 2-Fluorophenol	*73.7*		*20-120*	*%REC*	1	11/26/2012 11:14 PM
Surr: 4-Terphenyl-d14	*103*		*40-135*	*%REC*	1	11/26/2012 11:14 PM
Surr: Nitrobenzene-d5	*83.2*		*41-120*	*%REC*	1	11/26/2012 11:14 PM
Surr: Phenol-d6	*77.9*		*20-120*	*%REC*	1	11/26/2012 11:14 PM
VOLATILES - SW8260C			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		5.0	µg/L	1	11/25/2012 05:42 PM
1,1-Dichloroethane	ND		5.0	µg/L	1	11/25/2012 05:42 PM
1,2-Dibromoethane	ND		5.0	µg/L	1	11/25/2012 05:42 PM
1,2-Dichloroethane	ND		5.0	µg/L	1	11/25/2012 05:42 PM
1,4-Dioxane	ND		100	µg/L	1	11/25/2012 05:42 PM
2-Butanone	ND		10	µg/L	1	11/25/2012 05:42 PM
Benzene	ND		5.0	µg/L	1	11/25/2012 05:42 PM
Carbon disulfide	ND		10	µg/L	1	11/25/2012 05:42 PM
Chlorobenzene	ND		5.0	µg/L	1	11/25/2012 05:42 PM
Chloroform	ND		5.0	µg/L	1	11/25/2012 05:42 PM
Ethylbenzene	ND		5.0	µg/L	1	11/25/2012 05:42 PM
Methyl tert-butyl ether	ND		5.0	µg/L	1	11/25/2012 05:42 PM
Styrene	ND		5.0	µg/L	1	11/25/2012 05:42 PM
Tetrachloroethene	ND		5.0	µg/L	1	11/25/2012 05:42 PM
Toluene	ND		5.0	µg/L	1	11/25/2012 05:42 PM
Trichloroethene	ND		5.0	µg/L	1	11/25/2012 05:42 PM
Xylenes, Total	ND		15	µg/L	1	11/25/2012 05:42 PM
Surr: 1,2-Dichloroethane-d4	*107*		*70-125*	*%REC*	1	11/25/2012 05:42 PM
Surr: 4-Bromofluorobenzene	*106*		*72-125*	*%REC*	1	11/25/2012 05:42 PM
Surr: Dibromofluoromethane	*102*		*71-125*	*%REC*	1	11/25/2012 05:42 PM
Surr: Toluene-d8	*102*		*75-125*	*%REC*	1	11/25/2012 05:42 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *14-Dec-12*

Client:	Navajo Refining Company		
Project:	Lovington Lea Refining-Monthly	**Work Order:**	1211770
Sample ID:	1210 Tank	**Lab ID:**	1211770-01
Collection Date:	11/20/2012 07:00 AM	**Matrix:**	WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE - SM4500CN E			**M4500CN E&G**			Analyst: **EDG**
Cyanide	ND		0.0200	mg/L	1	11/30/2012 10:45 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Batch ID: **66014** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW1-112612-66014** Units: **mg/L** Analysis Date: **11/26/2012 12:49 PM**

Client ID: Run ID: **MERCURY_121126A** SeqNo: **3028244** Prep Date: **11/26/2012** 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: **GLCSW1-112612-66014** Units: **mg/L** Analysis Date: **11/26/2012 12:57 PM**

Client ID: Run ID: **MERCURY_121126A** SeqNo: **3028248** Prep Date: **11/26/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00509	0.00020	0.005	0	102	85-115	0			

MS Sample ID: **1211647-07CMS** Units: **mg/L** Analysis Date: **11/26/2012 01:03 PM**

Client ID: Run ID: **MERCURY_121126A** SeqNo: **3028254** Prep Date: **11/26/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00487	0.00020	0.005	0.000027	96.9	85-115	0			

MSD Sample ID: **1211647-07CMSD** Units: **mg/L** Analysis Date: **11/26/2012 01:05 PM**

Client ID: Run ID: **MERCURY_121126A** SeqNo: **3028257** Prep Date: **11/26/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00496	0.00020	0.005	0.000027	98.7	85-115	0.00487	1.83	20	

DUP Sample ID: **1211647-07CDUP** Units: **mg/L** Analysis Date: **11/26/2012 01:01 PM**

Client ID: Run ID: **MERCURY_121126A** SeqNo: **3028252** Prep Date: **11/26/2012** 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	0.000027	0	20	

The following samples were analyzed in this batch: 1211770-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1211770
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **66095** Instrument ID **ICPMS03** Method: **SW6020**

MBLK Sample ID: **MBLKW2-112812-66095** Units: **mg/L** Analysis Date: **11/29/2012 06:36 PM**

Client ID: Run ID: **ICPMS03_121129A** SeqNo: **3034144** Prep Date: **11/28/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.0050								
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Lead	ND	0.0050								
Nickel	ND	0.0050								
Selenium	0.00118	0.0050								J
Silver	ND	0.0050								
Vanadium	ND	0.0050								
Zinc	ND	0.0050								

LCS Sample ID: **MLCSW2-112812-66095** Units: **mg/L** Analysis Date: **11/29/2012 06:41 PM**

Client ID: Run ID: **ICPMS03_121129A** SeqNo: **3034145** Prep Date: **11/28/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05014	0.0050	0.05	0	100	80-120	0			
Arsenic	0.05111	0.0050	0.05	0	102	80-120	0			
Barium	0.05244	0.0050	0.05	0	105	80-120	0			
Beryllium	0.05116	0.0020	0.05	0	102	80-120	0			
Cadmium	0.05119	0.0020	0.05	0	102	80-120	0			
Chromium	0.0495	0.0050	0.05	0	99	80-120	0			
Cobalt	0.05065	0.0050	0.05	0	101	80-120	0			
Lead	0.05183	0.0050	0.05	0	104	80-120	0			
Nickel	0.04998	0.0050	0.05	0	100	80-120	0			
Selenium	0.05206	0.0050	0.05	0	104	80-120	0			
Silver	0.05189	0.0050	0.05	0	104	80-120	0			
Vanadium	0.04924	0.0050	0.05	0	98.5	80-120	0			
Zinc	0.05137	0.0050	0.05	0	103	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1211770
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **66095** Instrument ID **ICPMS03** Method: **SW6020**

MS Sample ID: **1211868-03CMS** Units: **mg/L** Analysis Date: **11/29/2012 07:09 PM**

Client ID: Run ID: **ICPMS03_121129A** SeqNo: **3034151** Prep Date: **11/28/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05091	0.0050	0.05	0.0002762	101	80-120	0			
Arsenic	0.1155	0.0050	0.05	0.06345	104	80-120	0			
Barium	0.6645	0.0050	0.05	0.5904	148	80-120	0			SO
Beryllium	0.0525	0.0020	0.05	0.0001921	105	80-120	0			
Cadmium	0.04881	0.0020	0.05	0.00006209	97.5	80-120	0			
Chromium	0.05027	0.0050	0.05	0.0004148	99.7	80-120	0			
Cobalt	0.05095	0.0050	0.05	0.001298	99.3	80-120	0			
Lead	0.05063	0.0050	0.05	0.0002101	101	80-120	0			
Nickel	0.0512	0.0050	0.05	0.002219	98	80-120	0			
Selenium	0.05407	0.0050	0.05	0.001619	105	80-120	0			
Silver	0.04821	0.0050	0.05	-0.0001273	96.7	80-120	0			
Vanadium	0.05145	0.0050	0.05	0.001201	100	80-120	0			
Zinc	0.05396	0.0050	0.05	0.003539	101	80-120	0			

MSD Sample ID: **1211868-03CMSD** Units: **mg/L** Analysis Date: **11/29/2012 07:14 PM**

Client ID: Run ID: **ICPMS03_121129A** SeqNo: **3034152** Prep Date: **11/28/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.0502	0.0050	0.05	0.0002762	99.8	80-120	0.05091	1.4	15	
Arsenic	0.1143	0.0050	0.05	0.06345	102	80-120	0.1155	1.04	15	
Barium	0.6675	0.0050	0.05	0.5904	154	80-120	0.6645	0.45	15	SO
Beryllium	0.05388	0.0020	0.05	0.0001921	107	80-120	0.0525	2.59	15	
Cadmium	0.05033	0.0020	0.05	0.00006209	101	80-120	0.04881	3.07	15	
Chromium	0.05013	0.0050	0.05	0.0004148	99.4	80-120	0.05027	0.279	15	
Cobalt	0.05064	0.0050	0.05	0.001298	98.7	80-120	0.05095	0.61	15	
Lead	0.05152	0.0050	0.05	0.0002101	103	80-120	0.05063	1.74	15	
Nickel	0.05062	0.0050	0.05	0.002219	96.8	80-120	0.0512	1.14	15	
Selenium	0.0521	0.0050	0.05	0.001619	101	80-120	0.05407	3.71	15	
Silver	0.04962	0.0050	0.05	-0.0001273	99.5	80-120	0.04821	2.88	15	
Vanadium	0.05208	0.0050	0.05	0.001201	102	80-120	0.05145	1.22	15	
Zinc	0.05304	0.0050	0.05	0.003539	99	80-120	0.05396	1.72	15	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1211770
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **66095** Instrument ID **ICPMS03** Method: **SW6020**

DUP Sample ID: **1211868-03CDUP** Units: **mg/L** Analysis Date: **11/29/2012 07:00 PM**

Client ID: Run ID: **ICPMS03_121129A** SeqNo: **3034149** Prep Date: **11/28/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.0050	0	0	0	0-0	0.0002762	0	25	
Arsenic	0.06352	0.0050	0	0	0	0-0	0.06345	0.11	25	
Barium	0.6038	0.0050	0	0	0	0-0	0.5904	2.24	25	
Beryllium	ND	0.0020	0	0	0	0-0	0.0001921	0	25	
Cadmium	ND	0.0020	0	0	0	0-0	0.00006209	0	25	
Chromium	ND	0.0050	0	0	0	0-0	0.0004148	0	25	
Cobalt	0.001356	0.0050	0	0	0	0-0	0.001298	0	25	J
Lead	ND	0.0050	0	0	0	0-0	0.0002101	0	25	
Nickel	0.002384	0.0050	0	0	0	0-0	0.002219	0	25	J
Selenium	0.00174	0.0050	0	0	0	0-0	0.001619	0	25	J
Silver	ND	0.0050	0	0	0	0-0	-0.0001273	0	25	
Vanadium	0.001048	0.0050	0	0	0	0-0	0.001201	0	25	J
Zinc	0.003441	0.0050	0	0	0	0-0	0.003539	0	25	J

The following samples were analyzed in this batch: 1211770-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1211770
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **65996** Instrument ID **SV-6** Method: **SW8270**

MBLK Sample ID: **SBLKW2-121123-65996** Units: **µg/L** Analysis Date: **11/26/2012 04:21 PM**

Client ID: Run ID: **SV-6_121126B** SeqNo: **3033191** Prep Date: **11/23/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	ND	0.20								
1,3-Dichlorobenzene	ND	0.20								
1,4-Dichlorobenzene	ND	0.20								
1-Methylnaphthalene	ND	0.20								
2,4-Dimethylphenol	ND	0.20								
2,4-Dinitrophenol	ND	1.0								
2-Methylphenol	ND	0.20								
3&4-Methylphenol	ND	0.20								
4-Nitrophenol	ND	1.0								
Acenaphthylene	ND	0.20								
Anthracene	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzenethiol	ND	0.20								
Benzo(a)pyrene	ND	0.20								
Benzo(b)fluoranthene	ND	0.20								
Benzo(k)fluoranthene	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.20								
Chrysene	ND	0.20								
Dibenz(a,h)acridine	ND	0.20								
Dibenz(a,h)anthracene	ND	0.20								
Diethyl phthalate	ND	0.20								
Dimethyl phthalate	ND	0.20								
Di-n-butyl phthalate	ND	0.20								
Fluoranthene	ND	0.20								
Fluorene	ND	0.20								
Indene	ND	0.20								
Indeno(1,2,3-cd)pyrene	ND	0.20								
Naphthalene	ND	0.20								
Phenanthrene	ND	0.20								
Phenol	ND	0.20								
Pyrene	ND	0.20								
Pyridine	ND	1.0								
Quinoline	ND	0.20								
Surr: 2,4,6-Tribromophenol	*5.356*	0.20	*5*	0	*107*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*5.164*	0.20	*5*	0	*103*	*40-125*	0			
Surr: 2-Fluorophenol	*5.078*	0.20	*5*	0	*102*	*20-120*	0			
Surr: 4-Terphenyl-d14	*5.852*	0.20	*5*	0	*117*	*40-135*	0			
Surr: Nitrobenzene-d5	*4.7*	0.20	*5*	0	*94*	*41-120*	0			
Surr: Phenol-d6	*4.988*	0.20	*5*	0	*99.8*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1211770
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **65996** Instrument ID **SV-6** Method: **SW8270**

LCS Sample ID: **SLCSW2-121123-65996** Units: **µg/L** Analysis Date: **11/26/2012 04:40 PM**

Client ID: Run ID: **SV-6_121126B** SeqNo: **3033193** Prep Date: **11/23/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	4.913	0.20	5	0	98.3	45-120	0			
1,3-Dichlorobenzene	4.9	0.20	5	0	98	45-120	0			
1,4-Dichlorobenzene	4.962	0.20	5	0	99.2	40-120	0			
1-Methylnaphthalene	4.972	0.20	5	0	99.4	45-120	0			
2,4-Dimethylphenol	4.851	0.20	5	0	97	35-120	0			
2,4-Dinitrophenol	4.71	1.0	5	0	94.2	15-120	0			
2-Methylphenol	4.879	0.20	5	0	97.6	45-120	0			
3&4-Methylphenol	4.963	0.20	5	0	99.3	35-120	0			
4-Nitrophenol	4.812	1.0	5	0	96.2	30-130	0			
Acenaphthylene	4.789	0.20	5	0	95.8	47-120	0			
Anthracene	5.323	0.20	5	0	106	45-120	0			
Benz(a)anthracene	4.92	0.20	5	0	98.4	40-120	0			
Benzo(a)pyrene	4.98	0.20	5	0	99.6	45-120	0			
Benzo(b)fluoranthene	4.938	0.20	5	0	98.8	50-120	0			
Benzo(k)fluoranthene	4.878	0.20	5	0	97.6	45-127	0			
Bis(2-ethylhexyl)phthalate	4.781	0.20	5	0	95.6	40-139	0			
Chrysene	4.942	0.20	5	0	98.8	43-120	0			
Dibenz(a,h)anthracene	5.086	0.20	5	0	102	45-125	0			
Diethyl phthalate	4.917	0.20	5	0	98.3	41-120	0			
Dimethyl phthalate	4.941	0.20	5	0	98.8	40-122	0			
Di-n-butyl phthalate	5.265	0.20	5	0	105	45-123	0			
Fluoranthene	5.483	0.20	5	0	110	45-125	0			
Fluorene	4.925	0.20	5	0	98.5	49-120	0			
Indeno(1,2,3-cd)pyrene	5.041	0.20	5	0	101	41-128	0			
Naphthalene	4.87	0.20	5	0	97.4	45-120	0			
Phenanthrene	5.342	0.20	5	0	107	45-121	0			
Phenol	4.753	0.20	5	0	95.1	20-124	0			
Pyrene	4.885	0.20	5	0	97.7	40-130	0			
Pyridine	4	1.0	5	0	80	15-120	0			
Quinoline	4.918	0.20	5	0	98.4	45-120	0			
Surr: 2,4,6-Tribromophenol	*5.512*	0.20	*5*	0	*110*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*5.168*	0.20	*5*	0	*103*	*40-125*	0			
Surr: 2-Fluorophenol	*4.599*	0.20	*5*	0	*92*	*20-120*	0			
Surr: 4-Terphenyl-d14	*5.723*	0.20	*5*	0	*114*	*40-135*	0			
Surr: Nitrobenzene-d5	*4.637*	0.20	*5*	0	*92.7*	*41-120*	0			
Surr: Phenol-d6	*4.814*	0.20	*5*	0	*96.3*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1211770
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **65996** Instrument ID **SV-6** Method: **SW8270**

LCS Sample ID: **SLCSW3-121123-65996** Units: **µg/L** Analysis Date: **11/26/2012 05:19 PM**

Client ID: Run ID: **SV-6_121126B** SeqNo: **3033197** Prep Date: **11/23/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzenethiol	4.405	0.20	5	0	88.1	11-110	0			
Surr: 2,4,6-Tribromophenol	*4.486*	0.20	*5*	0	*89.7*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*4.577*	0.20	*5*	0	*91.5*	*40-125*	0			
Surr: 2-Fluorophenol	*4.468*	0.20	*5*	0	*89.4*	*20-120*	0			
Surr: 4-Terphenyl-d14	*5.432*	0.20	*5*	0	*109*	*40-135*	0			
Surr: Nitrobenzene-d5	*4.121*	0.20	*5*	0	*82.4*	*41-120*	0			
Surr: Phenol-d6	*4.415*	0.20	*5*	0	*88.3*	*20-120*	0			

LCS Sample ID: **SLCSW4-1211223-65996** Units: **µg/L** Analysis Date: **11/26/2012 05:58 PM**

Client ID: Run ID: **SV-6_121126B** SeqNo: **3033213** Prep Date: **11/23/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibenz(a,h)acridine	5.028	0.20	5	0	101	35-140	0			
Indene	5.745	0.20	5	0	115	40-130	0			
Surr: 2,4,6-Tribromophenol	*4.442*	0.20	*5*	0	*88.8*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*4.667*	0.20	*5*	0	*93.3*	*40-125*	0			
Surr: 2-Fluorophenol	*4.479*	0.20	*5*	0	*89.6*	*20-120*	0			
Surr: 4-Terphenyl-d14	*5.137*	0.20	*5*	0	*103*	*40-135*	0			
Surr: Nitrobenzene-d5	*4.214*	0.20	*5*	0	*84.3*	*41-120*	0			
Surr: Phenol-d6	*4.342*	0.20	*5*	0	*86.8*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1211770
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **65996** Instrument ID **SV-6** Method: **SW8270**

LCSD Sample ID: **SLCSDW2-121123-65996** Units: **µg/L** Analysis Date: **11/26/2012 05:00 PM**

Client ID: Run ID: **SV-6_121126B** SeqNo: **3033195** Prep Date: **11/23/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	4.751	0.20	5	0	95	45-120	4.913	3.34	20	
1,3-Dichlorobenzene	4.764	0.20	5	0	95.3	45-120	4.9	2.8	20	
1,4-Dichlorobenzene	4.75	0.20	5	0	95	40-120	4.962	4.37	20	
1-Methylnaphthalene	4.835	0.20	5	0	96.7	45-120	4.972	2.81	20	
2,4-Dimethylphenol	4.731	0.20	5	0	94.6	35-120	4.851	2.51	20	
2,4-Dinitrophenol	4.717	1.0	5	0	94.3	15-120	4.71	0.146	50	
2-Methylphenol	4.738	0.20	5	0	94.8	45-120	4.879	2.93	20	
3&4-Methylphenol	4.755	0.20	5	0	95.1	35-120	4.963	4.29	20	
4-Nitrophenol	4.658	1.0	5	0	93.2	30-130	4.812	3.24	20	
Acenaphthylene	4.736	0.20	5	0	94.7	47-120	4.789	1.1	20	
Anthracene	5.077	0.20	5	0	102	45-120	5.323	4.72	20	
Benz(a)anthracene	4.827	0.20	5	0	96.5	40-120	4.92	1.91	20	
Benzo(a)pyrene	4.774	0.20	5	0	95.5	45-120	4.98	4.21	20	
Benzo(b)fluoranthene	4.857	0.20	5	0	97.1	50-120	4.938	1.67	20	
Benzo(k)fluoranthene	4.605	0.20	5	0	92.1	45-127	4.878	5.77	20	
Bis(2-ethylhexyl)phthalate	4.703	0.20	5	0	94.1	40-139	4.781	1.65	20	
Chrysene	4.79	0.20	5	0	95.8	43-120	4.942	3.12	20	
Dibenz(a,h)anthracene	4.786	0.20	5	0	95.7	45-125	5.086	6.07	20	
Diethyl phthalate	4.806	0.20	5	0	96.1	41-120	4.917	2.3	20	
Dimethyl phthalate	4.869	0.20	5	0	97.4	40-122	4.941	1.47	20	
Di-n-butyl phthalate	5.037	0.20	5	0	101	45-123	5.265	4.44	20	
Fluoranthene	5.163	0.20	5	0	103	45-125	5.483	6.02	20	
Fluorene	4.75	0.20	5	0	95	49-120	4.925	3.63	20	
Indeno(1,2,3-cd)pyrene	5.181	0.20	5	0	104	41-128	5.041	2.75	20	
Naphthalene	4.776	0.20	5	0	95.5	45-120	4.87	1.95	20	
Phenanthrene	5.044	0.20	5	0	101	45-121	5.342	5.75	20	
Phenol	4.616	0.20	5	0	92.3	20-124	4.753	2.93	20	
Pyrene	4.697	0.20	5	0	93.9	40-130	4.885	3.92	20	
Pyridine	4.094	1.0	5	0	81.9	15-120	4	2.32	20	
Quinoline	4.843	0.20	5	0	96.9	45-120	4.918	1.53	20	
Surr: 2,4,6-Tribromophenol	*5.511*	0.20	*5*	0	*110*	*34-129*	5.512	*0.00944*	*0*	
Surr: 2-Fluorobiphenyl	*4.986*	0.20	*5*	0	*99.7*	*40-125*	5.168	*3.58*	*0*	
Surr: 2-Fluorophenol	*4.844*	0.20	*5*	0	*96.9*	*20-120*	4.599	*5.19*	*0*	
Surr: 4-Terphenyl-d14	*5.566*	0.20	*5*	0	*111*	*40-135*	5.723	*2.79*	*0*	
Surr: Nitrobenzene-d5	*4.569*	0.20	*5*	0	*91.4*	*41-120*	4.637	*1.47*	*0*	
Surr: Phenol-d6	*4.743*	0.20	*5*	0	*94.9*	*20-120*	4.814	*1.48*	*0*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1211770
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **65996** Instrument ID **SV-6** Method: **SW8270**

LCSD Sample ID: **SLCSDW3-121123-65996** Units: **µg/L** Analysis Date: **11/26/2012 05:39 PM**

Client ID: Run ID: **SV-6_121126B** SeqNo: **3033199** Prep Date: **11/23/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzenethiol	4.795	0.20	5	0	95.9	11-110	4.405	8.49	30	
Surr: 2,4,6-Tribromophenol	*4.428*	0.20	*5*	0	*88.6*	*34-129*	4.486	*1.29*	*0*	
Surr: 2-Fluorobiphenyl	*4.594*	0.20	*5*	0	*91.9*	*40-125*	4.577	*0.375*	*0*	
Surr: 2-Fluorophenol	*4.294*	0.20	*5*	0	*85.9*	*20-120*	4.468	*3.96*	*0*	
Surr: 4-Terphenyl-d14	*5.423*	0.20	*5*	0	*108*	*40-135*	5.432	*0.156*	*0*	
Surr: Nitrobenzene-d5	*4.18*	0.20	*5*	0	*83.6*	*41-120*	4.121	*1.42*	*0*	
Surr: Phenol-d6	*4.35*	0.20	*5*	0	*87*	*20-120*	4.415	*1.48*	*0*	

LCSD Sample ID: **SLCSDW4-121123-65996** Units: **µg/L** Analysis Date: **11/26/2012 06:18 PM**

Client ID: Run ID: **SV-6_121126B** SeqNo: **3033214** Prep Date: **11/23/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibenz(a,h)acridine	5.655	0.20	5	0	113	35-140	5.028	11.8	20	
Indene	6.281	0.20	5	0	126	40-130	5.745	8.91	20	
Surr: 2,4,6-Tribromophenol	*3.145*	0.20	*5*	0	*62.9*	*34-129*	4.442	*34.2*	*0*	
Surr: 2-Fluorobiphenyl	*5.394*	0.20	*5*	0	*108*	*40-125*	4.667	*14.5*	*0*	
Surr: 2-Fluorophenol	*5.314*	0.20	*5*	0	*106*	*20-120*	4.479	*17.1*	*0*	
Surr: 4-Terphenyl-d14	*6.055*	0.20	*5*	0	*121*	*40-135*	5.137	*16.4*	*0*	
Surr: Nitrobenzene-d5	*4.786*	0.20	*5*	0	*95.7*	*41-120*	4.214	*12.7*	*0*	
Surr: Phenol-d6	*5.036*	0.20	*5*	0	*101*	*20-120*	4.342	*14.8*	*0*	

The following samples were analyzed in this batch: 1211770-01D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1211770
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R138745** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-121125-R138745** Units: **µg/L** Analysis Date: **11/25/2012 01:11 PM**

Client ID: Run ID: **VOA1_121125A** SeqNo: **3027719** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dioxane	ND	100								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon disulfide	ND	10								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Ethylbenzene	ND	5.0								
Methyl tert-butyl ether	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
Trichloroethene	ND	5.0								
Xylenes, Total	ND	15								
Surr: 1,2-Dichloroethane-d4	*48.26*	5.0	*50*	0	*96.5*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.25*	5.0	*50*	0	*100*	*72-125*	0			
Surr: Dibromofluoromethane	*47.3*	5.0	*50*	0	*94.6*	*71-125*	0			
Surr: Toluene-d8	*48.78*	5.0	*50*	0	*97.6*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1211770
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R138745** Instrument ID **VOA1** Method: **SW8260**

LCS Sample ID: **VLCSW-112512-R138745** Units: **µg/L** Analysis Date: **11/25/2012 11:32 AM**

Client ID: Run ID: **VOA1_121125A** SeqNo: **3027718** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	55.74	5.0	50	0	111	80-120	0			
1,1-Dichloroethane	48.02	5.0	50	0	96	76-120	0			
1,2-Dibromoethane	49.07	5.0	50	0	98.1	80-120	0			
1,2-Dichloroethane	59.85	5.0	50	0	120	78-120	0			
1,4-Dioxane	1084	100	1000	0	108	50-158	0			
2-Butanone	88.53	10	100	0	88.5	58-132	0			
Benzene	51.24	5.0	50	0	102	73-121	0			
Carbon disulfide	94.96	10	100	0	95	68-141	0			
Chlorobenzene	46.79	5.0	50	0	93.6	80-120	0			
Chloroform	48.81	5.0	50	0	97.6	80-120	0			
Ethylbenzene	49.01	5.0	50	0	98	80-120	0			
Methyl tert-butyl ether	46.57	5.0	50	0	93.1	73-121	0			
Styrene	49.32	5.0	50	0	98.6	80-120	0			
Tetrachloroethene	52.93	5.0	50	0	106	79-120	0			
Toluene	48.96	5.0	50	0	97.9	80-120	0			
Trichloroethene	56.51	5.0	50	0	113	80-120	0			
Xylenes, Total	150.4	15	150	0	100	80-120	0			
Surr: 1,2-Dichloroethane-d4	*50.01*	5.0	*50*	0	*100*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.98*	5.0	*50*	0	*100*	*72-125*	0			
Surr: Dibromofluoromethane	*49.44*	5.0	*50*	0	*98.9*	*71-125*	0			
Surr: Toluene-d8	*46.41*	5.0	*50*	0	*92.8*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1211770
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R138745** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **1211604-01ZMS** Units: **µg/L** Analysis Date: **11/25/2012 02:25 PM**

Client ID: Run ID: **VOA1_121125A** SeqNo: **3027722** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	45.15	5.0	50	0	90.3	80-120	0			
1,1-Dichloroethane	45.2	5.0	50	0	90.4	76-120	0			
1,2-Dibromoethane	46.1	5.0	50	0	92.2	80-120	0			
1,2-Dichloroethane	49.05	5.0	50	3.623	90.9	78-120	0			
1,4-Dioxane	942.8	100	1000	0	94.3	50-158	0			
2-Butanone	90.81	10	100	0	90.8	58-132	0			
Benzene	46.59	5.0	50	0	93.2	73-121	0			
Carbon disulfide	82.53	10	100	0	82.5	68-141	0			
Chlorobenzene	45.42	5.0	50	0	90.8	80-120	0			
Chloroform	47.88	5.0	50	0	95.8	80-120	0			
Ethylbenzene	43.5	5.0	50	0	87	80-120	0			
Methyl tert-butyl ether	48.24	5.0	50	0	96.5	73-121	0			
Styrene	44.03	5.0	50	0	88.1	80-120	0			
Tetrachloroethene	40.64	5.0	50	0	81.3	79-120	0			
Toluene	43.95	5.0	50	0	87.9	80-120	0			
Trichloroethene	53.16	5.0	50	3.599	99.1	80-120	0			
Xylenes, Total	128.2	15	150	0	85.4	80-120	0			
Surr: 1,2-Dichloroethane-d4	*47.34*	5.0	*50*	0	*94.7*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*51.64*	5.0	*50*	0	*103*	*72-125*	0			
Surr: Dibromofluoromethane	*48.41*	5.0	*50*	0	*96.8*	*71-125*	0			
Surr: Toluene-d8	*46.93*	5.0	*50*	0	*93.9*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1211770
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R138745** Instrument ID **VOA1** Method: **SW8260**

MSD Sample ID: **1211604-01ZMSD** Units: **µg/L** Analysis Date: **11/25/2012 02:50 PM**

Client ID: Run ID: **VOA1_121125A** SeqNo: **3027723** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	50.85	5.0	50	0	102	80-120	45.15	11.9	20	
1,1-Dichloroethane	47.92	5.0	50	0	95.8	76-120	45.2	5.84	20	
1,2-Dibromoethane	49.24	5.0	50	0	98.5	80-120	46.1	6.58	20	
1,2-Dichloroethane	53.2	5.0	50	3.623	99.1	78-120	49.05	8.1	20	
1,4-Dioxane	1077	100	1000	0	108	50-158	942.8	13.3	20	
2-Butanone	93.25	10	100	0	93.3	58-132	90.81	2.65	20	
Benzene	47.68	5.0	50	0	95.4	73-121	46.59	2.31	20	
Carbon disulfide	87.52	10	100	0	87.5	68-141	82.53	5.87	20	
Chlorobenzene	46.16	5.0	50	0	92.3	80-120	45.42	1.6	20	
Chloroform	47.73	5.0	50	0	95.5	80-120	47.88	0.315	20	
Ethylbenzene	49	5.0	50	0	98	80-120	43.5	11.9	20	
Methyl tert-butyl ether	47.57	5.0	50	0	95.1	73-121	48.24	1.38	20	
Styrene	45.68	5.0	50	0	91.4	80-120	44.03	3.67	20	
Tetrachloroethene	46.55	5.0	50	0	93.1	79-120	40.64	13.6	20	
Toluene	46	5.0	50	0	92	80-120	43.95	4.54	20	
Trichloroethene	56.3	5.0	50	3.599	105	80-120	53.16	5.74	20	
Xylenes, Total	139.3	15	150	0	92.9	80-120	128.2	8.32	20	
Surr: 1,2-Dichloroethane-d4	*48.43*	5.0	*50*	0	*96.9*	*70-125*	47.34	*2.27*	*20*	
Surr: 4-Bromofluorobenzene	*49.61*	5.0	*50*	0	*99.2*	*72-125*	51.64	*4.02*	*20*	
Surr: Dibromofluoromethane	*50.28*	5.0	*50*	0	*101*	*71-125*	48.41	*3.78*	*20*	
Surr: Toluene-d8	*46.43*	5.0	*50*	0	*92.9*	*75-125*	46.93	*1.07*	*20*	

The following samples were analyzed in this batch: 1211770-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1211770
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R139079** Instrument ID **UV-2450** Method: **M4500CN E&G (Dissolve)**

MBLK Sample ID: **WBLKW1-113012-R139079** Units: **mg/L** Analysis Date: **11/30/2012 10:45 AM**
Client ID: Run ID: **UV-2450_121130B** SeqNo: **3034885** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	ND	0.020								

LCS Sample ID: **WLCSW1-113012-R139079** Units: **mg/L** Analysis Date: **11/30/2012 10:45 AM**
Client ID: Run ID: **UV-2450_121130B** SeqNo: **3034886** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.169	0.020	0.2	0	84.5	80-120	0			

LCSD Sample ID: **WLCSDW1-113012-R139079** Units: **mg/L** Analysis Date: **11/30/2012 10:45 AM**
Client ID: Run ID: **UV-2450_121130B** SeqNo: **3034918** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.172	0.020	0.2	0	86	80-120	0.169	1.76	20	

MS Sample ID: **1211793-02AMS** Units: **mg/L** Analysis Date: **11/30/2012 10:45 AM**
Client ID: Run ID: **UV-2450_121130B** SeqNo: **3034917** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.174	0.020	0.2	0.001	86.5	80-120	0			

The following samples were analyzed in this batch: 1211770-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC Page: 14 of 14

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
WorkOrder: **1211770**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **21-Nov-12 09:15**

Work Order: **1211770** Received by: **RDH**

Checklist completed by Rachel D. Naran (eSignature) 23-Nov-12 (Date) Reviewed by: Patricia L. Lynch (eSignature) 27-Nov-12 (Date)

Matrices: 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):	4895	005	
Cooler(s)/Kit(s):	4895		
Date/Time sample(s) sent to storage:	11/23/12 11:20		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

ALS Environmental

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Everett, WA +1 425 356 2600 | Holland, MI +1 616 399 6070

Chain of Custody For 1211770

Page 1 of 1

COC ID: 71111

NAVAJO REFINING: Navajo Refining Company

Project: Lovington Lea Refining-Monthly

ALS Project Manager:

Customer Information		Project Information	
Purchase Order		Project Name	Lovington Lea Refining SkinnerList
Work Order		Project Number	123809
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange
Address	501 East Main	Address	501 East Main
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211
Phone	(575) 748-6733	Phone	(575) 748-6733
Fax	(575) 746-5421	Fax	(575) 746-5421
e-Mail Address		e-Mail Address	

A	VOC (8260) Skinner List
B	LL SVOC (8270) Skinner List
C	Total Metals (6020/7000) Skinner List
D	Total Cyanide
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	1210 Tank	11-20-12	7:00	W	N/A	1	✓	✓	✓	✓							
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Andres Sandoval

Shipment Method:

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

Results Due Date:

Relinquished by: Andres Sandoval | Date: 11-20-12 | Time: 7:00 a.m. | Received by:

Relinquished by: | Date: | Time: | Received by (Laboratory): 11/22/12 ALS

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

Notes: 10 Day TAT

Cooler ID	Cooler Temp.

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

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 Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental 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.

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8989 8549 4385

FedEx Express MPS Label

8989 8549 4385 8989 8549 4385

FedEx Tracking Number for Shipper

Form ID No. 0260

FedEx Express

1 From Please print and press hard.

Date 11/20/12

Sender's FedEx Account Number SENDER'S FEDEX ACCOUNT NUMBER ONLY 1129-9018-6

Sender's Name CATHY [redacted] Phone (575) 396-5821

Company NAVAJO REFINING CO (LEA)

Address 7406 S MAIN ST

Dept./Floor/Suite/Room

City LOVINGTON State NM ZIP 88260

2 Your Internal Billing Reference
First 24 characters will appear on invoice.

Samples Monthly

3 To Recipient's Name

Phone 281 530 5656

Company ALS

HOLD Weekday Print FedEx location address below. NOT available for FedEx First Overnight.

HOLD Saturday Print FedEx location address below. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Address 10450 STANCLIFF RD

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Dept./Floor/Suite/Room

Address STE 210

Print FedEx location address here if HOLD option is selected.

City Houston State TX ZIP 770994338

0408719506

4a Express Package Service * To most locations.

- [x] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard — Next business day* Saturday Delivery
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express — Third business day* Saturday Delivery

4b Express Freight Service ** To most locations.

- [ ] FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. FedEx 1Day Freight Box
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

5 Packaging * Declared value limit $500.

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.

6 Special Handling and Delivery Signature

- [ ] SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx First Overnight, FedEx
- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. Fee appl.

Does this shipment contain dangerous goods?

One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

7 Payment Bill to:

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [x] Recipient
- [ ] Third Party

Enter FedEx Acct. No. or Credit Card No.

FedEx Acct. No. 2470-76

Credit Card No.

Total Packages	Total Weight	Total Declared Value†
3	lbs.	$ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including those that limit our liability.

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

Date:
Name:
Comp:

CUSTODY SEAL

Time: 7:30 a.m.

Seal Broken By:

Date: 11/21/12

07-Jan-2013

Aaron Strange
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 748-6733
Fax: (575) 746-5421

Re: Lovington Lea Refining Skinner List Work Order: **1212900**

Dear Aaron,

ALS Environmental received 2 samples on 28-Dec-2012 09:45 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental 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 Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 28.

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

Sincerely,

Patricia L. Lynch

Electronically approved by: Jumoke M. Lawal

Patricia L. Lynch
Project Manager

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 07-Jan-13

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List
Work Order: **1212900**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1212900-01	EAST WATER WELL	Water		12/27/2012 08:30	12/28/2012 09:45	☐
1212900-02	Trip Blank 121212-25	Water		12/27/2012	12/28/2012 09:45	☐

Client:	Navajo Refining Company
Project:	Lovington Lea Refining Skinner List
Work Order:	1212900

Case Narrative

Batch 66896, Metals, Sample 1212893: MS/MSD is for an unrelated sample.

Batch 66868, Semivolatile Organics, Sample 1212907-03: MS/MSD is for an unrelated sample.

Batch R140725, Volatile Organics: The CCV %D for 1,4-dioxane is high, but the associated LCS recovery is in control. The MS/MSD is for an unrelated sample.

ALS Environmental

Date: *07-Jan-13*

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List
Work Order: 1212900
Sample ID: EAST WATER WELL
Lab ID: 1212900-01
Collection Date: 12/27/2012 08:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **1/3/2013**	Analyst: **OFO**
Mercury	ND		0.000200	mg/L	1	1/3/2013 02:30 PM
METALS			**SW6020**		Prep Date: **1/2/2013**	Analyst: **SKS**
Antimony	ND		0.00500	mg/L	1	1/2/2013 08:05 PM
Arsenic	**0.00808**		**0.00500**	**mg/L**	1	1/2/2013 08:05 PM
Barium	**0.120**		**0.00500**	**mg/L**	1	1/2/2013 08:05 PM
Beryllium	ND		0.00200	mg/L	1	1/2/2013 08:05 PM
Cadmium	ND		0.00200	mg/L	1	1/2/2013 08:05 PM
Chromium	**0.0226**		**0.00500**	**mg/L**	1	1/2/2013 08:05 PM
Cobalt	ND		0.00500	mg/L	1	1/2/2013 08:05 PM
Lead	**0.107**		**0.00500**	**mg/L**	1	1/2/2013 08:05 PM
Nickel	ND		0.00500	mg/L	1	1/2/2013 08:05 PM
Selenium	ND		0.00500	mg/L	1	1/2/2013 08:05 PM
Silver	ND		0.00500	mg/L	1	1/2/2013 08:05 PM
Vanadium	**0.0440**		**0.00500**	**mg/L**	1	1/2/2013 08:05 PM
Zinc	**0.425**		**0.00500**	**mg/L**	1	1/2/2013 08:05 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **12/31/2012**	Analyst: **LG**
1,2-Dichlorobenzene	ND		0.20	µg/L	1	1/2/2013 11:32 PM
1,3-Dichlorobenzene	ND		0.20	µg/L	1	1/2/2013 11:32 PM
1,4-Dichlorobenzene	ND		0.20	µg/L	1	1/2/2013 11:32 PM
1-Methylnaphthalene	ND		0.20	µg/L	1	1/2/2013 11:32 PM
2,4-Dimethylphenol	ND		0.20	µg/L	1	1/2/2013 11:32 PM
2,4-Dinitrophenol	ND		1.0	µg/L	1	1/2/2013 11:32 PM
2-Methylphenol	ND		0.20	µg/L	1	1/2/2013 11:32 PM
3&4-Methylphenol	ND		0.20	µg/L	1	1/2/2013 11:32 PM
4-Nitrophenol	ND		1.0	µg/L	1	1/2/2013 11:32 PM
Acenaphthylene	ND		0.20	µg/L	1	1/2/2013 11:32 PM
Anthracene	ND		0.20	µg/L	1	1/2/2013 11:32 PM
Benz(a)anthracene	ND		0.20	µg/L	1	1/2/2013 11:32 PM
Benzenethiol	ND		0.20	µg/L	1	1/2/2013 11:32 PM
Benzo(a)pyrene	ND		0.20	µg/L	1	1/2/2013 11:32 PM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	1/2/2013 11:32 PM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	1/2/2013 11:32 PM
Bis(2-ethylhexyl)phthalate	**0.79**		**0.20**	**µg/L**	1	1/2/2013 11:32 PM
Chrysene	ND		0.20	µg/L	1	1/2/2013 11:32 PM
Dibenz(a,h)acridine	ND		0.20	µg/L	1	1/2/2013 11:32 PM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	1/2/2013 11:32 PM
Diethyl phthalate	ND		0.20	µg/L	1	1/2/2013 11:32 PM
Dimethyl phthalate	ND		0.20	µg/L	1	1/2/2013 11:32 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List **Work Order:** 1212900
Sample ID: EAST WATER WELL **Lab ID:** 1212900-01
Collection Date: 12/27/2012 08:30 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Di-n-butyl phthalate	ND		0.20	µg/L	1	1/2/2013 11:32 PM
Fluoranthene	ND		0.20	µg/L	1	1/2/2013 11:32 PM
Fluorene	ND		0.20	µg/L	1	1/2/2013 11:32 PM
Indene	ND		0.20	µg/L	1	1/2/2013 11:32 PM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	1/2/2013 11:32 PM
Naphthalene	ND		0.20	µg/L	1	1/2/2013 11:32 PM
Phenanthrene	ND		0.20	µg/L	1	1/2/2013 11:32 PM
Phenol	ND		0.20	µg/L	1	1/2/2013 11:32 PM
Pyrene	ND		0.20	µg/L	1	1/2/2013 11:32 PM
Pyridine	ND		1.0	µg/L	1	1/2/2013 11:32 PM
Quinoline	ND		0.20	µg/L	1	1/2/2013 11:32 PM
Surr: 2,4,6-Tribromophenol	*47.3*		*34-129*	*%REC*	1	1/2/2013 11:32 PM
Surr: 2-Fluorobiphenyl	*51.3*		*40-125*	*%REC*	1	1/2/2013 11:32 PM
Surr: 2-Fluorophenol	*48.1*		*20-120*	*%REC*	1	1/2/2013 11:32 PM
Surr: 4-Terphenyl-d14	*77.8*		*40-135*	*%REC*	1	1/2/2013 11:32 PM
Surr: Nitrobenzene-d5	*51.4*		*41-120*	*%REC*	1	1/2/2013 11:32 PM
Surr: Phenol-d6	*47.0*		*20-120*	*%REC*	1	1/2/2013 11:32 PM
VOLATILES - SW8260C			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		5.0	µg/L	1	1/2/2013 03:23 PM
1,1-Dichloroethane	ND		5.0	µg/L	1	1/2/2013 03:23 PM
1,2-Dibromoethane	ND		5.0	µg/L	1	1/2/2013 03:23 PM
1,2-Dichloroethane	ND		5.0	µg/L	1	1/2/2013 03:23 PM
1,4-Dioxane	ND		100	µg/L	1	1/2/2013 03:23 PM
2-Butanone	ND		10	µg/L	1	1/2/2013 03:23 PM
Benzene	ND		5.0	µg/L	1	1/2/2013 03:23 PM
Carbon disulfide	ND		10	µg/L	1	1/2/2013 03:23 PM
Chlorobenzene	ND		5.0	µg/L	1	1/2/2013 03:23 PM
Chloroform	ND		5.0	µg/L	1	1/2/2013 03:23 PM
Ethylbenzene	ND		5.0	µg/L	1	1/2/2013 03:23 PM
Methyl tert-butyl ether	ND		5.0	µg/L	1	1/2/2013 03:23 PM
Styrene	ND		5.0	µg/L	1	1/2/2013 03:23 PM
Tetrachloroethene	ND		5.0	µg/L	1	1/2/2013 03:23 PM
Toluene	ND		5.0	µg/L	1	1/2/2013 03:23 PM
Trichloroethene	ND		5.0	µg/L	1	1/2/2013 03:23 PM
Xylenes, Total	ND		15	µg/L	1	1/2/2013 03:23 PM
Surr: 1,2-Dichloroethane-d4	*87.5*		*70-125*	*%REC*	1	1/2/2013 03:23 PM
Surr: 4-Bromofluorobenzene	*101*		*72-125*	*%REC*	1	1/2/2013 03:23 PM
Surr: Dibromofluoromethane	*94.3*		*71-125*	*%REC*	1	1/2/2013 03:23 PM
Surr: Toluene-d8	*103*		*75-125*	*%REC*	1	1/2/2013 03:23 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *07-Jan-13*

Client:	Navajo Refining Company		
Project:	Lovington Lea Refining Skinner List	**Work Order:**	1212900
Sample ID:	EAST WATER WELL	**Lab ID:**	1212900-01
Collection Date:	12/27/2012 08:30 AM	**Matrix:**	WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE - SM4500CN E			**M4500CN E&G**			Analyst: **EDG**
Cyanide	ND		0.0200	mg/L	1	1/3/2013 01:35 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Batch ID: **66883** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW1-010313-66883** Units: **mg/L** Analysis Date: **1/3/2013 01:51 PM**

Client ID: Run ID: **MERCURY_130103A** SeqNo: **3074035** Prep Date: **1/3/2013** 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: **GLCSW1-010313-66883** Units: **mg/L** Analysis Date: **1/3/2013 01:55 PM**

Client ID: Run ID: **MERCURY_130103A** SeqNo: **3074036** Prep Date: **1/3/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00497	0.00020	0.005	0	99.4	85-115	0			

MS Sample ID: **1212907-03EMS** Units: **mg/L** Analysis Date: **1/3/2013 02:05 PM**

Client ID: Run ID: **MERCURY_130103A** SeqNo: **3074039** Prep Date: **1/3/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00487	0.00020	0.005	-0.000018	97.8	85-115	0			

MSD Sample ID: **1212907-03EMSD** Units: **mg/L** Analysis Date: **1/3/2013 02:07 PM**

Client ID: Run ID: **MERCURY_130103A** SeqNo: **3074040** Prep Date: **1/3/2013** 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	-0.000018	102	85-115	0.00487	4.02	20	

DUP Sample ID: **1212907-03EDUP** Units: **mg/L** Analysis Date: **1/3/2013 01:59 PM**

Client ID: Run ID: **MERCURY_130103A** SeqNo: **3074038** Prep Date: **1/3/2013** 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	-0.000018	0	20	

The following samples were analyzed in this batch: 1212900-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212900
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66896** Instrument ID **ICPMS05** Method: **SW6020**

MBLK Sample ID: **MBLKW1-010213-66896** Units: **mg/L** Analysis Date: **1/2/2013 07:10 PM**
Client ID: Run ID: **ICPMS05_130102A** SeqNo: **3073435** Prep Date: **1/2/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.0050								
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Lead	ND	0.0050								
Nickel	ND	0.0050								
Selenium	ND	0.0050								
Silver	ND	0.0050								
Vanadium	ND	0.0050								
Zinc	ND	0.0050								

LCS Sample ID: **MLCSW1-010213-66896** Units: **mg/L** Analysis Date: **1/2/2013 07:12 PM**
Client ID: Run ID: **ICPMS05_130102A** SeqNo: **3073436** Prep Date: **1/2/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.051	0.0050	0.05	0	102	80-120	0			
Arsenic	0.05152	0.0050	0.05	0	103	80-120	0			
Barium	0.0548	0.0050	0.05	0	110	80-120	0			
Beryllium	0.05792	0.0020	0.05	0	116	80-120	0			
Cadmium	0.05299	0.0020	0.05	0	106	80-120	0			
Chromium	0.05242	0.0050	0.05	0	105	80-120	0			
Cobalt	0.05207	0.0050	0.05	0	104	80-120	0			
Lead	0.05356	0.0050	0.05	0	107	80-120	0			
Selenium	0.0524	0.0050	0.05	0	105	80-120	0			
Silver	0.05383	0.0050	0.05	0	108	80-120	0			
Vanadium	0.04882	0.0050	0.05	0	97.6	80-120	0			
Zinc	0.05727	0.0050	0.05	0	115	80-120	0			

LCS Sample ID: **MLCSW1-010213-66896** Units: **mg/L** Analysis Date: **1/4/2013 01:06 PM**
Client ID: Run ID: **ICP7500_130104A** SeqNo: **3074662** Prep Date: **1/2/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nickel	0.05653	0.0050	0.05	0	113	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212900
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66896** Instrument ID **ICPMS05** Method: **SW6020**

MS Sample ID: **1212893-13AMS** Units: **mg/L** Analysis Date: **1/2/2013 07:41 PM**

Client ID: Run ID: **ICPMS05_130102A** SeqNo: **3073448** Prep Date: **1/2/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04963	0.0050	0.05	0.000856	97.6	80-120	0			
Arsenic	0.06449	0.0050	0.05	0.01071	108	80-120	0			
Barium	0.1127	0.0050	0.05	0.05571	114	80-120	0			
Beryllium	0.05204	0.0020	0.05	0.000382	103	80-120	0			
Cadmium	0.06073	0.0020	0.05	0.007295	107	80-120	0			
Chromium	0.0498	0.0050	0.05	0.000525	98.5	80-120	0			
Cobalt	0.05142	0.0050	0.05	0.001879	99.1	80-120	0			
Lead	0.05327	0.0050	0.05	0.000828	105	80-120	0			
Nickel	0.06964	0.0050	0.05	0.01443	110	80-120	0			
Selenium	0.05791	0.0050	0.05	0.002495	111	80-120	0			
Silver	0.04722	0.0050	0.05	0.000344	93.7	80-120	0			
Vanadium	1.372	0.0050	0.05	1.327	89.1	80-120	0			O
Zinc	1.733	0.0050	0.05	1.639	187	80-120	0			SO

MSD Sample ID: **1212893-13AMSD** Units: **mg/L** Analysis Date: **1/2/2013 07:43 PM**

Client ID: Run ID: **ICPMS05_130102A** SeqNo: **3073449** Prep Date: **1/2/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05142	0.0050	0.05	0.000856	101	80-120	0.04963	3.53	15	
Arsenic	0.06451	0.0050	0.05	0.01071	108	80-120	0.06449	0.031	15	
Barium	0.1105	0.0050	0.05	0.05571	110	80-120	0.1127	1.97	15	
Beryllium	0.05378	0.0020	0.05	0.000382	107	80-120	0.05204	3.29	15	
Cadmium	0.06061	0.0020	0.05	0.007295	107	80-120	0.06073	0.195	15	
Chromium	0.05226	0.0050	0.05	0.000525	103	80-120	0.0498	4.82	15	
Cobalt	0.05244	0.0050	0.05	0.001879	101	80-120	0.05142	1.96	15	
Lead	0.05364	0.0050	0.05	0.000828	106	80-120	0.05327	0.677	15	
Nickel	0.07109	0.0050	0.05	0.01443	113	80-120	0.06964	2.06	15	
Selenium	0.05481	0.0050	0.05	0.002495	105	80-120	0.05791	5.51	15	
Silver	0.04808	0.0050	0.05	0.000344	95.5	80-120	0.04722	1.82	15	
Vanadium	1.394	0.0050	0.05	1.327	134	80-120	1.372	1.62	15	SO
Zinc	1.734	0.0050	0.05	1.639	190	80-120	1.733	0.0859	15	SO

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212900
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66896** Instrument ID **ICPMS05** Method: **SW6020**

DUP Sample ID: **1212893-13ADUP** Units: **mg/L** Analysis Date: **1/2/2013 07:36 PM**

Client ID: Run ID: **ICPMS05_130102A** SeqNo: **3073446** Prep Date: **1/2/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.0050	0	0	0	0-0	0.000856	0	25	
Arsenic	0.01142	0.0050	0	0	0	0-0	0.01071	6.47	25	
Barium	0.05654	0.0050	0	0	0	0-0	0.05571	1.48	25	
Beryllium	ND	0.0020	0	0	0	0-0	0.000382	0	25	
Cadmium	0.00749	0.0020	0	0	0	0-0	0.007295	2.64	25	
Chromium	ND	0.0050	0	0	0	0-0	0.000525	0	25	
Cobalt	ND	0.0050	0	0	0	0-0	0.001879	0	25	
Lead	ND	0.0050	0	0	0	0-0	0.000828	0	25	
Nickel	0.01829	0.0050	0	0	0	0-0	0.01443	23.6	25	
Selenium	ND	0.0050	0	0	0	0-0	0.002495	0	25	
Silver	ND	0.0050	0	0	0	0-0	0.000344	0	25	
Vanadium	1.342	0.0050	0	0	0	0-0	1.327	1.1	25	
Zinc	1.659	0.0050	0	0	0	0-0	1.639	1.17	25	

The following samples were analyzed in this batch: 1212900-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212900
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66868** Instrument ID **SV-6** Method: **SW8270**

MBLK Sample ID: **SBLKW1-121231-66868** Units: **µg/L** Analysis Date: **1/2/2013 04:41 PM**

Client ID: Run ID: **SV-6_130102A** SeqNo: **3074733** Prep Date: **12/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	ND	0.20								
1,3-Dichlorobenzene	ND	0.20								
1,4-Dichlorobenzene	ND	0.20								
1-Methylnaphthalene	ND	0.20								
2,4-Dimethylphenol	ND	0.20								
2,4-Dinitrophenol	ND	1.0								
2-Methylphenol	ND	0.20								
3&4-Methylphenol	ND	0.20								
4-Nitrophenol	ND	1.0								
Acenaphthylene	ND	0.20								
Anthracene	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzenethiol	ND	0.20								
Benzo(a)pyrene	ND	0.20								
Benzo(b)fluoranthene	ND	0.20								
Benzo(k)fluoranthene	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.20								
Chrysene	ND	0.20								
Dibenz(a,h)acridine	ND	0.20								
Dibenz(a,h)anthracene	ND	0.20								
Diethyl phthalate	ND	0.20								
Dimethyl phthalate	ND	0.20								
Di-n-butyl phthalate	ND	0.20								
Fluoranthene	ND	0.20								
Fluorene	ND	0.20								
Indene	ND	0.20								
Indeno(1,2,3-cd)pyrene	ND	0.20								
Naphthalene	ND	0.20								
Phenanthrene	ND	0.20								
Phenol	ND	0.20								
Pyrene	ND	0.20								
Pyridine	ND	1.0								
Quinoline	ND	0.20								
Surr: 2,4,6-Tribromophenol	3.612	0.20	*5*	0	*72.2*	*34-129*	0			
Surr: 2-Fluorobiphenyl	4.283	0.20	*5*	0	*85.7*	*40-125*	0			
Surr: 2-Fluorophenol	4.166	0.20	*5*	0	*83.3*	*20-120*	0			
Surr: 4-Terphenyl-d14	4.825	0.20	*5*	0	*96.5*	*40-135*	0			
Surr: Nitrobenzene-d5	4.479	0.20	*5*	0	*89.6*	*41-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **66868** Instrument ID **SV-6** Method: **SW8270**

Surr: Phenol-d6	4.384	0.20	*5*	0	*87.7*	*20-120*	0			

LCS Sample ID: **SLCSW1-121231-66868** Units: **µg/L** Analysis Date: **1/2/2013 05:00 PM**

Client ID: Run ID: **SV-6_130102A** SeqNo: **3074734** Prep Date: **12/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	4.275	0.20	5	0	85.5	45-120	0			
1,3-Dichlorobenzene	4.303	0.20	5	0	86.1	45-120	0			
1,4-Dichlorobenzene	4.234	0.20	5	0	84.7	40-120	0			
1-Methylnaphthalene	4.299	0.20	5	0	86	45-120	0			
2,4-Dimethylphenol	3.851	0.20	5	0	77	35-120	0			
2,4-Dinitrophenol	2.723	1.0	5	0	54.5	15-120	0			
2-Methylphenol	4.273	0.20	5	0	85.5	45-120	0			
3&4-Methylphenol	4.333	0.20	5	0	86.7	35-120	0			
4-Nitrophenol	4.793	1.0	5	0	95.9	30-130	0			
Acenaphthylene	4.287	0.20	5	0	85.7	47-120	0			
Anthracene	4.443	0.20	5	0	88.9	45-120	0			
Benz(a)anthracene	4.18	0.20	5	0	83.6	40-120	0			
Benzo(a)pyrene	4.108	0.20	5	0	82.2	45-120	0			
Benzo(b)fluoranthene	4.524	0.20	5	0	90.5	50-120	0			
Benzo(k)fluoranthene	3.97	0.20	5	0	79.4	45-127	0			
Bis(2-ethylhexyl)phthalate	4.614	0.20	5	0	92.3	40-139	0			
Chrysene	4.183	0.20	5	0	83.7	43-120	0			
Dibenz(a,h)anthracene	4.224	0.20	5	0	84.5	45-125	0			
Diethyl phthalate	4.28	0.20	5	0	85.6	41-120	0			
Dimethyl phthalate	4.169	0.20	5	0	83.4	40-122	0			
Di-n-butyl phthalate	4.64	0.20	5	0	92.8	45-123	0			
Fluoranthene	4.368	0.20	5	0	87.4	45-125	0			
Fluorene	4.186	0.20	5	0	83.7	49-120	0			
Indeno(1,2,3-cd)pyrene	4.087	0.20	5	0	81.7	41-128	0			
Naphthalene	4.231	0.20	5	0	84.6	45-120	0			
Phenanthrene	4.422	0.20	5	0	88.4	45-121	0			
Phenol	4.384	0.20	5	0	87.7	20-124	0			
Pyrene	4.183	0.20	5	0	83.7	40-130	0			
Pyridine	4.06	1.0	5	0	81.2	15-120	0			
Quinoline	4.335	0.20	5	0	86.7	45-120	0			
Surr: 2,4,6-Tribromophenol	3.896	0.20	*5*	0	*77.9*	*34-129*	0			
Surr: 2-Fluorobiphenyl	4.285	0.20	*5*	0	*85.7*	*40-125*	0			
Surr: 2-Fluorophenol	4.247	0.20	*5*	0	*84.9*	*20-120*	0			
Surr: 4-Terphenyl-d14	4.729	0.20	*5*	0	*94.6*	*40-135*	0			
Surr: Nitrobenzene-d5	4.437	0.20	*5*	0	*88.7*	*41-120*	0			
Surr: Phenol-d6	4.407	0.20	*5*	0	*88.1*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212900
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66868** Instrument ID **SV-6** Method: **SW8270**

LCS Sample ID: **SLCSW2-121231-66868** Units: **µg/L** Analysis Date: **1/2/2013 05:39 PM**
Client ID: Run ID: **SV-6_130102A** SeqNo: **3074736** Prep Date: **12/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzenethiol	1.518	0.20	5	0	30.4	11-110	0			
Surr: 2,4,6-Tribromophenol	3.431	0.20	*5*	0	*68.6*	*34-129*	0			
Surr: 2-Fluorobiphenyl	3.995	0.20	*5*	0	*79.9*	*40-125*	0			
Surr: 2-Fluorophenol	4.123	0.20	*5*	0	*82.5*	*20-120*	0			
Surr: 4-Terphenyl-d14	4.578	0.20	*5*	0	*91.6*	*40-135*	0			
Surr: Nitrobenzene-d5	4.129	0.20	*5*	0	*82.6*	*41-120*	0			
Surr: Phenol-d6	4.144	0.20	*5*	0	*82.9*	*20-120*	0			

LCS Sample ID: **SLCSW3-121231-66868** Units: **µg/L** Analysis Date: **1/2/2013 06:18 PM**
Client ID: Run ID: **SV-6_130102A** SeqNo: **3074738** Prep Date: **12/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibenz(a,h)acridine	4.612	0.20	5	0	92.2	35-140	0			
Indene	5.433	0.20	5	0	109	40-130	0			
Surr: 2,4,6-Tribromophenol	3.336	0.20	*5*	0	*66.7*	*34-129*	0			
Surr: 2-Fluorobiphenyl	4	0.20	*5*	0	*80*	*40-125*	0			
Surr: 2-Fluorophenol	4.158	0.20	*5*	0	*83.2*	*20-120*	0			
Surr: 4-Terphenyl-d14	4.635	0.20	*5*	0	*92.7*	*40-135*	0			
Surr: Nitrobenzene-d5	4.205	0.20	*5*	0	*84.1*	*41-120*	0			
Surr: Phenol-d6	4.172	0.20	*5*	0	*83.4*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212900
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66868** Instrument ID **SV-6** Method: **SW8270**

LCSD Sample ID: **SLCSDW1-121231-66868** Units: **µg/L** Analysis Date: **1/2/2013 05:20 PM**

Client ID: Run ID: **SV-6_130102A** SeqNo: **3074735** Prep Date: **12/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	4.267	0.20	5	0	85.3	45-120	4.275	0.186	20	
1,3-Dichlorobenzene	4.193	0.20	5	0	83.9	45-120	4.303	2.58	20	
1,4-Dichlorobenzene	4.193	0.20	5	0	83.9	40-120	4.234	0.964	20	
1-Methylnaphthalene	4.28	0.20	5	0	85.6	45-120	4.299	0.439	20	
2,4-Dimethylphenol	3.831	0.20	5	0	76.6	35-120	3.851	0.527	20	
2,4-Dinitrophenol	2.829	1.0	5	0	56.6	15-120	2.723	3.82	50	
2-Methylphenol	4.272	0.20	5	0	85.4	45-120	4.273	0.0163	20	
3&4-Methylphenol	4.246	0.20	5	0	84.9	35-120	4.333	2.03	20	
4-Nitrophenol	4.702	1.0	5	0	94	30-130	4.793	1.91	20	
Acenaphthylene	4.165	0.20	5	0	83.3	47-120	4.287	2.89	20	
Anthracene	4.366	0.20	5	0	87.3	45-120	4.443	1.75	20	
Benz(a)anthracene	4.15	0.20	5	0	83	40-120	4.18	0.729	20	
Benzo(a)pyrene	4.091	0.20	5	0	81.8	45-120	4.108	0.414	20	
Benzo(b)fluoranthene	4.374	0.20	5	0	87.5	50-120	4.524	3.38	20	
Benzo(k)fluoranthene	3.987	0.20	5	0	79.7	45-127	3.97	0.43	20	
Bis(2-ethylhexyl)phthalate	4.634	0.20	5	0	92.7	40-139	4.614	0.427	20	
Chrysene	4.136	0.20	5	0	82.7	43-120	4.183	1.13	20	
Dibenz(a,h)anthracene	4.19	0.20	5	0	83.8	45-125	4.224	0.807	20	
Diethyl phthalate	4.186	0.20	5	0	83.7	41-120	4.28	2.22	20	
Dimethyl phthalate	4.066	0.20	5	0	81.3	40-122	4.169	2.5	20	
Di-n-butyl phthalate	4.557	0.20	5	0	91.1	45-123	4.64	1.82	20	
Fluoranthene	4.333	0.20	5	0	86.7	45-125	4.368	0.798	20	
Fluorene	4.127	0.20	5	0	82.5	49-120	4.186	1.44	20	
Indeno(1,2,3-cd)pyrene	4.187	0.20	5	0	83.7	41-128	4.087	2.4	20	
Naphthalene	4.208	0.20	5	0	84.2	45-120	4.231	0.552	20	
Phenanthrene	4.363	0.20	5	0	87.3	45-121	4.422	1.33	20	
Phenol	4.312	0.20	5	0	86.2	20-124	4.384	1.64	20	
Pyrene	4.136	0.20	5	0	82.7	40-130	4.183	1.12	20	
Pyridine	4.035	1.0	5	0	80.7	15-120	4.06	0.63	20	
Quinoline	4.346	0.20	5	0	86.9	45-120	4.335	0.266	20	
Surr: 2,4,6-Tribromophenol	3.756	0.20	*5*	0	*75.1*	*34-129*	3.896	*3.66*	*0*	
Surr: 2-Fluorobiphenyl	4.04	0.20	*5*	0	*80.8*	*40-125*	4.285	*5.89*	*0*	
Surr: 2-Fluorophenol	4.13	0.20	*5*	0	*82.6*	*20-120*	4.247	*2.79*	*0*	
Surr: 4-Terphenyl-d14	4.499	0.20	*5*	0	*90*	*40-135*	4.729	*4.98*	*0*	
Surr: Nitrobenzene-d5	4.2	0.20	*5*	0	*84*	*41-120*	4.437	*5.48*	*0*	
Surr: Phenol-d6	4.256	0.20	*5*	0	*85.1*	*20-120*	4.407	*3.49*	*0*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212900
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66868** Instrument ID **SV-6** Method: **SW8270**

LCSD Sample ID: **SLCSDW2-121231-66868** Units: **µg/L** Analysis Date: **1/2/2013 05:59 PM**
Client ID: Run ID: **SV-6_130102A** SeqNo: **3074737** Prep Date: **12/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzenethiol	1.457	0.20	5	0	29.1	11-110	1.518	4.1	30	
Surr: 2,4,6-Tribromophenol	3.33	0.20	*5*	0	*66.6*	*34-129*	3.431	*2.99*	*0*	
Surr: 2-Fluorobiphenyl	3.964	0.20	*5*	0	*79.3*	*40-125*	3.995	*0.788*	*0*	
Surr: 2-Fluorophenol	4.09	0.20	*5*	0	*81.8*	*20-120*	4.123	*0.796*	*0*	
Surr: 4-Terphenyl-d14	4.536	0.20	*5*	0	*90.7*	*40-135*	4.578	*0.919*	*0*	
Surr: Nitrobenzene-d5	4.173	0.20	*5*	0	*83.5*	*41-120*	4.129	*1.08*	*0*	
Surr: Phenol-d6	3.983	0.20	*5*	0	*79.7*	*20-120*	4.144	*3.97*	*0*	

LCSD Sample ID: **SLCSDW3-121231-66868** Units: **µg/L** Analysis Date: **1/2/2013 06:38 PM**
Client ID: Run ID: **SV-6_130102A** SeqNo: **3074739** Prep Date: **12/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibenz(a,h)acridine	4.52	0.20	5	0	90.4	35-140	4.612	2.01	20	
Indene	5.435	0.20	5	0	109	40-130	5.433	0.0398	20	
Surr: 2,4,6-Tribromophenol	2.999	0.20	*5*	0	*60*	*34-129*	3.336	*10.6*	*0*	
Surr: 2-Fluorobiphenyl	3.992	0.20	*5*	0	*79.8*	*40-125*	4	*0.204*	*0*	
Surr: 2-Fluorophenol	3.812	0.20	*5*	0	*76.2*	*20-120*	4.158	*8.69*	*0*	
Surr: 4-Terphenyl-d14	4.355	0.20	*5*	0	*87.1*	*40-135*	4.635	*6.21*	*0*	
Surr: Nitrobenzene-d5	4.122	0.20	*5*	0	*82.4*	*41-120*	4.205	*1.98*	*0*	
Surr: Phenol-d6	3.902	0.20	*5*	0	*78*	*20-120*	4.172	*6.69*	*0*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212900
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66868** Instrument ID **SV-6** Method: **SW8270**

MS Sample ID: **1212907-03DMS** Units: **µg/L** Analysis Date: **1/2/2013 08:16 PM**

Client ID: Run ID: **SV-6_130102A** SeqNo: **3074742** Prep Date: **12/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	3.283	0.20	5	0	65.7	45-120	0			
1,3-Dichlorobenzene	3.255	0.20	5	0	65.1	45-120	0			
1,4-Dichlorobenzene	3.296	0.20	5	0	65.9	40-120	0			
1-Methylnaphthalene	3.273	0.20	5	0	65.5	45-120	0			
2,4-Dimethylphenol	3.116	0.20	5	0	62.3	35-120	0			
2,4-Dinitrophenol	2.462	1.0	5	0	49.2	15-120	0			
2-Methylphenol	3.28	0.20	5	0	65.6	45-120	0			
3&4-Methylphenol	3.144	0.20	5	0	62.9	35-120	0			
4-Nitrophenol	4.108	1.0	5	0	82.2	30-130	0			
Acenaphthylene	3.187	0.20	5	0	63.7	47-120	0			
Anthracene	3.791	0.20	5	0	75.8	45-120	0			
Benz(a)anthracene	3.708	0.20	5	0	74.2	40-120	0			
Benzenethiol	0.3766	0.20	5	0	7.53	11-110	0			S
Benzo(a)pyrene	3.688	0.20	5	0	73.8	45-120	0			
Benzo(b)fluoranthene	4.023	0.20	5	0	80.5	50-120	0			
Benzo(k)fluoranthene	3.583	0.20	5	0	71.7	45-127	0			
Bis(2-ethylhexyl)phthalate	4.239	0.20	5	0.1823	81.1	40-139	0			
Chrysene	3.709	0.20	5	0	74.2	43-120	0			
Dibenz(a,h)acridine	3.905	0.20	5	0	78.1	35-140	0			
Dibenz(a,h)anthracene	3.56	0.20	5	0	71.2	45-125	0			
Diethyl phthalate	3.48	0.20	5	0	69.6	41-120	0			
Dimethyl phthalate	3.272	0.20	5	0	65.4	40-122	0			
Di-n-butyl phthalate	4.164	0.20	5	0	83.3	45-123	0			
Fluoranthene	3.917	0.20	5	0	78.3	45-125	0			
Fluorene	3.221	0.20	5	0	64.4	49-120	0			
Indene	3.971	0.20	5	0	79.4	40-130	0			
Indeno(1,2,3-cd)pyrene	3.794	0.20	5	0	75.9	41-128	0			
Naphthalene	3.252	0.20	5	0	65	45-120	0			
Phenanthrene	3.778	0.20	5	0	75.6	45-121	0			
Phenol	3.092	0.20	5	0	61.8	20-124	0			
Pyrene	3.688	0.20	5	0	73.8	40-130	0			
Pyridine	3.061	1.0	5	0	61.2	15-120	0			
Quinoline	3.332	0.20	5	0	66.6	45-120	0			
Surr: 2,4,6-Tribromophenol	3.304	0.20	*5*	0	*66.1*	*34-129*	0			
Surr: 2-Fluorobiphenyl	3.302	0.20	*5*	0	*66*	*40-125*	0			
Surr: 2-Fluorophenol	3.146	0.20	*5*	0	*62.9*	*20-120*	0			
Surr: 4-Terphenyl-d14	4.167	0.20	*5*	0	*83.3*	*40-135*	0			
Surr: Nitrobenzene-d5	3.089	0.20	*5*	0	*61.8*	*41-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **66868** Instrument ID **SV-6** Method: **SW8270**

Surr: Phenol-d6	3.122	0.20	*5*	0	*62.4*	*20-120*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212900
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66868** Instrument ID **SV-6** Method: **SW8270**

MSD Sample ID: **1212907-03DMSD** Units: **µg/L** Analysis Date: **1/2/2013 08:35 PM**

Client ID: Run ID: **SV-6_130102A** SeqNo: **3074744** Prep Date: **12/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	3.008	0.20	5	0	60.2	45-120	3.283	8.73	20	
1,3-Dichlorobenzene	2.98	0.20	5	0	59.6	45-120	3.255	8.8	20	
1,4-Dichlorobenzene	2.996	0.20	5	0	59.9	40-120	3.296	9.51	20	
1-Methylnaphthalene	2.979	0.20	5	0	59.6	45-120	3.273	9.43	20	
2,4-Dimethylphenol	2.87	0.20	5	0	57.4	35-120	3.116	8.21	20	
2,4-Dinitrophenol	2.602	1.0	5	0	52	15-120	2.462	5.52	50	
2-Methylphenol	3.012	0.20	5	0	60.2	45-120	3.28	8.52	20	
3&4-Methylphenol	2.882	0.20	5	0	57.6	35-120	3.144	8.68	20	
4-Nitrophenol	4.337	1.0	5	0	86.7	30-130	4.108	5.43	20	
Acenaphthylene	3.045	0.20	5	0	60.9	47-120	3.187	4.55	20	
Anthracene	3.652	0.20	5	0	73	45-120	3.791	3.72	20	
Benz(a)anthracene	3.782	0.20	5	0	75.6	40-120	3.708	1.97	20	
Benzenethiol	0.9463	0.20	5	0	18.9	11-110	0.3766	86.1	30	R
Benzo(a)pyrene	3.849	0.20	5	0	77	45-120	3.688	4.26	20	
Benzo(b)fluoranthene	4.414	0.20	5	0	88.3	50-120	4.023	9.27	20	
Benzo(k)fluoranthene	3.566	0.20	5	0	71.3	45-127	3.583	0.492	20	
Bis(2-ethylhexyl)phthalate	4.473	0.20	5	0.1823	85.8	40-139	4.239	5.38	20	
Chrysene	3.873	0.20	5	0	77.5	43-120	3.709	4.33	20	
Dibenz(a,h)acridine	4.284	0.20	5	0	85.7	35-140	3.905	9.25	20	
Dibenz(a,h)anthracene	3.928	0.20	5	0	78.6	45-125	3.56	9.81	20	
Diethyl phthalate	3.391	0.20	5	0	67.8	41-120	3.48	2.6	20	
Dimethyl phthalate	3.116	0.20	5	0	62.3	40-122	3.272	4.89	20	
Di-n-butyl phthalate	4.249	0.20	5	0	85	45-123	4.164	2.01	20	
Fluoranthene	3.992	0.20	5	0	79.8	45-125	3.917	1.9	20	
Fluorene	3.108	0.20	5	0	62.2	49-120	3.221	3.56	20	
Indene	3.821	0.20	5	0	76.4	40-130	3.971	3.85	20	
Indeno(1,2,3-cd)pyrene	3.855	0.20	5	0	77.1	41-128	3.794	1.6	20	
Naphthalene	2.976	0.20	5	0	59.5	45-120	3.252	8.86	20	
Phenanthrene	3.648	0.20	5	0	73	45-121	3.778	3.53	20	
Phenol	2.83	0.20	5	0	56.6	20-124	3.092	8.84	20	
Pyrene	3.838	0.20	5	0	76.8	40-130	3.688	3.99	20	
Pyridine	2.753	1.0	5	0	55.1	15-120	3.061	10.6	20	
Quinoline	3.064	0.20	5	0	61.3	45-120	3.332	8.37	20	
Surr: 2,4,6-Tribromophenol	3.358	0.20	*5*	0	*67.2*	*34-129*	3.304	*1.62*	*0*	
Surr: 2-Fluorobiphenyl	3.057	0.20	*5*	0	*61.1*	*40-125*	3.302	*7.72*	*0*	
Surr: 2-Fluorophenol	2.808	0.20	*5*	0	*56.2*	*20-120*	3.146	*11.4*	*0*	
Surr: 4-Terphenyl-d14	4.416	0.20	*5*	0	*88.3*	*40-135*	4.167	*5.79*	*0*	
Surr: Nitrobenzene-d5	2.936	0.20	*5*	0	*58.7*	*41-120*	3.089	*5.1*	*0*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212900
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66868**	Instrument ID **SV-6**		Method: **SW8270**						
Surr: Phenol-d6	2.906	0.20	*5*	0	*58.1*	*20-120*	3.122	*7.19*	*0*

The following samples were analyzed in this batch: 1212900-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212900
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R140725** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-010213-R140725** Units: **µg/L** Analysis Date: **1/2/2013 11:15 AM**

Client ID: Run ID: **VOA1_130102A** SeqNo: **3073509** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dioxane	ND	100								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon disulfide	ND	10								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Ethylbenzene	ND	5.0								
Methyl tert-butyl ether	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
Trichloroethene	ND	5.0								
Xylenes, Total	ND	15								
Surr: 1,2-Dichloroethane-d4	45.83	5.0	*50*	0	*91.7*	*70-125*	0			
Surr: 4-Bromofluorobenzene	48.99	5.0	*50*	0	*98*	*72-125*	0			
Surr: Dibromofluoromethane	47.02	5.0	*50*	0	*94*	*71-125*	0			
Surr: Toluene-d8	47.19	5.0	*50*	0	*94.4*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212900
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R140725** Instrument ID **VOA1** Method: **SW8260**

LCS Sample ID: **VLCSW-010313-R140725** Units: **µg/L** Analysis Date: **1/2/2013 10:26 AM**

Client ID: Run ID: **VOA1_130102A** SeqNo: **3073508** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.43	5.0	50	0	98.9	80-120	0			
1,1-Dichloroethane	46.21	5.0	50	0	92.4	76-120	0			
1,2-Dibromoethane	47.4	5.0	50	0	94.8	80-120	0			
1,2-Dichloroethane	46.79	5.0	50	0	93.6	78-120	0			
1,4-Dioxane	1154	100	1000	0	115	50-158	0			
2-Butanone	97.71	10	100	0	97.7	58-132	0			
Benzene	45.38	5.0	50	0	90.8	73-121	0			
Carbon disulfide	97.88	10	100	0	97.9	68-141	0			
Chlorobenzene	46.31	5.0	50	0	92.6	80-120	0			
Chloroform	48.28	5.0	50	0	96.6	80-120	0			
Ethylbenzene	46.84	5.0	50	0	93.7	80-120	0			
Methyl tert-butyl ether	51.58	5.0	50	0	103	73-121	0			
Styrene	49.36	5.0	50	0	98.7	80-120	0			
Tetrachloroethene	47.95	5.0	50	0	95.9	79-120	0			
Toluene	48.94	5.0	50	0	97.9	80-120	0			
Trichloroethene	53.21	5.0	50	0	106	80-120	0			
Xylenes, Total	145.5	15	150	0	97	80-120	0			
Surr: 1,2-Dichloroethane-d4	43.09	5.0	*50*	0	*86.2*	*70-125*	0			
Surr: 4-Bromofluorobenzene	47.2	5.0	*50*	0	*94.4*	*72-125*	0			
Surr: Dibromofluoromethane	47.77	5.0	*50*	0	*95.5*	*71-125*	0			
Surr: Toluene-d8	47.93	5.0	*50*	0	*95.9*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212900
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R140725** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **1212791-13AMS** Units: **µg/L** Analysis Date: **1/2/2013 01:44 PM**

Client ID: Run ID: **VOA1_130102A** SeqNo: **3073515** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	46.67	5.0	50	0	93.3	80-120	0			
1,1-Dichloroethane	45.29	5.0	50	0	90.6	76-120	0			
1,2-Dibromoethane	46.74	5.0	50	0	93.5	80-120	0			
1,2-Dichloroethane	49.36	5.0	50	0	98.7	78-120	0			
1,4-Dioxane	1314	100	1000	0	131	50-158	0			
2-Butanone	99.16	10	100	0	99.2	58-132	0			
Benzene	113.1	5.0	50	58.03	110	73-121	0			
Carbon disulfide	89.03	10	100	0	89	68-141	0			
Chlorobenzene	45.4	5.0	50	0	90.8	80-120	0			
Chloroform	47.54	5.0	50	2.847	89.4	80-120	0			
Ethylbenzene	53.42	5.0	50	8.22	90.4	80-120	0			
Methyl tert-butyl ether	52.76	5.0	50	2.765	100	73-121	0			
Styrene	17.79	5.0	50	0	35.6	80-120	0			S
Tetrachloroethene	43.29	5.0	50	0	86.6	79-120	0			
Toluene	46.62	5.0	50	0	93.2	80-120	0			
Trichloroethene	51.13	5.0	50	0	102	80-120	0			
Xylenes, Total	200.4	15	150	56.74	95.8	80-120	0			
Surr: 1,2-Dichloroethane-d4	44.29	5.0	*50*	0	*88.6*	*70-125*	0			
Surr: 4-Bromofluorobenzene	48.5	5.0	*50*	0	*97*	*72-125*	0			
Surr: Dibromofluoromethane	48.24	5.0	*50*	0	*96.5*	*71-125*	0			
Surr: Toluene-d8	46.74	5.0	*50*	0	*93.5*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212900
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R140725** Instrument ID **VOA1** Method: **SW8260**

MSD Sample ID: **1212791-13AMSD** Units: **µg/L** Analysis Date: **1/2/2013 02:08 PM**

Client ID: Run ID: **VOA1_130102A** SeqNo: **3073516** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	45.89	5.0	50	0	91.8	80-120	46.67	1.69	20	
1,1-Dichloroethane	46.03	5.0	50	0	92.1	76-120	45.29	1.64	20	
1,2-Dibromoethane	46.67	5.0	50	0	93.3	80-120	46.74	0.141	20	
1,2-Dichloroethane	48.01	5.0	50	0	96	78-120	49.36	2.79	20	
1,4-Dioxane	1260	100	1000	0	126	50-158	1314	4.22	20	
2-Butanone	96.67	10	100	0	96.7	58-132	99.16	2.55	20	
Benzene	105.2	5.0	50	58.03	94.3	73-121	113.1	7.28	20	
Carbon disulfide	83.08	10	100	0	83.1	68-141	89.03	6.91	20	
Chlorobenzene	47.15	5.0	50	0	94.3	80-120	45.4	3.78	20	
Chloroform	47.66	5.0	50	2.847	89.6	80-120	47.54	0.249	20	
Ethylbenzene	50.99	5.0	50	8.22	85.5	80-120	53.42	4.65	20	
Methyl tert-butyl ether	52.23	5.0	50	2.765	98.9	73-121	52.76	1.02	20	
Styrene	14.98	5.0	50	0	30	80-120	17.79	17.1	20	S
Tetrachloroethene	42.32	5.0	50	0	84.6	79-120	43.29	2.25	20	
Toluene	45.09	5.0	50	0	90.2	80-120	46.62	3.33	20	
Trichloroethene	49.85	5.0	50	0	99.7	80-120	51.13	2.55	20	
Xylenes, Total	178.8	15	150	56.74	81.3	80-120	200.4	11.4	20	
Surr: 1,2-Dichloroethane-d4	45.56	5.0	*50*	0	*91.1*	*70-125*	44.29	*2.84*	*20*	
Surr: 4-Bromofluorobenzene	49.36	5.0	*50*	0	*98.7*	*72-125*	48.5	*1.75*	*20*	
Surr: Dibromofluoromethane	47.41	5.0	*50*	0	*94.8*	*71-125*	48.24	*1.75*	*20*	
Surr: Toluene-d8	46.11	5.0	*50*	0	*92.2*	*75-125*	46.74	*1.35*	*20*	

The following samples were analyzed in this batch: 1212900-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212900
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R140759** Instrument ID **UV-2450** Method: **M4500CN E&G (Dissolve)**

MBLK Sample ID: **WBLKW1-010313-R140759** Units: **mg/L** Analysis Date: **1/3/2013 01:35 PM**
Client ID: Run ID: **UV-2450_130103E** SeqNo: **3074117** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	ND	0.020								

LCS Sample ID: **WLCSW1-010313-R140759** Units: **mg/L** Analysis Date: **1/3/2013 01:35 PM**
Client ID: Run ID: **UV-2450_130103E** SeqNo: **3074118** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.176	0.020	0.2	0	88	80-120	0			

LCSD Sample ID: **WLCSDW1-010313-R140759** Units: **mg/L** Analysis Date: **1/3/2013 01:35 PM**
Client ID: Run ID: **UV-2450_130103E** SeqNo: **3074126** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.171	0.020	0.2	0	85.5	80-120	0.176	2.88	20	

MS Sample ID: **1212815-01CMS** Units: **mg/L** Analysis Date: **1/3/2013 01:35 PM**
Client ID: Run ID: **UV-2450_130103E** SeqNo: **3074125** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.164	0.020	0.2	0.004	80	80-120	0			

The following samples were analyzed in this batch: 1212900-01D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List
WorkOrder: **1212900**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **28-Dec-12 09:45**

Work Order: **1212900** Received by: **JBA**

Checklist completed by Johnnie B. Allen (eSignature) 28-Dec-12 (Date) Reviewed by: Patricia L. Lynch (eSignature) 31-Dec-12 (Date)

Matrices: 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):	0.8 C/uc	005	
Cooler(s)/Kit(s):	5100		
Date/Time sample(s) sent to storage:	12/28/12 16:25		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

ALS Environmental

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Fort Collins, CO +1 970 490 1511
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Chain of Custody Form

Page 1 of 1

COC ID: 66160

1212900

NAVAJO REFINING: Navajo Refining Company

Project: Lovington Lea Refining Skinner List

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Lovington Lea Refining SkinnerList	A	VOC (8260) Skinner List
Work Order		Project Number	129809	B	LL SVOC (8270) Skinner List
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (6020/7000) Skinner List
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange	D	Total Cyanide (9014)
Address	501 East Main	Address	501 East Main	E	
				F	
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	
Phone	(575) 748-6733	Phone	(575) 748-6733	H	
Fax	(575) 746-5421	Fax	(575) 746-5421	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	East water well	12/27/12	8:30	W	-	7	✓	✓	✓	✓							
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Andres Sandoval

Shipment Method:

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 Day TAT
Andres Sandoval	12/27/12	8:30		
Relinquished by:	Date:	Time:	Received by (Laboratory):	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Cooler ID	Cooler Temp.
5190	

QC Package: (Check One Box Below)

- ☑ Level II Std QC
- ☐ Level III Std QC/Raw Data
- ☐ Level IV SW846/CLP
- ☐ Other / EDD
- ☐ 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 Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental 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.

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8989 8549 4330

FedEx Express US Airl

FedEx Express MPS Label

8989 8549 4330 8989 8549 4330

FedEx Tracking Number for Shipper Form ID No. 0260

MUR42 2064 Sender's Copy

1 From Please print and press hard.
Date 12/27/12 Sender's FedEx Account Number [redacted]-9018-6

Sender's Name CATHY [redacted] TRUETT Phone (575) 396-5821

Company NAVAJO REFINING CO (LEA)

Address 7406 S MAIN ST

Dept./Floor/Suite/Room

City LOVINGTON State NM ZIP 88260

2 Your Internal Billing Reference DEC. SAMPLES
First 24 characters will appear on invoice.

3 To
Recipient's Name Phone 281 530 5656

Company ALS LAB

HOLD Weekday Print FedEx location address below. NOT available for FedEx First Overnight.

HOLD Saturday Print FedEx location address below. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Address 10450 STANCLIFF RD. STE 210
We cannot deliver to P.O. boxes or P.O. ZIP codes.

Dept./Floor/Suite/Room

Address
Print FedEx location address here if HOLD option is selected.

City HOUSTON State TX ZIP 77099-4338

0408719506

4a Express Package Service * To most locations. Packages up to 150 lbs.

- [x] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

4b Express Freight Service ** To most locations. Packages over 150 lbs.

- [ ] FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- FedEx 1Day Freight Booking No. [redacted]
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [x] Other

6 Special Handling and Delivery Signature Options

- [ ] SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods? One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

- [ ] Cargo Aircraft Only

7 Payment Bill to:

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [x] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Enter FedEx Acct. No. or Credit Card No. below.

FedEx Acct. No. / Credit Card No. 2470-7613-1 Exp. Date

Total Packages 4 Total Weight ____ lbs. Total Declared Value $____ .00

† Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

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Store your addresses at fedex.com
Simplify your shipping. Manage your account. Access all the tools you need.

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

CUSTODY SEAL
Date: 12/27/12 Time: 1040
Name: Andrew Sawyer
Company: Navajo
Date: 12/28/12

07-Jan-2013

Aaron Strange
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 748-6733
Fax: (575) 746-5421

Re: Lovington Lea Refining Skinner List Work Order: **1212899**

Dear Aaron,

ALS Environmental received 2 samples on 28-Dec-2012 09:45 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental 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 Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 31.

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

Sincerely,

Patricia L. Lynch

Electronically approved by: Jumoke M. Lawal

Patricia L. Lynch
Project Manager

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 07-Jan-13

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List
Work Order: **1212899**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1212899-01	1210 TANK	Water		12/27/2012 08:30	12/28/2012 09:45	☐
1212899-02	Trip Blank 121212-67	Water		12/27/2012	12/28/2012 09:45	☐

Client:	Navajo Refining Company
Project:	Lovington Lea Refining Skinner List
Work Order:	1212899

Case Narrative

Batch 66868, Semivolatile Organics, Sample 1212907-03: MS/MSD is for an unrelated sample.

Batch R140725, Volatile Organics: The CCV %D for 1,4-dioxane is high, but the associated LCS recovery is in control. The MS/MSD is for an unrelated sample.

ALS Environmental

Date: *07-Jan-13*

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List
Work Order: 1212899
Sample ID: 1210 TANK
Lab ID: 1212899-01
Collection Date: 12/27/2012 08:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY-SW7470A			**SW7470**		Prep Date: **1/3/2013**	Analyst: **OFO**
Mercury	ND		0.000200	mg/L	1	1/3/2013 02:28 PM
METALS			**SW6020**		Prep Date: **1/3/2013**	Analyst: **ALR**
Antimony	ND		0.00500	mg/L	1	1/3/2013 05:02 PM
Arsenic	**0.00547**		**0.00500**	**mg/L**	1	1/3/2013 05:02 PM
Barium	**0.107**		**0.00500**	**mg/L**	1	1/3/2013 05:02 PM
Beryllium	ND		0.00200	mg/L	1	1/4/2013 01:16 PM
Cadmium	ND		0.00200	mg/L	1	1/3/2013 05:02 PM
Chromium	**0.00873**		**0.00500**	**mg/L**	1	1/3/2013 05:02 PM
Cobalt	ND		0.00500	mg/L	1	1/3/2013 05:02 PM
Lead	ND		0.00500	mg/L	1	1/3/2013 05:02 PM
Nickel	ND		0.00500	mg/L	1	1/3/2013 05:02 PM
Selenium	**0.00622**		**0.00500**	**mg/L**	1	1/3/2013 05:02 PM
Silver	ND		0.00500	mg/L	1	1/3/2013 05:02 PM
Vanadium	**0.0296**		**0.00500**	**mg/L**	1	1/3/2013 05:02 PM
Zinc	**0.0111**		**0.00500**	**mg/L**	1	1/3/2013 05:02 PM
LOW-LEVEL SEMIVOLATILES			**SW8270**		Prep Date: **12/31/2012**	Analyst: **LG**
1,2-Dichlorobenzene	ND		0.20	µg/L	1	1/2/2013 11:12 PM
1,3-Dichlorobenzene	ND		0.20	µg/L	1	1/2/2013 11:12 PM
1,4-Dichlorobenzene	ND		0.20	µg/L	1	1/2/2013 11:12 PM
1-Methylnaphthalene	ND		0.20	µg/L	1	1/2/2013 11:12 PM
2,4-Dimethylphenol	ND		0.20	µg/L	1	1/2/2013 11:12 PM
2,4-Dinitrophenol	ND		1.0	µg/L	1	1/2/2013 11:12 PM
2-Methylphenol	ND		0.20	µg/L	1	1/2/2013 11:12 PM
3&4-Methylphenol	ND		0.20	µg/L	1	1/2/2013 11:12 PM
4-Nitrophenol	ND		1.0	µg/L	1	1/2/2013 11:12 PM
Acenaphthylene	ND		0.20	µg/L	1	1/2/2013 11:12 PM
Anthracene	ND		0.20	µg/L	1	1/2/2013 11:12 PM
Benz(a)anthracene	ND		0.20	µg/L	1	1/2/2013 11:12 PM
Benzenethiol	ND		0.20	µg/L	1	1/2/2013 11:12 PM
Benzo(a)pyrene	ND		0.20	µg/L	1	1/2/2013 11:12 PM
Benzo(b)fluoranthene	ND		0.20	µg/L	1	1/2/2013 11:12 PM
Benzo(k)fluoranthene	ND		0.20	µg/L	1	1/2/2013 11:12 PM
Bis(2-ethylhexyl)phthalate	**0.23**		**0.20**	**µg/L**	1	1/2/2013 11:12 PM
Chrysene	ND		0.20	µg/L	1	1/2/2013 11:12 PM
Dibenz(a,h)acridine	ND		0.20	µg/L	1	1/2/2013 11:12 PM
Dibenz(a,h)anthracene	ND		0.20	µg/L	1	1/2/2013 11:12 PM
Diethyl phthalate	ND		0.20	µg/L	1	1/2/2013 11:12 PM
Dimethyl phthalate	ND		0.20	µg/L	1	1/2/2013 11:12 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List **Work Order:** 1212899
Sample ID: 1210 TANK **Lab ID:** 1212899-01
Collection Date: 12/27/2012 08:30 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Di-n-butyl phthalate	ND		0.20	µg/L	1	1/2/2013 11:12 PM
Fluoranthene	ND		0.20	µg/L	1	1/2/2013 11:12 PM
Fluorene	ND		0.20	µg/L	1	1/2/2013 11:12 PM
Indene	ND		0.20	µg/L	1	1/2/2013 11:12 PM
Indeno(1,2,3-cd)pyrene	ND		0.20	µg/L	1	1/2/2013 11:12 PM
Naphthalene	ND		0.20	µg/L	1	1/2/2013 11:12 PM
Phenanthrene	ND		0.20	µg/L	1	1/2/2013 11:12 PM
Phenol	ND		0.20	µg/L	1	1/2/2013 11:12 PM
Pyrene	ND		0.20	µg/L	1	1/2/2013 11:12 PM
Pyridine	ND		1.0	µg/L	1	1/2/2013 11:12 PM
Quinoline	ND		0.20	µg/L	1	1/2/2013 11:12 PM
Surr: 2,4,6-Tribromophenol	*50.5*		*34-129*	*%REC*	1	1/2/2013 11:12 PM
Surr: 2-Fluorobiphenyl	*63.1*		*40-125*	*%REC*	1	1/2/2013 11:12 PM
Surr: 2-Fluorophenol	*58.1*		*20-120*	*%REC*	1	1/2/2013 11:12 PM
Surr: 4-Terphenyl-d14	*75.0*		*40-135*	*%REC*	1	1/2/2013 11:12 PM
Surr: Nitrobenzene-d5	*64.4*		*41-120*	*%REC*	1	1/2/2013 11:12 PM
Surr: Phenol-d6	*57.6*		*20-120*	*%REC*	1	1/2/2013 11:12 PM
VOLATILES - SW8260C			**SW8260**			Analyst: **PC**
1,1,1-Trichloroethane	ND		5.0	µg/L	1	1/2/2013 03:47 PM
1,1-Dichloroethane	ND		5.0	µg/L	1	1/2/2013 03:47 PM
1,2-Dibromoethane	ND		5.0	µg/L	1	1/2/2013 03:47 PM
1,2-Dichloroethane	ND		5.0	µg/L	1	1/2/2013 03:47 PM
1,4-Dioxane	ND		100	µg/L	1	1/2/2013 03:47 PM
2-Butanone	ND		10	µg/L	1	1/2/2013 03:47 PM
Benzene	ND		5.0	µg/L	1	1/2/2013 03:47 PM
Carbon disulfide	ND		10	µg/L	1	1/2/2013 03:47 PM
Chlorobenzene	ND		5.0	µg/L	1	1/2/2013 03:47 PM
Chloroform	ND		5.0	µg/L	1	1/2/2013 03:47 PM
Ethylbenzene	ND		5.0	µg/L	1	1/2/2013 03:47 PM
Methyl tert-butyl ether	ND		5.0	µg/L	1	1/2/2013 03:47 PM
Styrene	ND		5.0	µg/L	1	1/2/2013 03:47 PM
Tetrachloroethene	ND		5.0	µg/L	1	1/2/2013 03:47 PM
Toluene	ND		5.0	µg/L	1	1/2/2013 03:47 PM
Trichloroethene	ND		5.0	µg/L	1	1/2/2013 03:47 PM
Xylenes, Total	ND		15	µg/L	1	1/2/2013 03:47 PM
Surr: 1,2-Dichloroethane-d4	*87.1*		*70-125*	*%REC*	1	1/2/2013 03:47 PM
Surr: 4-Bromofluorobenzene	*92.1*		*72-125*	*%REC*	1	1/2/2013 03:47 PM
Surr: Dibromofluoromethane	*93.3*		*71-125*	*%REC*	1	1/2/2013 03:47 PM
Surr: Toluene-d8	*94.3*		*75-125*	*%REC*	1	1/2/2013 03:47 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *07-Jan-13*

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List
Work Order: 1212899
Sample ID: 1210 TANK
Lab ID: 1212899-01
Collection Date: 12/27/2012 08:30 AM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE - SM4500CN E			**M4500CN E&G**			Analyst: **EDG**
Cyanide	ND		0.0200	mg/L	1	1/3/2013 01:35 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **66883** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW1-010313-66883** Units: **mg/L** Analysis Date: **1/3/2013 01:51 PM**

Client ID: Run ID: **MERCURY_130103A** SeqNo: **3074035** Prep Date: **1/3/2013** 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: **GLCSW1-010313-66883** Units: **mg/L** Analysis Date: **1/3/2013 01:55 PM**

Client ID: Run ID: **MERCURY_130103A** SeqNo: **3074036** Prep Date: **1/3/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00497	0.00020	0.005	0	99.4	85-115	0			

MS Sample ID: **1212907-03EMS** Units: **mg/L** Analysis Date: **1/3/2013 02:05 PM**

Client ID: Run ID: **MERCURY_130103A** SeqNo: **3074039** Prep Date: **1/3/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00487	0.00020	0.005	-0.000018	97.8	85-115	0			

MSD Sample ID: **1212907-03EMSD** Units: **mg/L** Analysis Date: **1/3/2013 02:07 PM**

Client ID: Run ID: **MERCURY_130103A** SeqNo: **3074040** Prep Date: **1/3/2013** 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	-0.000018	102	85-115	0.00487	4.02	20	

DUP Sample ID: **1212907-03EDUP** Units: **mg/L** Analysis Date: **1/3/2013 01:59 PM**

Client ID: Run ID: **MERCURY_130103A** SeqNo: **3074038** Prep Date: **1/3/2013** 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	-0.000018	0	20	

The following samples were analyzed in this batch: 1212899-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212899
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66917** Instrument ID **ICPMS05** Method: **SW6020**

MBLK Sample ID: **MBLKW1-010313-66917** Units: **mg/L** Analysis Date: **1/3/2013 04:57 PM**
Client ID: Run ID: **ICPMS05_130103A** SeqNo: **3074303** Prep Date: **1/3/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.0050								
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Cadmium	ND	0.0020								
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Lead	ND	0.0050								
Nickel	ND	0.0050								
Selenium	ND	0.0050								
Silver	ND	0.0050								
Vanadium	ND	0.0050								
Zinc	ND	0.0050								

MBLK Sample ID: **MBLKW1-010313-66917** Units: **mg/L** Analysis Date: **1/4/2013 12:32 PM**
Client ID: Run ID: **ICP7500_130104A** SeqNo: **3074589** Prep Date: **1/3/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	ND	0.0020								

LCS Sample ID: **MLCSW1-010313-66917** Units: **mg/L** Analysis Date: **1/3/2013 04:59 PM**
Client ID: Run ID: **ICPMS05_130103A** SeqNo: **3074304** Prep Date: **1/3/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04969	0.0050	0.05	0	99.4	80-120	0			
Arsenic	0.05067	0.0050	0.05	0	101	80-120	0			
Barium	0.04997	0.0050	0.05	0	99.9	80-120	0			
Cadmium	0.05141	0.0020	0.05	0	103	80-120	0			
Chromium	0.05315	0.0050	0.05	0	106	80-120	0			
Cobalt	0.05104	0.0050	0.05	0	102	80-120	0			
Lead	0.05143	0.0050	0.05	0	103	80-120	0			
Nickel	0.05162	0.0050	0.05	0	103	80-120	0			
Selenium	0.05389	0.0050	0.05	0	108	80-120	0			
Silver	0.04905	0.0050	0.05	0	98.1	80-120	0			
Vanadium	0.05291	0.0050	0.05	0	106	80-120	0			
Zinc	0.05446	0.0050	0.05	0	109	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212899
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66917** Instrument ID **ICPMS05** Method: **SW6020**

LCS Sample ID: **MLCSW1-010313-66917** Units: **mg/L** Analysis Date: **1/4/2013 12:37 PM**
Client ID: Run ID: **ICP7500_130104A** SeqNo: **3074590** Prep Date: **1/3/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.04394	0.0020	0.05	0	87.9	80-120	0			

MS Sample ID: **1212899-01CMS** Units: **mg/L** Analysis Date: **1/3/2013 05:21 PM**
Client ID: **1210 TANK** Run ID: **ICPMS05_130103A** SeqNo: **3074313** Prep Date: **1/3/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05116	0.0050	0.05	0.000166	102	80-120	0			
Arsenic	0.05611	0.0050	0.05	0.005469	101	80-120	0			
Barium	0.1585	0.0050	0.05	0.1073	102	80-120	0			
Cadmium	0.05129	0.0020	0.05	0.000006	103	80-120	0			
Chromium	0.05912	0.0050	0.05	0.008726	101	80-120	0			
Cobalt	0.0504	0.0050	0.05	0.000291	100	80-120	0			
Lead	0.05404	0.0050	0.05	0.00056	107	80-120	0			
Nickel	0.05087	0.0050	0.05	0.00026	101	80-120	0			
Selenium	0.05523	0.0050	0.05	0.006223	98	80-120	0			
Silver	0.05008	0.0050	0.05	0.000137	99.9	80-120	0			
Vanadium	0.07669	0.0050	0.05	0.02956	94.3	80-120	0			
Zinc	0.05929	0.0050	0.05	0.01107	96.4	80-120	0			

MS Sample ID: **1301020-01AMS** Units: **mg/L** Analysis Date: **1/3/2013 06:19 PM**
Client ID: Run ID: **ICPMS05_130103A** SeqNo: **3074337** Prep Date: **1/3/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1031	0.0050	0.1	0.000789	102	80-120	0			
Arsenic	0.1083	0.0050	0.1	0.002877	105	80-120	0			
Barium	0.2228	0.0050	0.1	0.1161	107	80-120	0			
Cadmium	0.1005	0.0020	0.1	0.00033	100	80-120	0			
Chromium	0.1035	0.0050	0.1	0.000398	103	80-120	0			
Cobalt	0.103	0.0050	0.1	0.000424	103	80-120	0			
Lead	0.09859	0.0050	0.1	0.00061	98	80-120	0			
Nickel	0.1091	0.0050	0.1	0.00409	105	80-120	0			
Selenium	0.1073	0.0050	0.1	0.000671	107	80-120	0			
Silver	0.09679	0.0050	0.1	0.000331	96.5	80-120	0			
Vanadium	0.1063	0.0050	0.1	0.001482	105	80-120	0			
Zinc	0.1098	0.0050	0.1	0.0095	100	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212899
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66917** Instrument ID **ICPMS05** Method: **SW6020**

MS Sample ID: **1212899-01CMS** Units: **mg/L** Analysis Date: **1/4/2013 01:31 PM**
Client ID: **1210 TANK** Run ID: **ICP7500_130104A** SeqNo: **3074668** Prep Date: **1/3/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.04749	0.0020	0.05	0.0001123	94.8	80-120	0			

MS Sample ID: **1301020-01AMS** Units: **mg/L** Analysis Date: **1/4/2013 08:00 PM**
Client ID: Run ID: **ICP7500_130104A** SeqNo: **3075273** Prep Date: **1/3/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.09837	0.0020	0.1	0.0001895	98.2	80-120	0			

MSD Sample ID: **1212899-01CMSD** Units: **mg/L** Analysis Date: **1/3/2013 05:24 PM**
Client ID: **1210 TANK** Run ID: **ICPMS05_130103A** SeqNo: **3074314** Prep Date: **1/3/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05125	0.0050	0.05	0.000166	102	80-120	0.05116	0.18	15	
Arsenic	0.05418	0.0050	0.05	0.005469	97.4	80-120	0.05611	3.5	15	
Barium	0.1575	0.0050	0.05	0.1073	100	80-120	0.1585	0.647	15	
Cadmium	0.05082	0.0020	0.05	0.000006	102	80-120	0.05129	0.921	15	
Chromium	0.06089	0.0050	0.05	0.008726	104	80-120	0.05912	2.94	15	
Cobalt	0.04951	0.0050	0.05	0.000291	98.4	80-120	0.0504	1.78	15	
Lead	0.05184	0.0050	0.05	0.00056	103	80-120	0.05404	4.16	15	
Nickel	0.04999	0.0050	0.05	0.00026	99.5	80-120	0.05087	1.75	15	
Selenium	0.05833	0.0050	0.05	0.006223	104	80-120	0.05523	5.46	15	
Silver	0.04953	0.0050	0.05	0.000137	98.8	80-120	0.05008	1.11	15	
Vanadium	0.07753	0.0050	0.05	0.02956	95.9	80-120	0.07669	1.09	15	
Zinc	0.06291	0.0050	0.05	0.01107	104	80-120	0.05929	5.93	15	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212899
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66917** Instrument ID **ICPMS05** Method: **SW6020**

MSD Sample ID: **1301020-01AMSD** Units: **mg/L** Analysis Date: **1/3/2013 06:21 PM**
Client ID: Run ID: **ICPMS05_130103A** SeqNo: **3074338** Prep Date: **1/3/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.0991	0.0050	0.1	0.000789	98.3	80-120	0.1031	3.92	15	
Arsenic	0.1051	0.0050	0.1	0.002877	102	80-120	0.1083	3	15	
Barium	0.218	0.0050	0.1	0.1161	102	80-120	0.2228	2.19	15	
Cadmium	0.1009	0.0020	0.1	0.00033	101	80-120	0.1005	0.384	15	
Chromium	0.1016	0.0050	0.1	0.000398	101	80-120	0.1035	1.86	15	
Cobalt	0.1002	0.0050	0.1	0.000424	99.7	80-120	0.103	2.76	15	
Lead	0.09897	0.0050	0.1	0.00061	98.4	80-120	0.09859	0.381	15	
Nickel	0.1041	0.0050	0.1	0.00409	100	80-120	0.1091	4.71	15	
Selenium	0.1054	0.0050	0.1	0.000671	105	80-120	0.1073	1.78	15	
Silver	0.09451	0.0050	0.1	0.000331	94.2	80-120	0.09679	2.38	15	
Vanadium	0.1038	0.0050	0.1	0.001482	102	80-120	0.1063	2.4	15	
Zinc	0.113	0.0050	0.1	0.0095	103	80-120	0.1098	2.86	15	

MSD Sample ID: **1212899-01CMSD** Units: **mg/L** Analysis Date: **1/4/2013 01:36 PM**
Client ID: **1210 TANK** Run ID: **ICP7500_130104A** SeqNo: **3074669** Prep Date: **1/3/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.04654	0.0020	0.05	0.0001123	92.9	80-120	0.04749	2.02	15	

MSD Sample ID: **1301020-01AMSD** Units: **mg/L** Analysis Date: **1/4/2013 08:05 PM**
Client ID: Run ID: **ICP7500_130104A** SeqNo: **3075274** Prep Date: **1/3/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.09791	0.0020	0.1	0.0001895	97.7	80-120	0.09837	0.469	15	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212899
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66917** Instrument ID **ICPMS05** Method: **SW6020**

DUP Sample ID: **1212899-01CDUP** Units: **mg/L** Analysis Date: **1/3/2013 05:04 PM**
Client ID: **1210 TANK** Run ID: **ICPMS05_130103A** SeqNo: **3074306** Prep Date: **1/3/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.0050	0	0	0	0-0	0.000166	0	25	
Arsenic	0.005059	0.0050	0	0	0	0-0	0.005469	7.79	25	
Barium	0.1085	0.0050	0	0	0	0-0	0.1073	1.15	25	
Cadmium	ND	0.0020	0	0	0	0-0	0.000006	0	25	
Chromium	0.008655	0.0050	0	0	0	0-0	0.008726	0.817	25	
Cobalt	ND	0.0050	0	0	0	0-0	0.000291	0	25	
Lead	ND	0.0050	0	0	0	0-0	0.00056	0	25	
Nickel	ND	0.0050	0	0	0	0-0	0.00026	0	25	
Selenium	ND	0.0050	0	0	0	0-0	0.006223	0	25	
Silver	ND	0.0050	0	0	0	0-0	0.000137	0	25	
Vanadium	0.02837	0.0050	0	0	0	0-0	0.02956	4.12	25	
Zinc	0.009141	0.0050	0	0	0	0-0	0.01107	19.1	25	

DUP Sample ID: **1301020-01ADUP** Units: **mg/L** Analysis Date: **1/3/2013 06:14 PM**
Client ID: Run ID: **ICPMS05_130103A** SeqNo: **3074335** Prep Date: **1/3/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.0050	0	0	0	0-0	0.000789	0	25	
Arsenic	ND	0.0050	0	0	0	0-0	0.002877	0	25	
Barium	0.115	0.0050	0	0	0	0-0	0.1161	0.941	25	
Cadmium	ND	0.0020	0	0	0	0-0	0.00033	0	25	
Chromium	ND	0.0050	0	0	0	0-0	0.000398	0	25	
Cobalt	ND	0.0050	0	0	0	0-0	0.000424	0	25	
Lead	ND	0.0050	0	0	0	0-0	0.00061	0	25	
Nickel	ND	0.0050	0	0	0	0-0	0.00409	0	25	
Selenium	ND	0.0050	0	0	0	0-0	0.000671	0	25	
Silver	ND	0.0050	0	0	0	0-0	0.000331	0	25	
Vanadium	ND	0.0050	0	0	0	0-0	0.001482	0	25	
Zinc	0.008537	0.0050	0	0	0	0-0	0.0095	10.7	25	

DUP Sample ID: **1212899-01CDUP** Units: **mg/L** Analysis Date: **1/4/2013 01:21 PM**
Client ID: **1210 TANK** Run ID: **ICP7500_130104A** SeqNo: **3074665** Prep Date: **1/3/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	ND	0.0020	0	0	0	0-0	0.0001123	0	25	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212899
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66917** Instrument ID **ICPMS05** Method: **SW6020**

DUP Sample ID: **1301020-01ADUP** Units: **mg/L** Analysis Date: **1/4/2013 07:50 PM**

Client ID: Run ID: **ICP7500_130104A** SeqNo: **3075271** Prep Date: **1/3/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	ND	0.0020	0	0	0	0-0	0.0001895	0	25	

The following samples were analyzed in this batch: 1212899-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212899
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66868** Instrument ID **SV-6** Method: **SW8270**

MBLK Sample ID: **SBLKW1-121231-66868** Units: **µg/L** Analysis Date: **1/2/2013 04:41 PM**

Client ID: Run ID: **SV-6_130102A** SeqNo: **3074733** Prep Date: **12/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	ND	0.20								
1,3-Dichlorobenzene	ND	0.20								
1,4-Dichlorobenzene	ND	0.20								
1-Methylnaphthalene	ND	0.20								
2,4-Dimethylphenol	ND	0.20								
2,4-Dinitrophenol	ND	1.0								
2-Methylphenol	ND	0.20								
3&4-Methylphenol	ND	0.20								
4-Nitrophenol	ND	1.0								
Acenaphthylene	ND	0.20								
Anthracene	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzenethiol	ND	0.20								
Benzo(a)pyrene	ND	0.20								
Benzo(b)fluoranthene	ND	0.20								
Benzo(k)fluoranthene	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.20								
Chrysene	ND	0.20								
Dibenz(a,h)acridine	ND	0.20								
Dibenz(a,h)anthracene	ND	0.20								
Diethyl phthalate	ND	0.20								
Dimethyl phthalate	ND	0.20								
Di-n-butyl phthalate	ND	0.20								
Fluoranthene	ND	0.20								
Fluorene	ND	0.20								
Indene	ND	0.20								
Indeno(1,2,3-cd)pyrene	ND	0.20								
Naphthalene	ND	0.20								
Phenanthrene	ND	0.20								
Phenol	ND	0.20								
Pyrene	ND	0.20								
Pyridine	ND	1.0								
Quinoline	ND	0.20								
Surr: 2,4,6-Tribromophenol	3.612	0.20	*5*	0	*72.2*	*34-129*	0			
Surr: 2-Fluorobiphenyl	4.283	0.20	*5*	0	*85.7*	*40-125*	0			
Surr: 2-Fluorophenol	4.166	0.20	*5*	0	*83.3*	*20-120*	0			
Surr: 4-Terphenyl-d14	4.825	0.20	*5*	0	*96.5*	*40-135*	0			
Surr: Nitrobenzene-d5	4.479	0.20	*5*	0	*89.6*	*41-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **66868** Instrument ID **SV-6** Method: **SW8270**

Surr: Phenol-d6	4.384	0.20	*5*	0	*87.7*	*20-120*	0

LCS Sample ID: **SLCSW1-121231-66868** Units: **µg/L** Analysis Date: **1/2/2013 05:00 PM**

Client ID: Run ID: **SV-6_130102A** SeqNo: **3074734** Prep Date: **12/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	4.275	0.20	5	0	85.5	45-120	0			
1,3-Dichlorobenzene	4.303	0.20	5	0	86.1	45-120	0			
1,4-Dichlorobenzene	4.234	0.20	5	0	84.7	40-120	0			
1-Methylnaphthalene	4.299	0.20	5	0	86	45-120	0			
2,4-Dimethylphenol	3.851	0.20	5	0	77	35-120	0			
2,4-Dinitrophenol	2.723	1.0	5	0	54.5	15-120	0			
2-Methylphenol	4.273	0.20	5	0	85.5	45-120	0			
3&4-Methylphenol	4.333	0.20	5	0	86.7	35-120	0			
4-Nitrophenol	4.793	1.0	5	0	95.9	30-130	0			
Acenaphthylene	4.287	0.20	5	0	85.7	47-120	0			
Anthracene	4.443	0.20	5	0	88.9	45-120	0			
Benz(a)anthracene	4.18	0.20	5	0	83.6	40-120	0			
Benzo(a)pyrene	4.108	0.20	5	0	82.2	45-120	0			
Benzo(b)fluoranthene	4.524	0.20	5	0	90.5	50-120	0			
Benzo(k)fluoranthene	3.97	0.20	5	0	79.4	45-127	0			
Bis(2-ethylhexyl)phthalate	4.614	0.20	5	0	92.3	40-139	0			
Chrysene	4.183	0.20	5	0	83.7	43-120	0			
Dibenz(a,h)anthracene	4.224	0.20	5	0	84.5	45-125	0			
Diethyl phthalate	4.28	0.20	5	0	85.6	41-120	0			
Dimethyl phthalate	4.169	0.20	5	0	83.4	40-122	0			
Di-n-butyl phthalate	4.64	0.20	5	0	92.8	45-123	0			
Fluoranthene	4.368	0.20	5	0	87.4	45-125	0			
Fluorene	4.186	0.20	5	0	83.7	49-120	0			
Indeno(1,2,3-cd)pyrene	4.087	0.20	5	0	81.7	41-128	0			
Naphthalene	4.231	0.20	5	0	84.6	45-120	0			
Phenanthrene	4.422	0.20	5	0	88.4	45-121	0			
Phenol	4.384	0.20	5	0	87.7	20-124	0			
Pyrene	4.183	0.20	5	0	83.7	40-130	0			
Pyridine	4.06	1.0	5	0	81.2	15-120	0			
Quinoline	4.335	0.20	5	0	86.7	45-120	0			
Surr: 2,4,6-Tribromophenol	3.896	0.20	*5*	0	*77.9*	*34-129*	0			
Surr: 2-Fluorobiphenyl	4.285	0.20	*5*	0	*85.7*	*40-125*	0			
Surr: 2-Fluorophenol	4.247	0.20	*5*	0	*84.9*	*20-120*	0			
Surr: 4-Terphenyl-d14	4.729	0.20	*5*	0	*94.6*	*40-135*	0			
Surr: Nitrobenzene-d5	4.437	0.20	*5*	0	*88.7*	*41-120*	0			
Surr: Phenol-d6	4.407	0.20	*5*	0	*88.1*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212899
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66868** Instrument ID **SV-6** Method: **SW8270**

LCS Sample ID: **SLCSW2-121231-66868** Units: **µg/L** Analysis Date: **1/2/2013 05:39 PM**
Client ID: Run ID: **SV-6_130102A** SeqNo: **3074736** Prep Date: **12/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzenethiol	1.518	0.20	5	0	30.4	11-110	0			
Surr: 2,4,6-Tribromophenol	3.431	0.20	*5*	0	*68.6*	*34-129*	0			
Surr: 2-Fluorobiphenyl	3.995	0.20	*5*	0	*79.9*	*40-125*	0			
Surr: 2-Fluorophenol	4.123	0.20	*5*	0	*82.5*	*20-120*	0			
Surr: 4-Terphenyl-d14	4.578	0.20	*5*	0	*91.6*	*40-135*	0			
Surr: Nitrobenzene-d5	4.129	0.20	*5*	0	*82.6*	*41-120*	0			
Surr: Phenol-d6	4.144	0.20	*5*	0	*82.9*	*20-120*	0			

LCS Sample ID: **SLCSW3-121231-66868** Units: **µg/L** Analysis Date: **1/2/2013 06:18 PM**
Client ID: Run ID: **SV-6_130102A** SeqNo: **3074738** Prep Date: **12/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibenz(a,h)acridine	4.612	0.20	5	0	92.2	35-140	0			
Indene	5.433	0.20	5	0	109	40-130	0			
Surr: 2,4,6-Tribromophenol	3.336	0.20	*5*	0	*66.7*	*34-129*	0			
Surr: 2-Fluorobiphenyl	4	0.20	*5*	0	*80*	*40-125*	0			
Surr: 2-Fluorophenol	4.158	0.20	*5*	0	*83.2*	*20-120*	0			
Surr: 4-Terphenyl-d14	4.635	0.20	*5*	0	*92.7*	*40-135*	0			
Surr: Nitrobenzene-d5	4.205	0.20	*5*	0	*84.1*	*41-120*	0			
Surr: Phenol-d6	4.172	0.20	*5*	0	*83.4*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212899
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66868** Instrument ID **SV-6** Method: **SW8270**

LCSD Sample ID: **SLCSDW1-121231-66868** Units: **µg/L** Analysis Date: **1/2/2013 05:20 PM**

Client ID: Run ID: **SV-6_130102A** SeqNo: **3074735** Prep Date: **12/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	4.267	0.20	5	0	85.3	45-120	4.275	0.186	20	
1,3-Dichlorobenzene	4.193	0.20	5	0	83.9	45-120	4.303	2.58	20	
1,4-Dichlorobenzene	4.193	0.20	5	0	83.9	40-120	4.234	0.964	20	
1-Methylnaphthalene	4.28	0.20	5	0	85.6	45-120	4.299	0.439	20	
2,4-Dimethylphenol	3.831	0.20	5	0	76.6	35-120	3.851	0.527	20	
2,4-Dinitrophenol	2.829	1.0	5	0	56.6	15-120	2.723	3.82	50	
2-Methylphenol	4.272	0.20	5	0	85.4	45-120	4.273	0.0163	20	
3&4-Methylphenol	4.246	0.20	5	0	84.9	35-120	4.333	2.03	20	
4-Nitrophenol	4.702	1.0	5	0	94	30-130	4.793	1.91	20	
Acenaphthylene	4.165	0.20	5	0	83.3	47-120	4.287	2.89	20	
Anthracene	4.366	0.20	5	0	87.3	45-120	4.443	1.75	20	
Benz(a)anthracene	4.15	0.20	5	0	83	40-120	4.18	0.729	20	
Benzo(a)pyrene	4.091	0.20	5	0	81.8	45-120	4.108	0.414	20	
Benzo(b)fluoranthene	4.374	0.20	5	0	87.5	50-120	4.524	3.38	20	
Benzo(k)fluoranthene	3.987	0.20	5	0	79.7	45-127	3.97	0.43	20	
Bis(2-ethylhexyl)phthalate	4.634	0.20	5	0	92.7	40-139	4.614	0.427	20	
Chrysene	4.136	0.20	5	0	82.7	43-120	4.183	1.13	20	
Dibenz(a,h)anthracene	4.19	0.20	5	0	83.8	45-125	4.224	0.807	20	
Diethyl phthalate	4.186	0.20	5	0	83.7	41-120	4.28	2.22	20	
Dimethyl phthalate	4.066	0.20	5	0	81.3	40-122	4.169	2.5	20	
Di-n-butyl phthalate	4.557	0.20	5	0	91.1	45-123	4.64	1.82	20	
Fluoranthene	4.333	0.20	5	0	86.7	45-125	4.368	0.798	20	
Fluorene	4.127	0.20	5	0	82.5	49-120	4.186	1.44	20	
Indeno(1,2,3-cd)pyrene	4.187	0.20	5	0	83.7	41-128	4.087	2.4	20	
Naphthalene	4.208	0.20	5	0	84.2	45-120	4.231	0.552	20	
Phenanthrene	4.363	0.20	5	0	87.3	45-121	4.422	1.33	20	
Phenol	4.312	0.20	5	0	86.2	20-124	4.384	1.64	20	
Pyrene	4.136	0.20	5	0	82.7	40-130	4.183	1.12	20	
Pyridine	4.035	1.0	5	0	80.7	15-120	4.06	0.63	20	
Quinoline	4.346	0.20	5	0	86.9	45-120	4.335	0.266	20	
Surr: 2,4,6-Tribromophenol	3.756	0.20	*5*	0	*75.1*	*34-129*	3.896	*3.66*	*0*	
Surr: 2-Fluorobiphenyl	4.04	0.20	*5*	0	*80.8*	*40-125*	4.285	*5.89*	*0*	
Surr: 2-Fluorophenol	4.13	0.20	*5*	0	*82.6*	*20-120*	4.247	*2.79*	*0*	
Surr: 4-Terphenyl-d14	4.499	0.20	*5*	0	*90*	*40-135*	4.729	*4.98*	*0*	
Surr: Nitrobenzene-d5	4.2	0.20	*5*	0	*84*	*41-120*	4.437	*5.48*	*0*	
Surr: Phenol-d6	4.256	0.20	*5*	0	*85.1*	*20-120*	4.407	*3.49*	*0*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212899
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66868** Instrument ID **SV-6** Method: **SW8270**

LCSD Sample ID: **SLCSDW2-121231-66868** Units: **µg/L** Analysis Date: **1/2/2013 05:59 PM**
Client ID: Run ID: **SV-6_130102A** SeqNo: **3074737** Prep Date: **12/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzenethiol	1.457	0.20	5	0	29.1	11-110	1.518	4.1	30	
Surr: 2,4,6-Tribromophenol	3.33	0.20	*5*	0	*66.6*	*34-129*	3.431	*2.99*	*0*	
Surr: 2-Fluorobiphenyl	3.964	0.20	*5*	0	*79.3*	*40-125*	3.995	*0.788*	*0*	
Surr: 2-Fluorophenol	4.09	0.20	*5*	0	*81.8*	*20-120*	4.123	*0.796*	*0*	
Surr: 4-Terphenyl-d14	4.536	0.20	*5*	0	*90.7*	*40-135*	4.578	*0.919*	*0*	
Surr: Nitrobenzene-d5	4.173	0.20	*5*	0	*83.5*	*41-120*	4.129	*1.08*	*0*	
Surr: Phenol-d6	3.983	0.20	*5*	0	*79.7*	*20-120*	4.144	*3.97*	*0*	

LCSD Sample ID: **SLCSDW3-121231-66868** Units: **µg/L** Analysis Date: **1/2/2013 06:38 PM**
Client ID: Run ID: **SV-6_130102A** SeqNo: **3074739** Prep Date: **12/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibenz(a,h)acridine	4.52	0.20	5	0	90.4	35-140	4.612	2.01	20	
Indene	5.435	0.20	5	0	109	40-130	5.433	0.0398	20	
Surr: 2,4,6-Tribromophenol	2.999	0.20	*5*	0	*60*	*34-129*	3.336	*10.6*	*0*	
Surr: 2-Fluorobiphenyl	3.992	0.20	*5*	0	*79.8*	*40-125*	4	*0.204*	*0*	
Surr: 2-Fluorophenol	3.812	0.20	*5*	0	*76.2*	*20-120*	4.158	*8.69*	*0*	
Surr: 4-Terphenyl-d14	4.355	0.20	*5*	0	*87.1*	*40-135*	4.635	*6.21*	*0*	
Surr: Nitrobenzene-d5	4.122	0.20	*5*	0	*82.4*	*41-120*	4.205	*1.98*	*0*	
Surr: Phenol-d6	3.902	0.20	*5*	0	*78*	*20-120*	4.172	*6.69*	*0*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212899
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66868** Instrument ID **SV-6** Method: **SW8270**

MS Sample ID: **1212907-03DMS** Units: **µg/L** Analysis Date: **1/2/2013 08:16 PM**

Client ID: Run ID: **SV-6_130102A** SeqNo: **3074742** Prep Date: **12/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	3.283	0.20	5	0	65.7	45-120	0			
1,3-Dichlorobenzene	3.255	0.20	5	0	65.1	45-120	0			
1,4-Dichlorobenzene	3.296	0.20	5	0	65.9	40-120	0			
1-Methylnaphthalene	3.273	0.20	5	0	65.5	45-120	0			
2,4-Dimethylphenol	3.116	0.20	5	0	62.3	35-120	0			
2,4-Dinitrophenol	2.462	1.0	5	0	49.2	15-120	0			
2-Methylphenol	3.28	0.20	5	0	65.6	45-120	0			
3&4-Methylphenol	3.144	0.20	5	0	62.9	35-120	0			
4-Nitrophenol	4.108	1.0	5	0	82.2	30-130	0			
Acenaphthylene	3.187	0.20	5	0	63.7	47-120	0			
Anthracene	3.791	0.20	5	0	75.8	45-120	0			
Benz(a)anthracene	3.708	0.20	5	0	74.2	40-120	0			
Benzenethiol	0.3766	0.20	5	0	7.53	11-110	0			S
Benzo(a)pyrene	3.688	0.20	5	0	73.8	45-120	0			
Benzo(b)fluoranthene	4.023	0.20	5	0	80.5	50-120	0			
Benzo(k)fluoranthene	3.583	0.20	5	0	71.7	45-127	0			
Bis(2-ethylhexyl)phthalate	4.239	0.20	5	0.1823	81.1	40-139	0			
Chrysene	3.709	0.20	5	0	74.2	43-120	0			
Dibenz(a,h)acridine	3.905	0.20	5	0	78.1	35-140	0			
Dibenz(a,h)anthracene	3.56	0.20	5	0	71.2	45-125	0			
Diethyl phthalate	3.48	0.20	5	0	69.6	41-120	0			
Dimethyl phthalate	3.272	0.20	5	0	65.4	40-122	0			
Di-n-butyl phthalate	4.164	0.20	5	0	83.3	45-123	0			
Fluoranthene	3.917	0.20	5	0	78.3	45-125	0			
Fluorene	3.221	0.20	5	0	64.4	49-120	0			
Indene	3.971	0.20	5	0	79.4	40-130	0			
Indeno(1,2,3-cd)pyrene	3.794	0.20	5	0	75.9	41-128	0			
Naphthalene	3.252	0.20	5	0	65	45-120	0			
Phenanthrene	3.778	0.20	5	0	75.6	45-121	0			
Phenol	3.092	0.20	5	0	61.8	20-124	0			
Pyrene	3.688	0.20	5	0	73.8	40-130	0			
Pyridine	3.061	1.0	5	0	61.2	15-120	0			
Quinoline	3.332	0.20	5	0	66.6	45-120	0			
Surr: 2,4,6-Tribromophenol	3.304	0.20	*5*	0	*66.1*	*34-129*	0			
Surr: 2-Fluorobiphenyl	3.302	0.20	*5*	0	*66*	*40-125*	0			
Surr: 2-Fluorophenol	3.146	0.20	*5*	0	*62.9*	*20-120*	0			
Surr: 4-Terphenyl-d14	4.167	0.20	*5*	0	*83.3*	*40-135*	0			
Surr: Nitrobenzene-d5	3.089	0.20	*5*	0	*61.8*	*41-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **66868** Instrument ID **SV-6** Method: **SW8270**

Surr: Phenol-d6	3.122	0.20	*5*	0	*62.4*	*20-120*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212899
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66868** Instrument ID **SV-6** Method: **SW8270**

MSD Sample ID: **1212907-03DMSD** Units: **µg/L** Analysis Date: **1/2/2013 08:35 PM**

Client ID: Run ID: **SV-6_130102A** SeqNo: **3074744** Prep Date: **12/31/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichlorobenzene	3.008	0.20	5	0	60.2	45-120	3.283	8.73	20	
1,3-Dichlorobenzene	2.98	0.20	5	0	59.6	45-120	3.255	8.8	20	
1,4-Dichlorobenzene	2.996	0.20	5	0	59.9	40-120	3.296	9.51	20	
1-Methylnaphthalene	2.979	0.20	5	0	59.6	45-120	3.273	9.43	20	
2,4-Dimethylphenol	2.87	0.20	5	0	57.4	35-120	3.116	8.21	20	
2,4-Dinitrophenol	2.602	1.0	5	0	52	15-120	2.462	5.52	50	
2-Methylphenol	3.012	0.20	5	0	60.2	45-120	3.28	8.52	20	
3&4-Methylphenol	2.882	0.20	5	0	57.6	35-120	3.144	8.68	20	
4-Nitrophenol	4.337	1.0	5	0	86.7	30-130	4.108	5.43	20	
Acenaphthylene	3.045	0.20	5	0	60.9	47-120	3.187	4.55	20	
Anthracene	3.652	0.20	5	0	73	45-120	3.791	3.72	20	
Benz(a)anthracene	3.782	0.20	5	0	75.6	40-120	3.708	1.97	20	
Benzenethiol	0.9463	0.20	5	0	18.9	11-110	0.3766	86.1	30	R
Benzo(a)pyrene	3.849	0.20	5	0	77	45-120	3.688	4.26	20	
Benzo(b)fluoranthene	4.414	0.20	5	0	88.3	50-120	4.023	9.27	20	
Benzo(k)fluoranthene	3.566	0.20	5	0	71.3	45-127	3.583	0.492	20	
Bis(2-ethylhexyl)phthalate	4.473	0.20	5	0.1823	85.8	40-139	4.239	5.38	20	
Chrysene	3.873	0.20	5	0	77.5	43-120	3.709	4.33	20	
Dibenz(a,h)acridine	4.284	0.20	5	0	85.7	35-140	3.905	9.25	20	
Dibenz(a,h)anthracene	3.928	0.20	5	0	78.6	45-125	3.56	9.81	20	
Diethyl phthalate	3.391	0.20	5	0	67.8	41-120	3.48	2.6	20	
Dimethyl phthalate	3.116	0.20	5	0	62.3	40-122	3.272	4.89	20	
Di-n-butyl phthalate	4.249	0.20	5	0	85	45-123	4.164	2.01	20	
Fluoranthene	3.992	0.20	5	0	79.8	45-125	3.917	1.9	20	
Fluorene	3.108	0.20	5	0	62.2	49-120	3.221	3.56	20	
Indene	3.821	0.20	5	0	76.4	40-130	3.971	3.85	20	
Indeno(1,2,3-cd)pyrene	3.855	0.20	5	0	77.1	41-128	3.794	1.6	20	
Naphthalene	2.976	0.20	5	0	59.5	45-120	3.252	8.86	20	
Phenanthrene	3.648	0.20	5	0	73	45-121	3.778	3.53	20	
Phenol	2.83	0.20	5	0	56.6	20-124	3.092	8.84	20	
Pyrene	3.838	0.20	5	0	76.8	40-130	3.688	3.99	20	
Pyridine	2.753	1.0	5	0	55.1	15-120	3.061	10.6	20	
Quinoline	3.064	0.20	5	0	61.3	45-120	3.332	8.37	20	
Surr: 2,4,6-Tribromophenol	3.358	0.20	*5*	0	*67.2*	*34-129*	3.304	*1.62*	*0*	
Surr: 2-Fluorobiphenyl	3.057	0.20	*5*	0	*61.1*	*40-125*	3.302	*7.72*	*0*	
Surr: 2-Fluorophenol	2.808	0.20	*5*	0	*56.2*	*20-120*	3.146	*11.4*	*0*	
Surr: 4-Terphenyl-d14	4.416	0.20	*5*	0	*88.3*	*40-135*	4.167	*5.79*	*0*	
Surr: Nitrobenzene-d5	2.936	0.20	*5*	0	*58.7*	*41-120*	3.089	*5.1*	*0*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212899
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **66868**	Instrument ID **SV-6**		Method: **SW8270**						
Surr: Phenol-d6	2.906	0.20	*5*	0	*58.1*	*20-120*	3.122	*7.19*	*0*

The following samples were analyzed in this batch: 1212899-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212899
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R140725** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-010213-R140725** Units: **µg/L** Analysis Date: **1/2/2013 11:15 AM**

Client ID: Run ID: **VOA1_130102A** SeqNo: **3073509** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dioxane	ND	100								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon disulfide	ND	10								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Ethylbenzene	ND	5.0								
Methyl tert-butyl ether	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
Trichloroethene	ND	5.0								
Xylenes, Total	ND	15								
Surr: 1,2-Dichloroethane-d4	45.83	5.0	*50*	0	*91.7*	*70-125*	0			
Surr: 4-Bromofluorobenzene	48.99	5.0	*50*	0	*98*	*72-125*	0			
Surr: Dibromofluoromethane	47.02	5.0	*50*	0	*94*	*71-125*	0			
Surr: Toluene-d8	47.19	5.0	*50*	0	*94.4*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212899
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R140725** Instrument ID **VOA1** Method: **SW8260**

LCS Sample ID: **VLCSW-010313-R140725** Units: **µg/L** Analysis Date: **1/2/2013 10:26 AM**
Client ID: Run ID: **VOA1_130102A** SeqNo: **3073508** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.43	5.0	50	0	98.9	80-120	0			
1,1-Dichloroethane	46.21	5.0	50	0	92.4	76-120	0			
1,2-Dibromoethane	47.4	5.0	50	0	94.8	80-120	0			
1,2-Dichloroethane	46.79	5.0	50	0	93.6	78-120	0			
1,4-Dioxane	1154	100	1000	0	115	50-158	0			
2-Butanone	97.71	10	100	0	97.7	58-132	0			
Benzene	45.38	5.0	50	0	90.8	73-121	0			
Carbon disulfide	97.88	10	100	0	97.9	68-141	0			
Chlorobenzene	46.31	5.0	50	0	92.6	80-120	0			
Chloroform	48.28	5.0	50	0	96.6	80-120	0			
Ethylbenzene	46.84	5.0	50	0	93.7	80-120	0			
Methyl tert-butyl ether	51.58	5.0	50	0	103	73-121	0			
Styrene	49.36	5.0	50	0	98.7	80-120	0			
Tetrachloroethene	47.95	5.0	50	0	95.9	79-120	0			
Toluene	48.94	5.0	50	0	97.9	80-120	0			
Trichloroethene	53.21	5.0	50	0	106	80-120	0			
Xylenes, Total	145.5	15	150	0	97	80-120	0			
Surr: 1,2-Dichloroethane-d4	43.09	5.0	*50*	0	*86.2*	*70-125*	0			
Surr: 4-Bromofluorobenzene	47.2	5.0	*50*	0	*94.4*	*72-125*	0			
Surr: Dibromofluoromethane	47.77	5.0	*50*	0	*95.5*	*71-125*	0			
Surr: Toluene-d8	47.93	5.0	*50*	0	*95.9*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212899
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R140725** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **1212791-13AMS** Units: **µg/L** Analysis Date: **1/2/2013 01:44 PM**

Client ID: Run ID: **VOA1_130102A** SeqNo: **3073515** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	46.67	5.0	50	0	93.3	80-120	0			
1,1-Dichloroethane	45.29	5.0	50	0	90.6	76-120	0			
1,2-Dibromoethane	46.74	5.0	50	0	93.5	80-120	0			
1,2-Dichloroethane	49.36	5.0	50	0	98.7	78-120	0			
1,4-Dioxane	1314	100	1000	0	131	50-158	0			
2-Butanone	99.16	10	100	0	99.2	58-132	0			
Benzene	113.1	5.0	50	58.03	110	73-121	0			
Carbon disulfide	89.03	10	100	0	89	68-141	0			
Chlorobenzene	45.4	5.0	50	0	90.8	80-120	0			
Chloroform	47.54	5.0	50	2.847	89.4	80-120	0			
Ethylbenzene	53.42	5.0	50	8.22	90.4	80-120	0			
Methyl tert-butyl ether	52.76	5.0	50	2.765	100	73-121	0			
Styrene	17.79	5.0	50	0	35.6	80-120	0			S
Tetrachloroethene	43.29	5.0	50	0	86.6	79-120	0			
Toluene	46.62	5.0	50	0	93.2	80-120	0			
Trichloroethene	51.13	5.0	50	0	102	80-120	0			
Xylenes, Total	200.4	15	150	56.74	95.8	80-120	0			
Surr: 1,2-Dichloroethane-d4	44.29	5.0	*50*	0	*88.6*	*70-125*	0			
Surr: 4-Bromofluorobenzene	48.5	5.0	*50*	0	*97*	*72-125*	0			
Surr: Dibromofluoromethane	48.24	5.0	*50*	0	*96.5*	*71-125*	0			
Surr: Toluene-d8	46.74	5.0	*50*	0	*93.5*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212899
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R140725** Instrument ID **VOA1** Method: **SW8260**

MSD Sample ID: **1212791-13AMSD** Units: **µg/L** Analysis Date: **1/2/2013 02:08 PM**

Client ID: Run ID: **VOA1_130102A** SeqNo: **3073516** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	45.89	5.0	50	0	91.8	80-120	46.67	1.69	20	
1,1-Dichloroethane	46.03	5.0	50	0	92.1	76-120	45.29	1.64	20	
1,2-Dibromoethane	46.67	5.0	50	0	93.3	80-120	46.74	0.141	20	
1,2-Dichloroethane	48.01	5.0	50	0	96	78-120	49.36	2.79	20	
1,4-Dioxane	1260	100	1000	0	126	50-158	1314	4.22	20	
2-Butanone	96.67	10	100	0	96.7	58-132	99.16	2.55	20	
Benzene	105.2	5.0	50	58.03	94.3	73-121	113.1	7.28	20	
Carbon disulfide	83.08	10	100	0	83.1	68-141	89.03	6.91	20	
Chlorobenzene	47.15	5.0	50	0	94.3	80-120	45.4	3.78	20	
Chloroform	47.66	5.0	50	2.847	89.6	80-120	47.54	0.249	20	
Ethylbenzene	50.99	5.0	50	8.22	85.5	80-120	53.42	4.65	20	
Methyl tert-butyl ether	52.23	5.0	50	2.765	98.9	73-121	52.76	1.02	20	
Styrene	14.98	5.0	50	0	30	80-120	17.79	17.1	20	S
Tetrachloroethene	42.32	5.0	50	0	84.6	79-120	43.29	2.25	20	
Toluene	45.09	5.0	50	0	90.2	80-120	46.62	3.33	20	
Trichloroethene	49.85	5.0	50	0	99.7	80-120	51.13	2.55	20	
Xylenes, Total	178.8	15	150	56.74	81.3	80-120	200.4	11.4	20	
Surr: 1,2-Dichloroethane-d4	45.56	5.0	*50*	0	*91.1*	*70-125*	44.29	*2.84*	*20*	
Surr: 4-Bromofluorobenzene	49.36	5.0	*50*	0	*98.7*	*72-125*	48.5	*1.75*	*20*	
Surr: Dibromofluoromethane	47.41	5.0	*50*	0	*94.8*	*71-125*	48.24	*1.75*	*20*	
Surr: Toluene-d8	46.11	5.0	*50*	0	*92.2*	*75-125*	46.74	*1.35*	*20*	

The following samples were analyzed in this batch: 1212899-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1212899
Project: Lovington Lea Refining Skinner List

QC BATCH REPORT

Batch ID: **R140759** Instrument ID **UV-2450** Method: **M4500CN E&G (Dissolve)**

MBLK Sample ID: **WBLKW1-010313-R140759** Units: **mg/L** Analysis Date: **1/3/2013 01:35 PM**
Client ID: Run ID: **UV-2450_130103E** SeqNo: **3074117** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	ND	0.020								

LCS Sample ID: **WLCSW1-010313-R140759** Units: **mg/L** Analysis Date: **1/3/2013 01:35 PM**
Client ID: Run ID: **UV-2450_130103E** SeqNo: **3074118** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.176	0.020	0.2	0	88	80-120	0			

LCSD Sample ID: **WLCSDW1-010313-R140759** Units: **mg/L** Analysis Date: **1/3/2013 01:35 PM**
Client ID: Run ID: **UV-2450_130103E** SeqNo: **3074126** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.171	0.020	0.2	0	85.5	80-120	0.176	2.88	20	

MS Sample ID: **1212815-01CMS** Units: **mg/L** Analysis Date: **1/3/2013 01:35 PM**
Client ID: Run ID: **UV-2450_130103E** SeqNo: **3074125** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.164	0.020	0.2	0.004	80	80-120	0			

The following samples were analyzed in this batch: 1212899-01D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refining Skinner List
WorkOrder: **1212899**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **28-Dec-12 09:45**

Work Order: **1212899** Received by: **PMG**

Checklist completed by Johnnie B. Allen (eSignature) 28-Dec-12 (Date) Reviewed by: Patricia L. Lynch (eSignature) 31-Dec-12 (Date)

Matrices: 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):	1.0 C/uc	005	
Cooler(s)/Kit(s):	4903		
Date/Time sample(s) sent to storage:	12/28/12 16:20		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

ALS Environmental

Cincinnati, OH +1 513 733 5336
Everett, WA +1 425 356 2600
Fort Collins, CO +1 970 490 1511
Holland, MI +1 616 399 6070

Chain of Custody Form

Page 1 of 1

COC ID: 66161

1212899

NAVAJO REFINING: Navajo Refining Company

Project: Lovington Lea Refining Skinner List

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Lovington Lea Refining SkinnerList	A	VOC (8260) Skinner List
Work Order		Project Number	128809	B	LL SVOC (8270) Skinner List
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Total Metals (6020/7000) Skinner List
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange	D	Total Cyanide (9014)
Address	501 East Main	Address	501 East Main	E	
				F	
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	
Phone	(575) 748-6733	Phone	(575) 748-6733	H	
Fax	(575) 746-5421	Fax	(575) 746-5421	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	1210 Tank	12/27/12	8:30 am	W	-	7	✓	✓	✓	✓							
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Andres Sandoval

Shipment Method:

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

Results Due Date:

Relinquished by: Andres Sandoval	Date: 12/27/12	Time: 8:30	Received by:
Relinquished by:	Date:	Time:	Received by (Laboratory): 12-28-12 0945
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: 10 Day TAT

Cooler ID	Cooler Temp.
4903	

QC Package: (Check One Box Below)

☑ Level II Std QC ☐ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other / EDD

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 Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental 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.

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

4903 -

CUSTODY SEAL

Date: 12-27-12 Time: 1000
Name: [redacted]
Company: NAVAJO - LEA CO. REFINERY

Seal Broken By:
Date: 12-28-12

FedEx Express MPS Label

8989 8549 4341 8989 8549 4341
FedEx Tracking Number for Shipper Form ID No. 0260

MUR42
3A20 304
Samples Only

8989 8549 4341

FedEx Express

1 From Please print and press hard.
Date 12/27/12 Sender's FedEx Account Number [redacted]

Sender's Name CATHY [redacted] TRUETT Phone (575) 396-5821

Company NAVAJO REFINING CO (LEA)

Address 7406 S MAIN ST
Dept/Floor/Suite/Room

City LOVINGTON State NM ZIP 88260

2 Your Internal Billing Reference
First 24 characters will appear on invoice. DEC SAMPLES

3 To
Recipient's Name Phone (281) 5305656

Company ALS LAB
☐ HOLD Weekday Print FedEx location address below. NOT available for FedEx First Overnight.
☐ HOLD Saturday Print FedEx location address below. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Address 10450 STANCLIFFRD. STE 210
We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept/Floor/Suite/Room

Address
Print FedEx location address here if HOLD option is selected.

City HOUSTON State TX ZIP 77099-4338

0408719506

4a Express Package Service * To most locations. Packages up to 150 lbs.
☒ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
☐ FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
☐ FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

4b Express Freight Service ** To most locations. Packages over 150 lbs.
☐ FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
FedEx 1Day Freight Booking No.
☐ FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.
☐ FedEx Envelope* ☐ FedEx Pak* Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak. ☐ FedEx Box ☐ FedEx Tube ☒ Other

6 Special Handling and Delivery Signature Options
☐ SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
☐ No Signature Required — Package may be left without obtaining a signature for delivery.
☐ Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods? One box must be checked.
☒ No
☐ Yes As per attached Shipper's Declaration.
☐ Yes Shipper's Declaration not required.
☐ Dry Ice Dry Ice, 9, UN 1845 _____ x _____ kg
Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.
☐ Cargo Aircraft Only

7 Payment Bill to:
☐ Sender Acct. No. in Section 1 will be billed.
☒ Recipient
☐ Third Party
☐ Credit Card
☐ Cash/Check
Enter FedEx Acct. No. or Credit Card No. below.
FedEx Acct. No. or Credit Card No. 2470-7613-1 Exp. Date

Total Packages 4 Total Weight _____ lbs. Total Declared Value† $ _____ .00

†Your liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

553

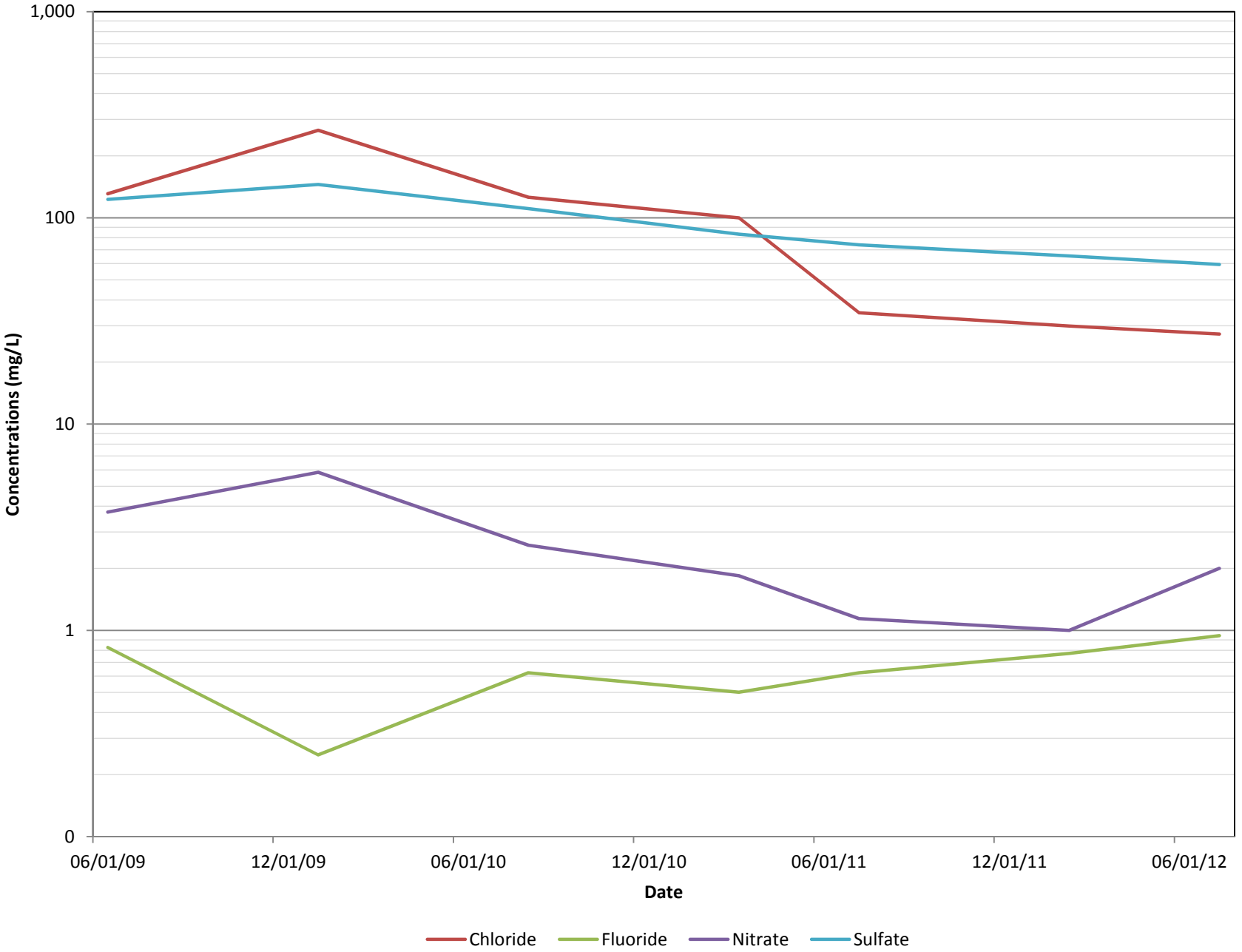
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Store your addresses at fedex.com
Simplify your shipping. Manage your account. Access all the tools you need.

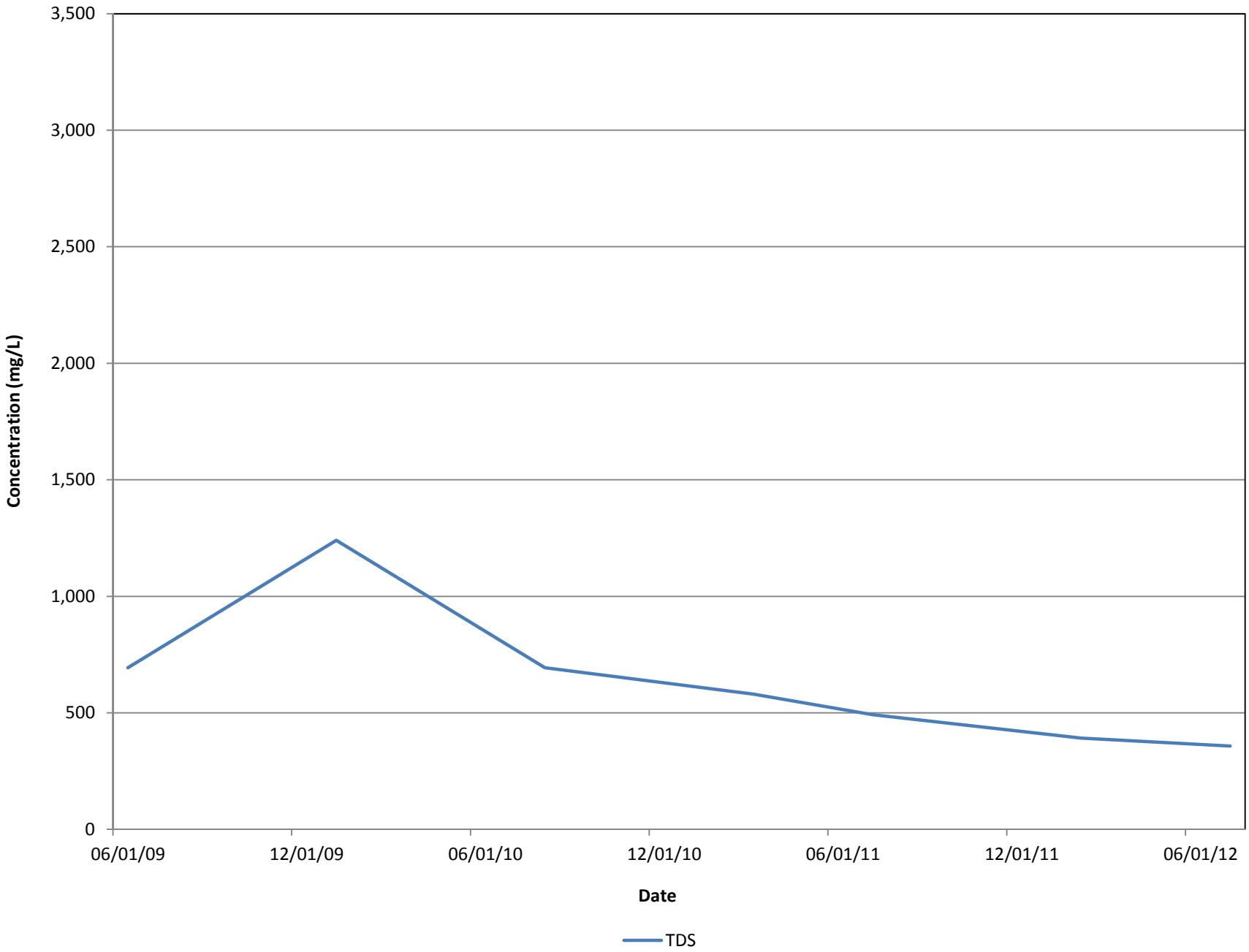
APPENDIX C

PLOTS OF GROUNDWATER CONCENTRATIONS OVER TIME

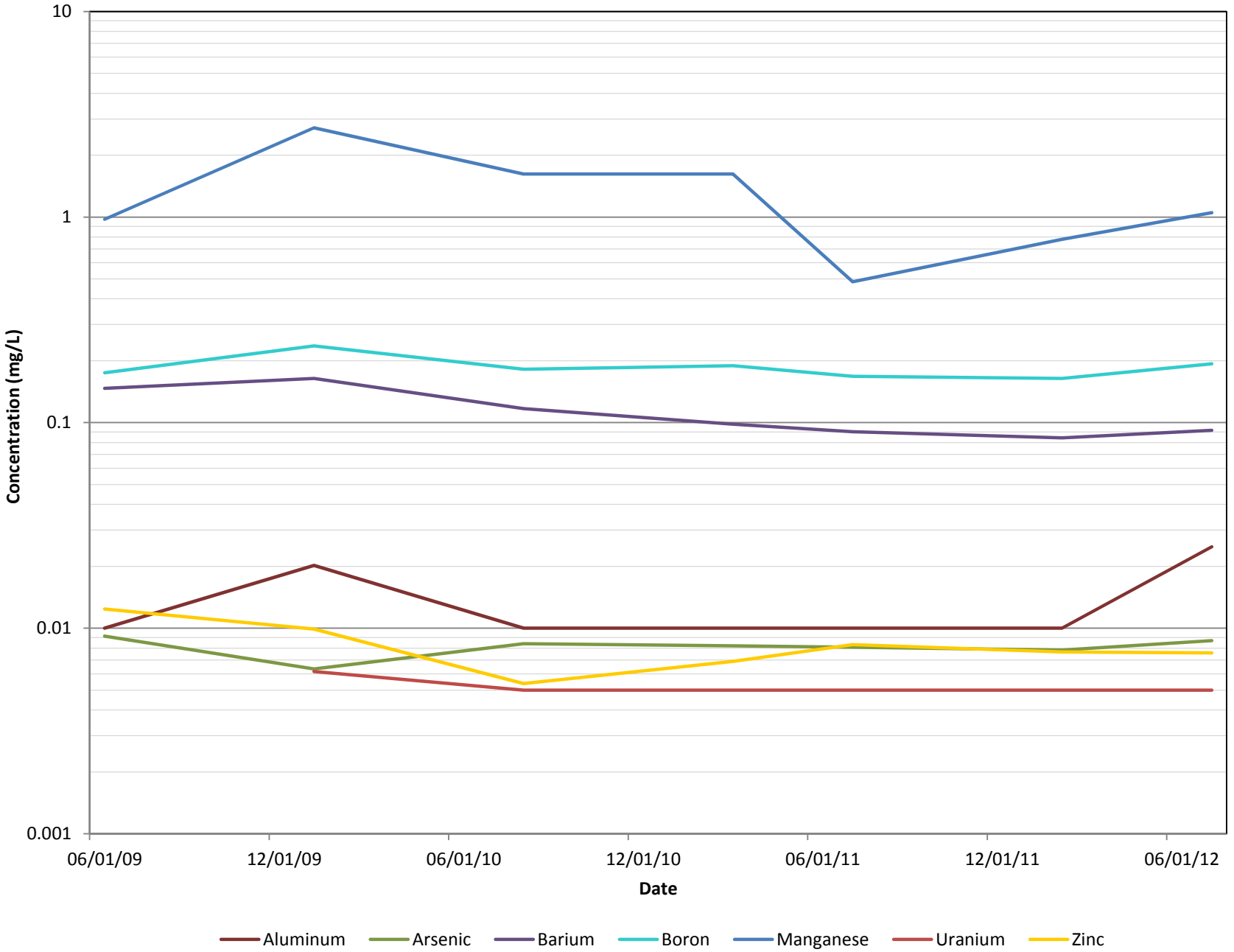
MW-1: ANION CONCENTRATIONS OVER TIME



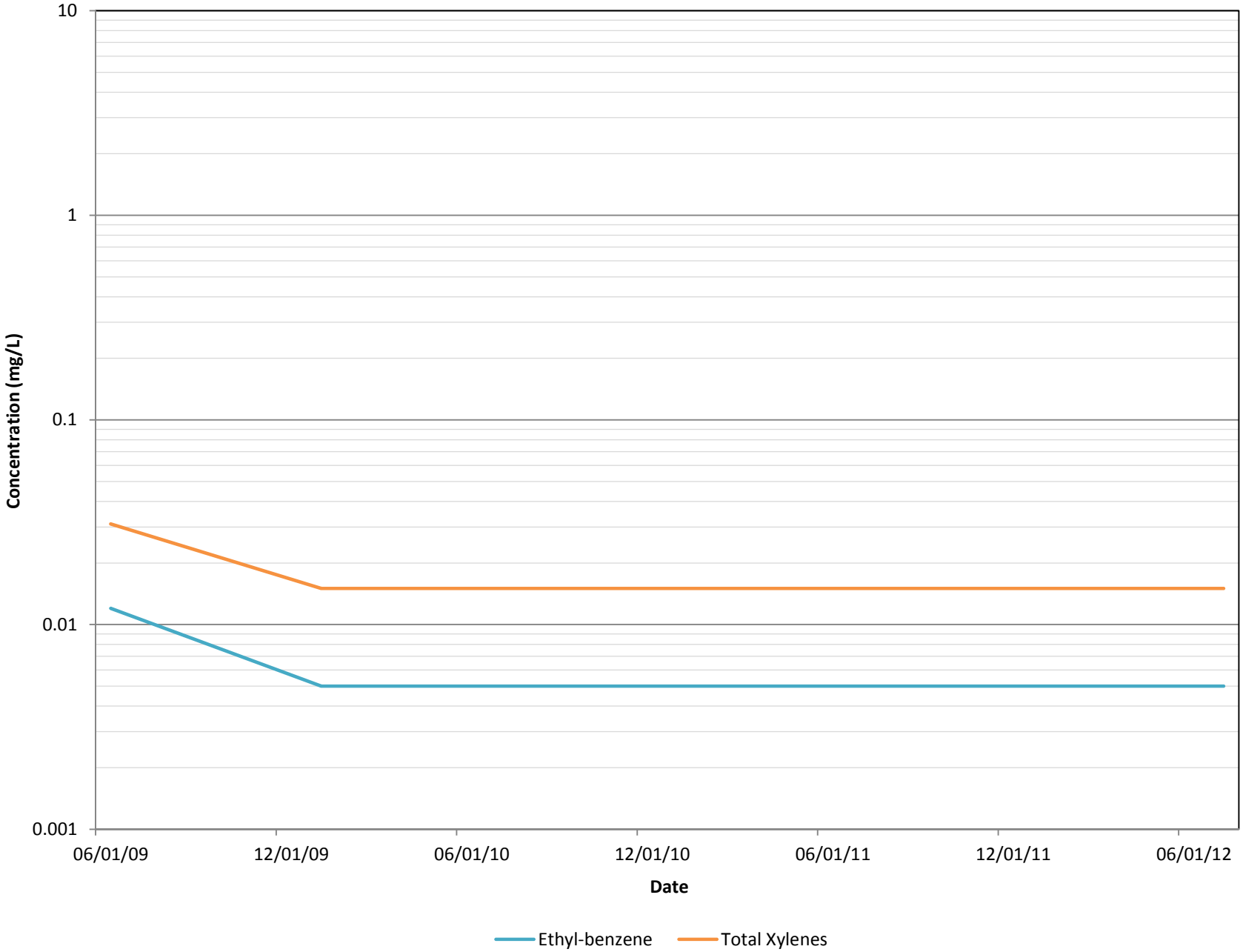
MW-1: TDS CONCENTRATIONS OVER TIME



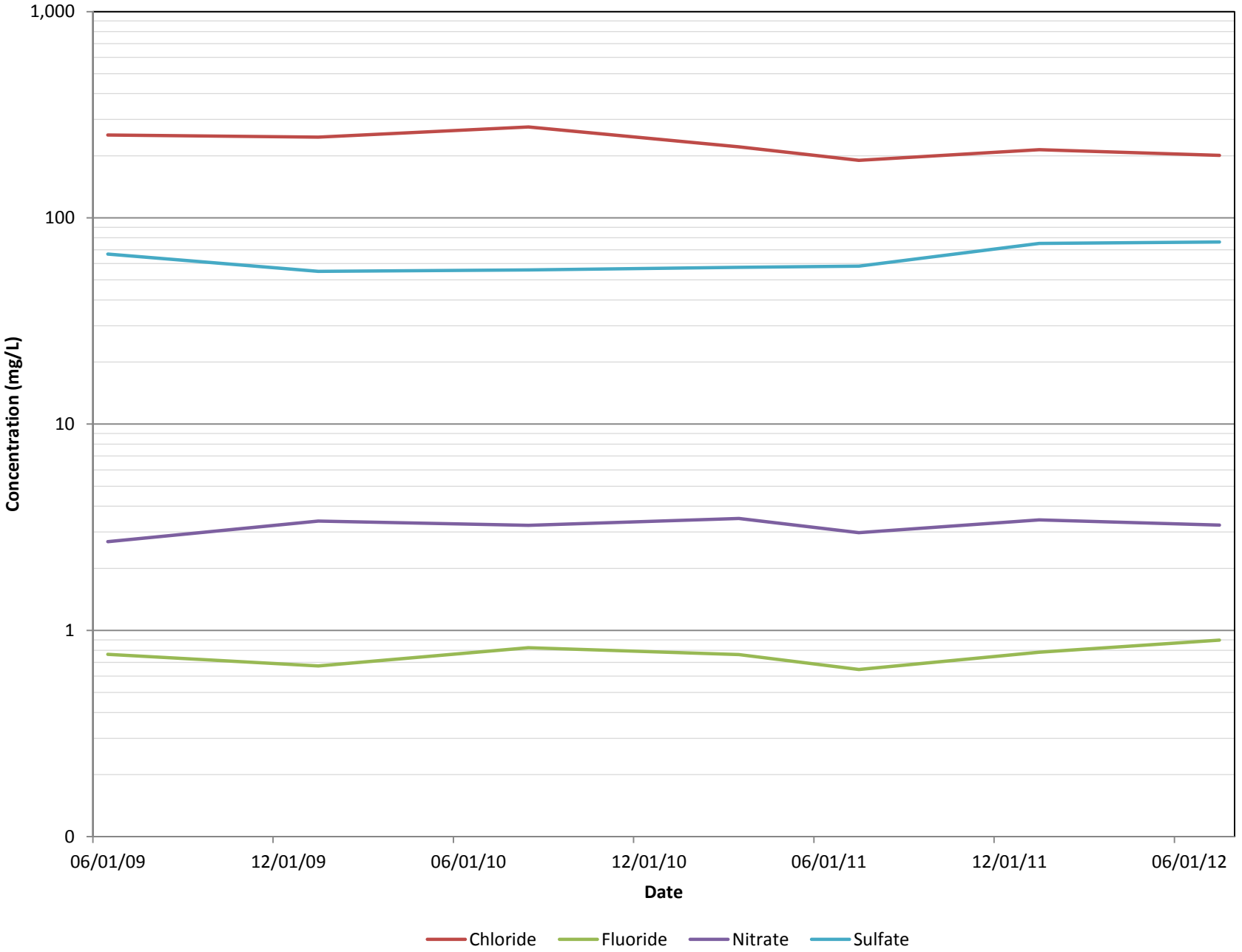
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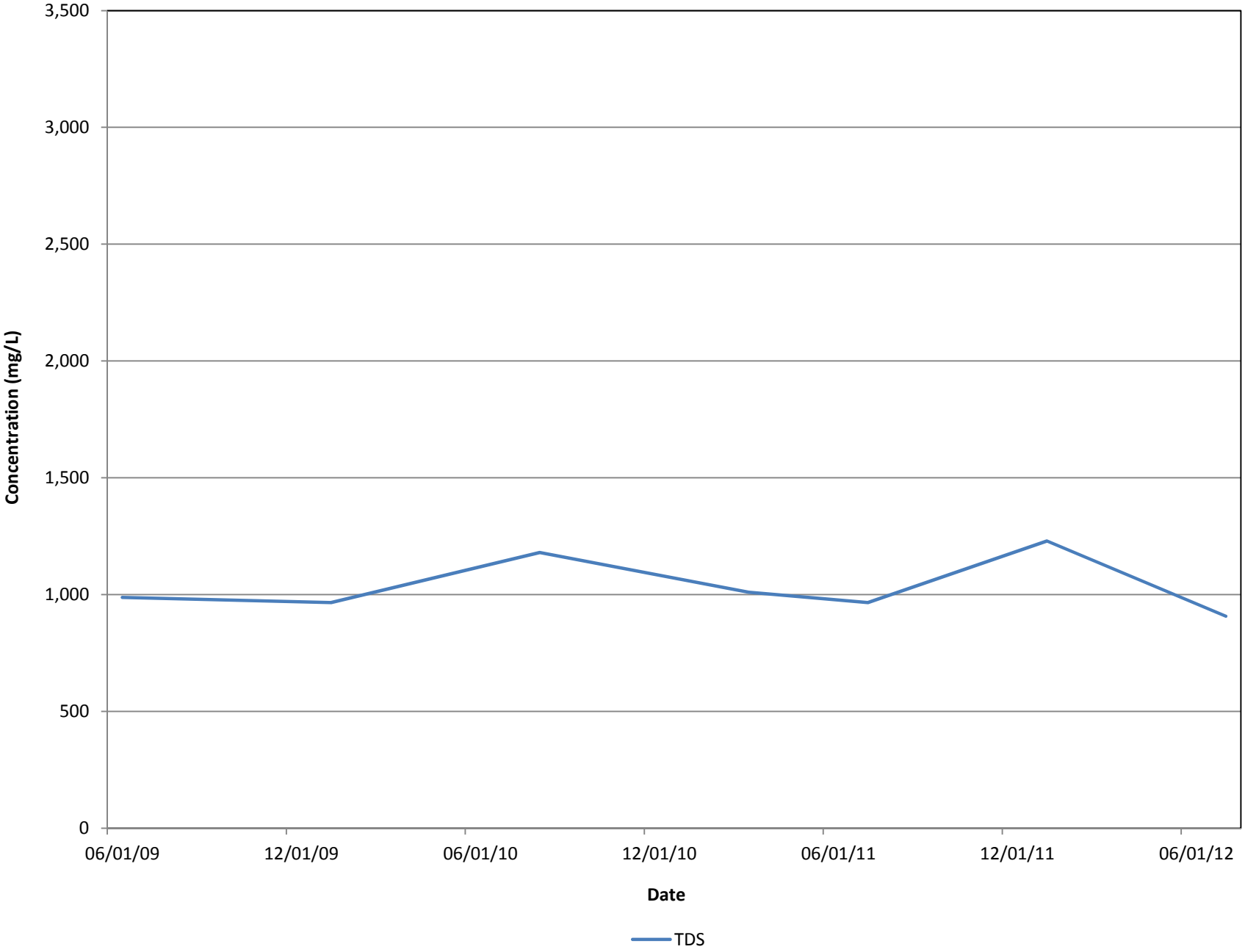
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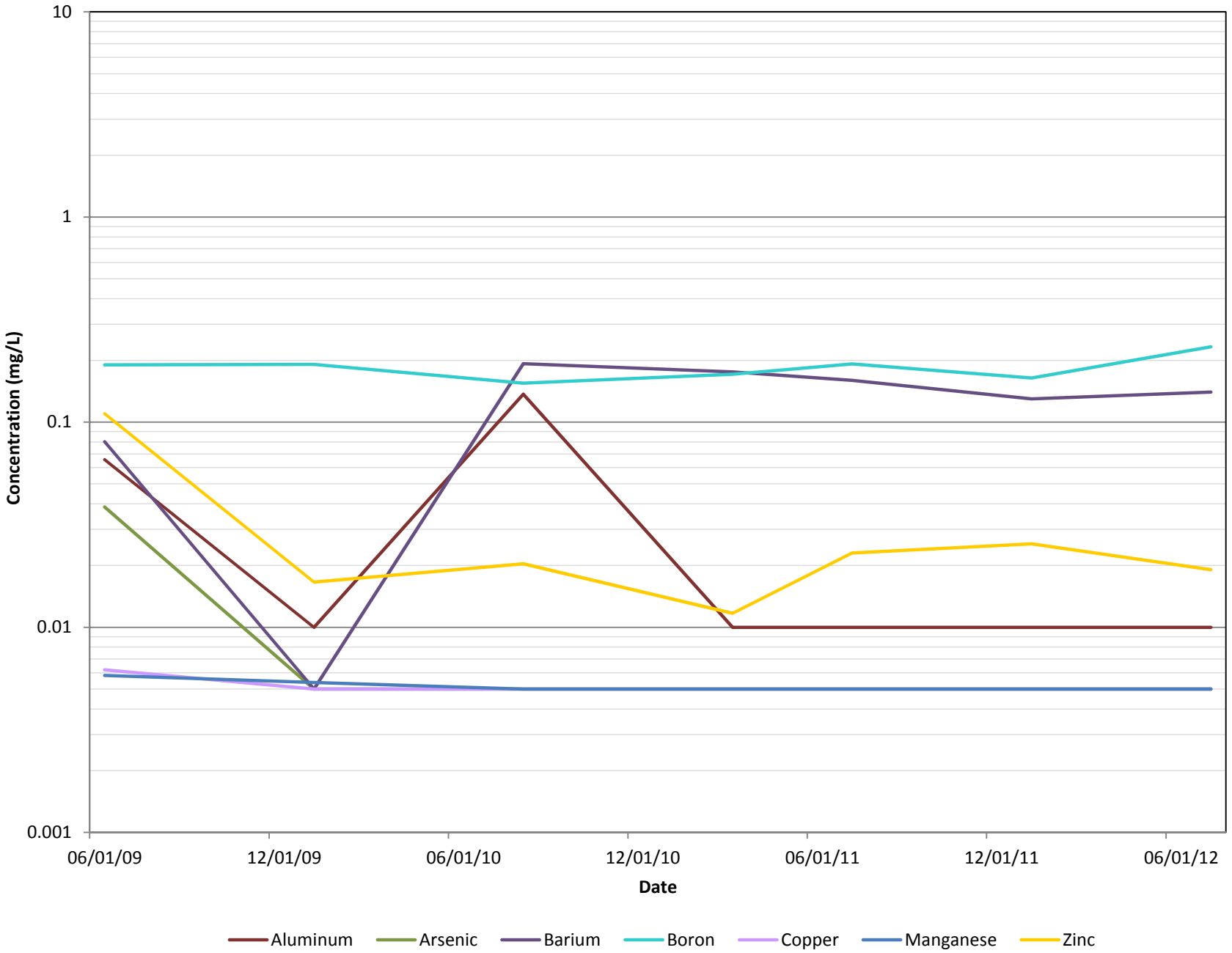
MW-2: ANION CONCENTRATIONS OVER TIME



MW-2: TDS CONCENTRATIONS OVER TIME



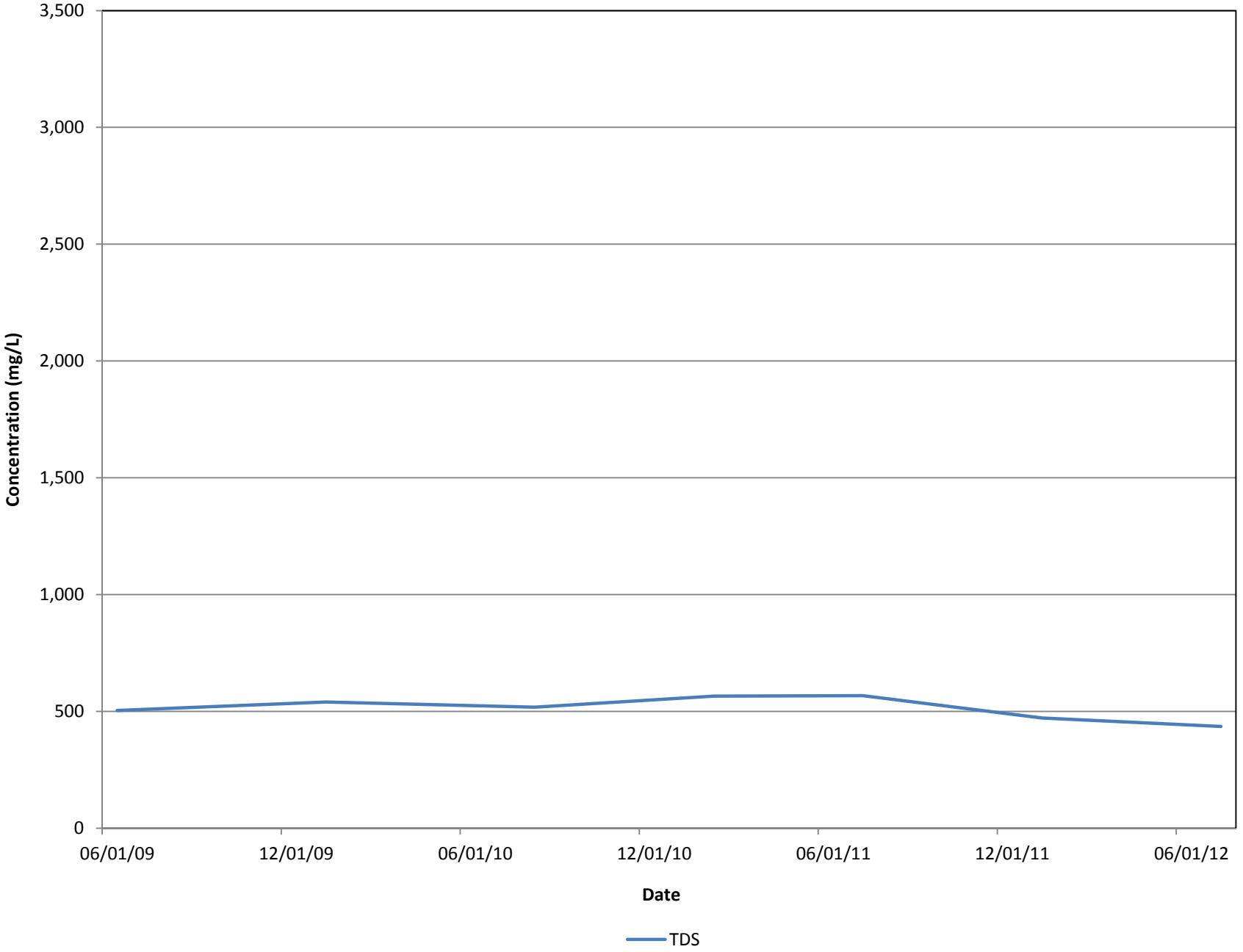
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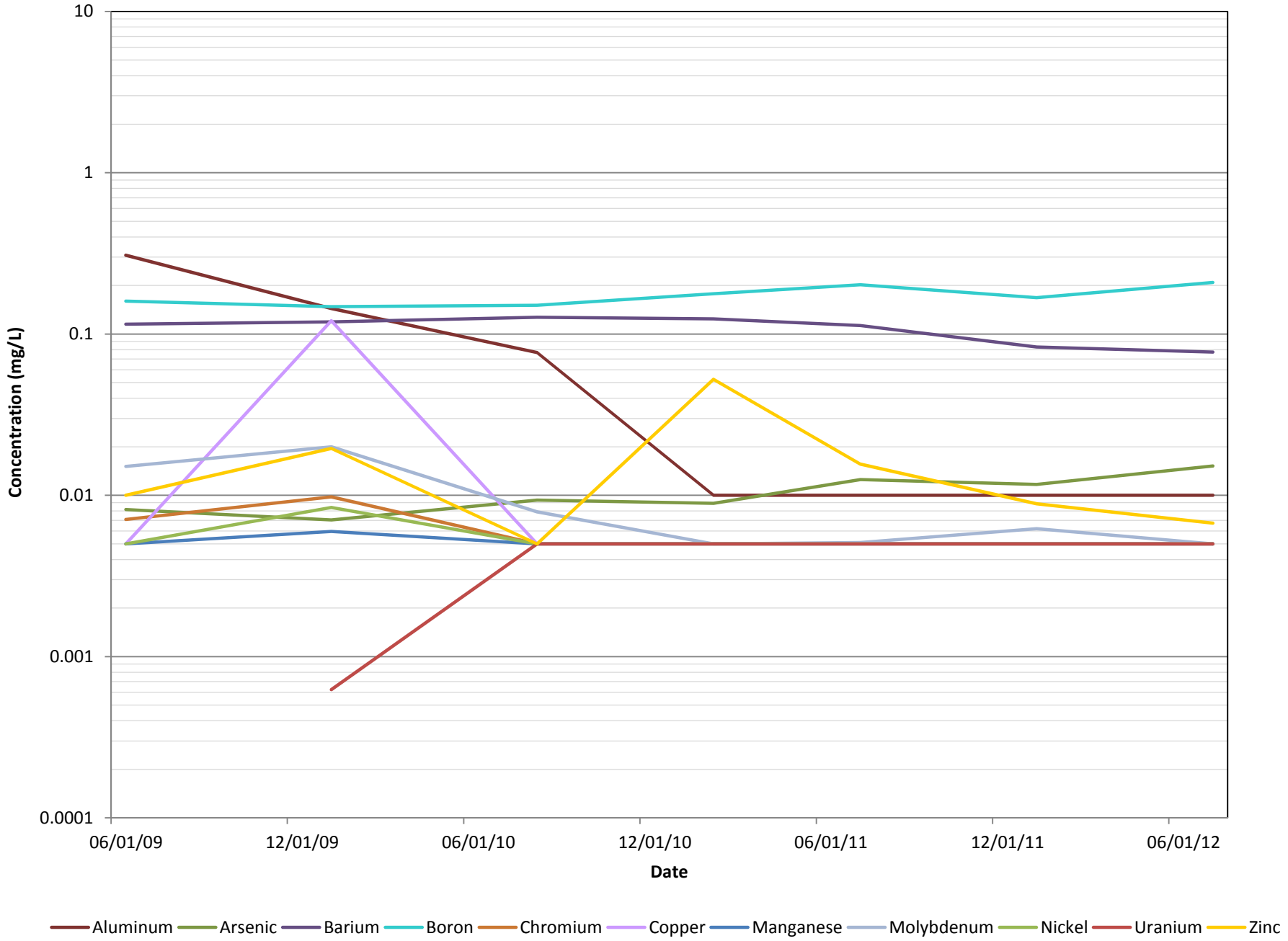
MW-3: ANION CONCENTRATIONS OVER TIME



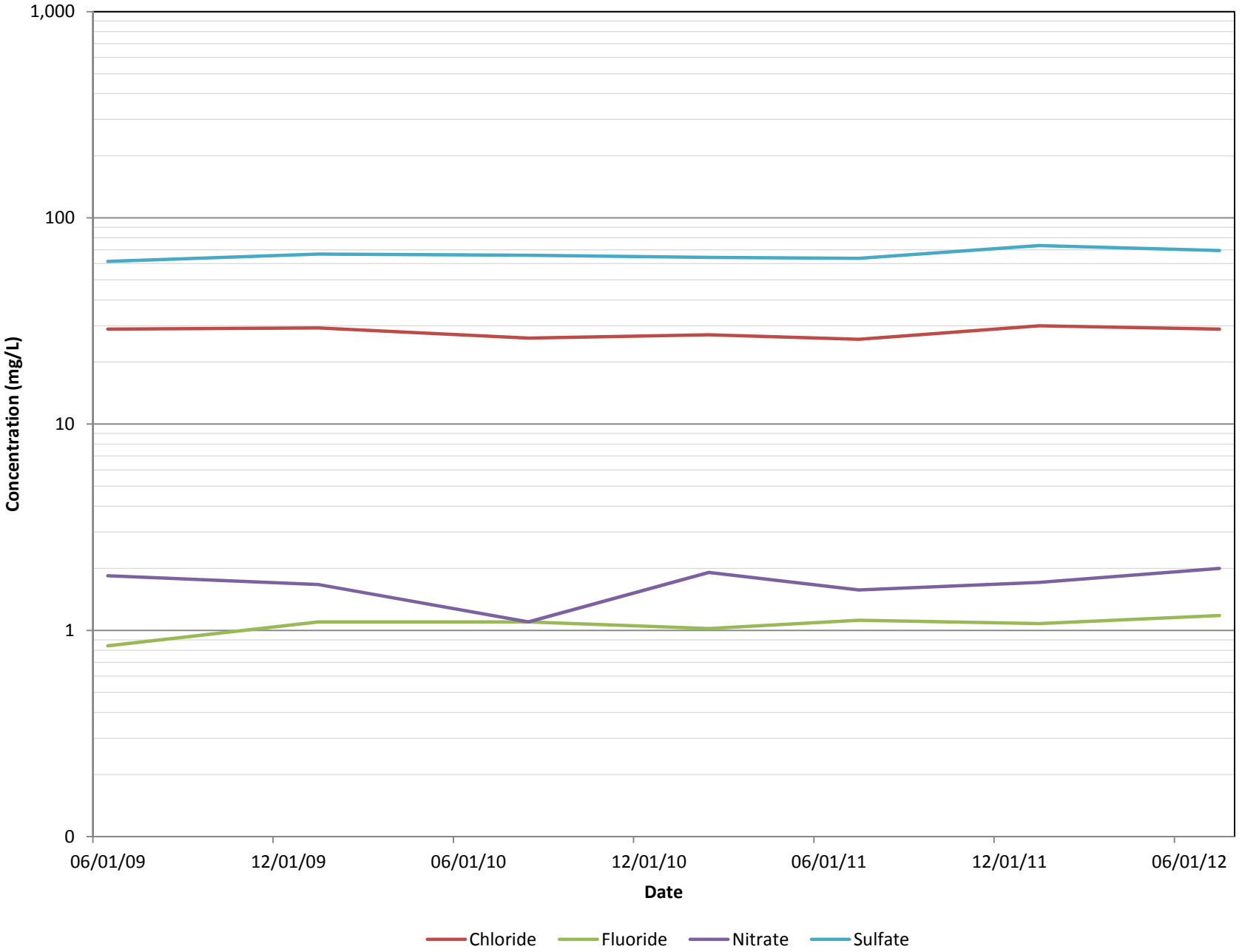
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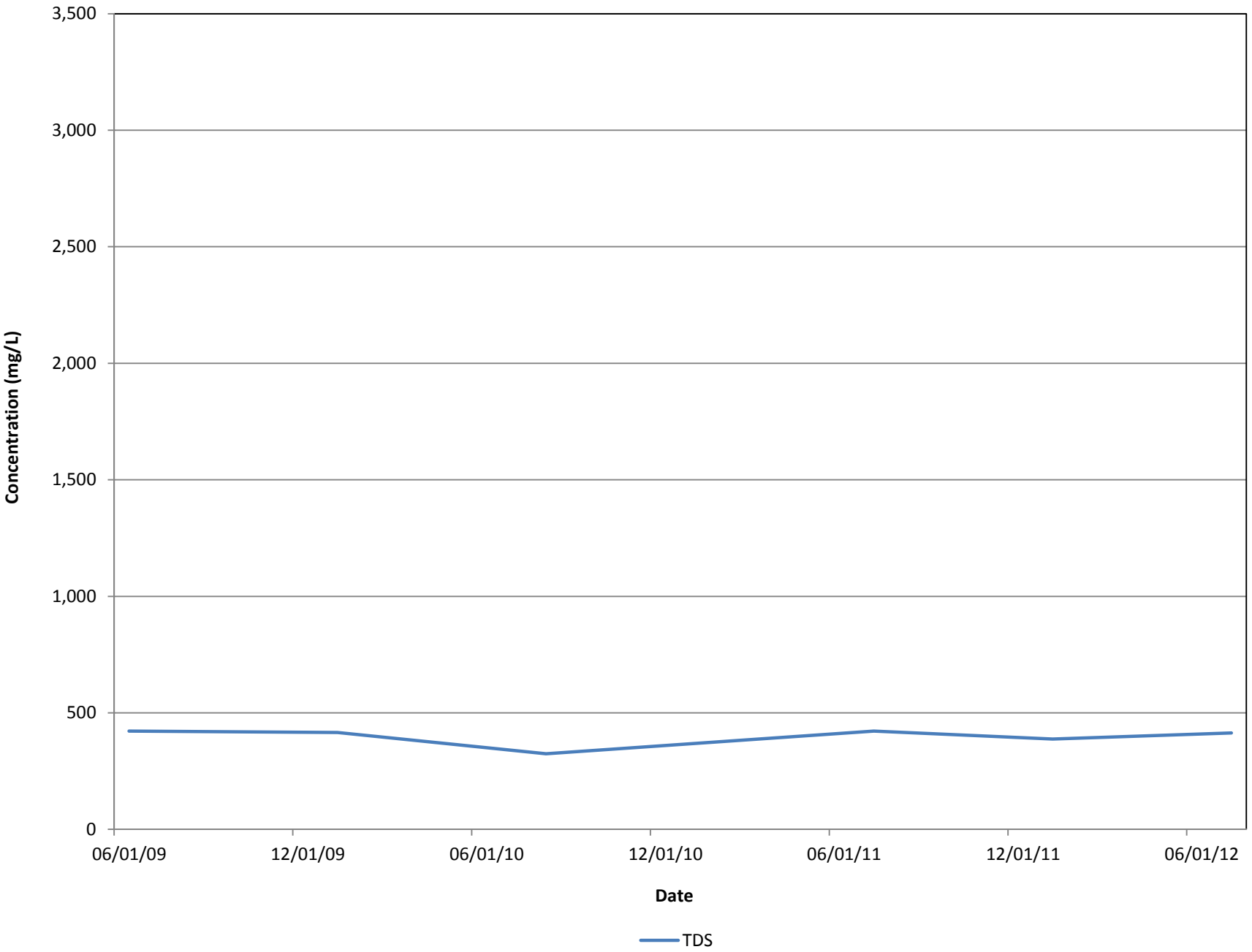
MW-3: METAL CONCENTRATIONS OVER TIME



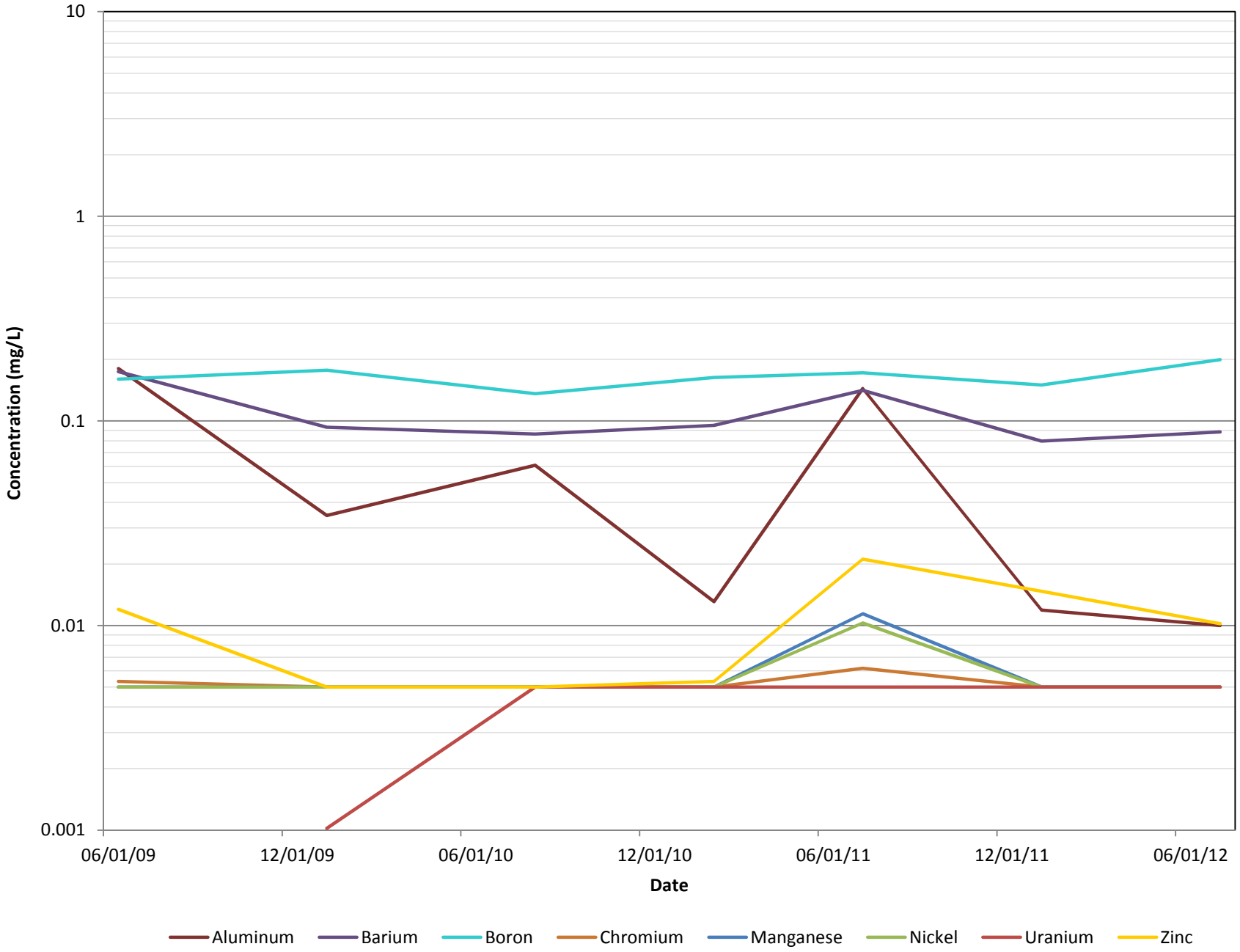
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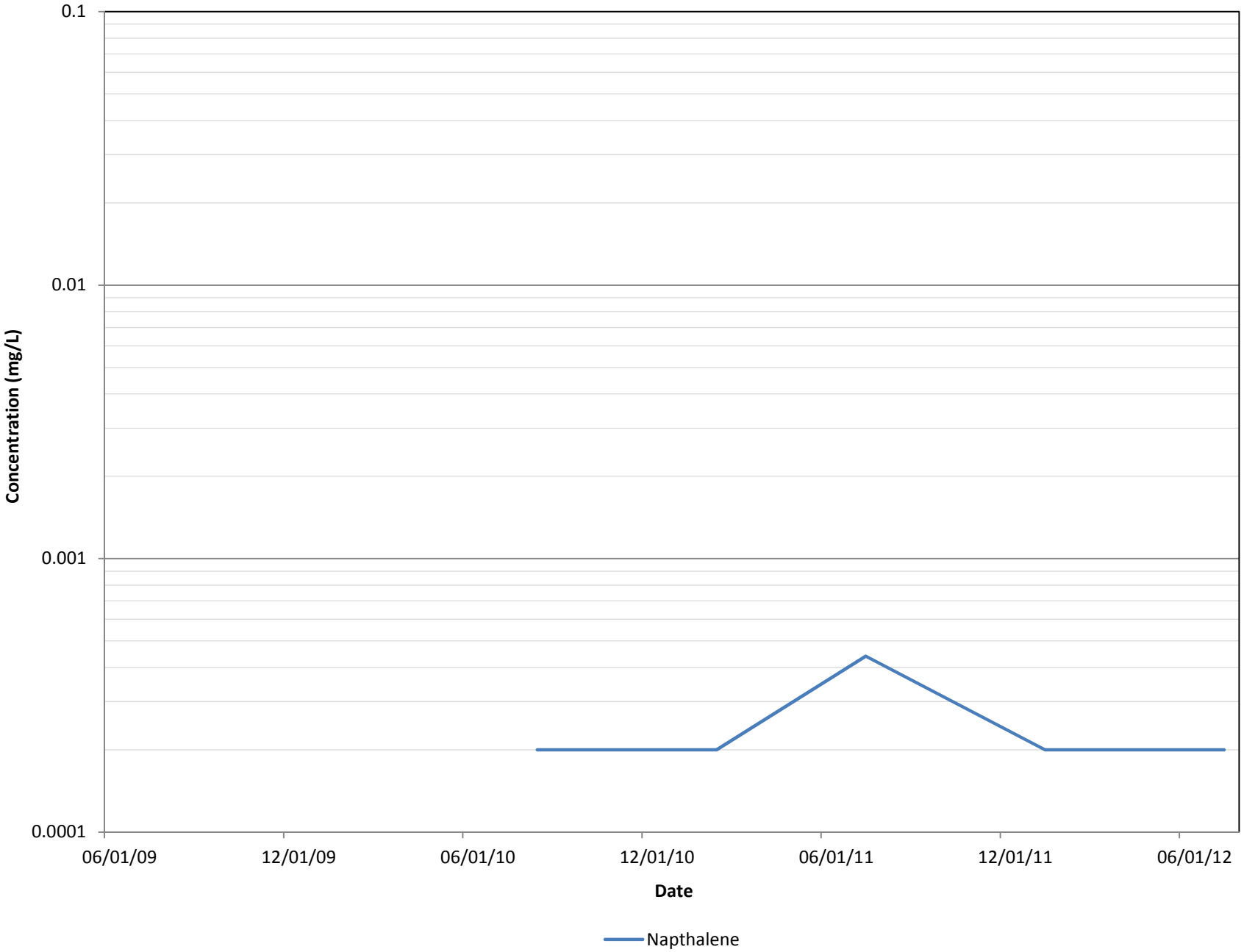
MW-4: TDS CONCENTRATIONS OVER TIME



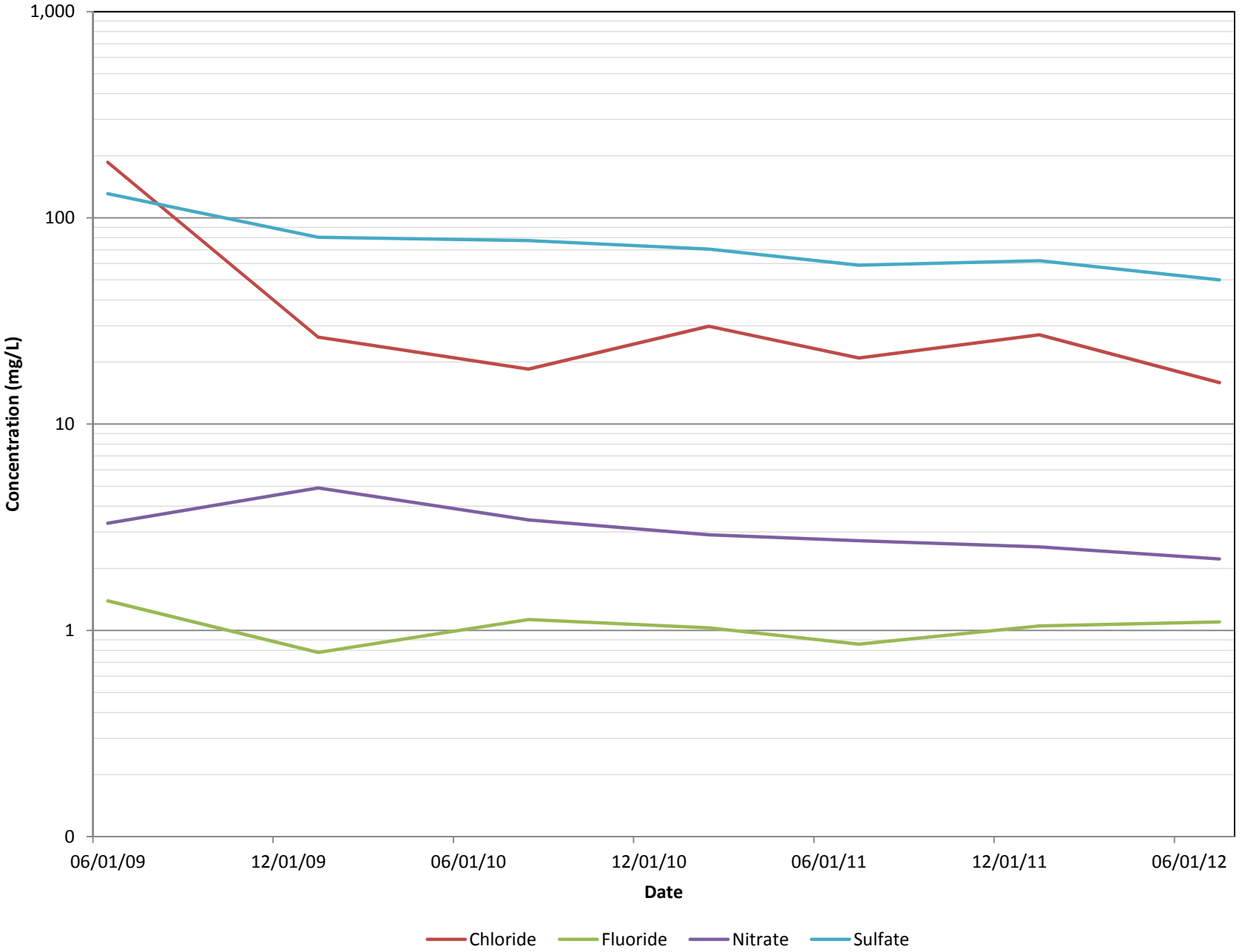
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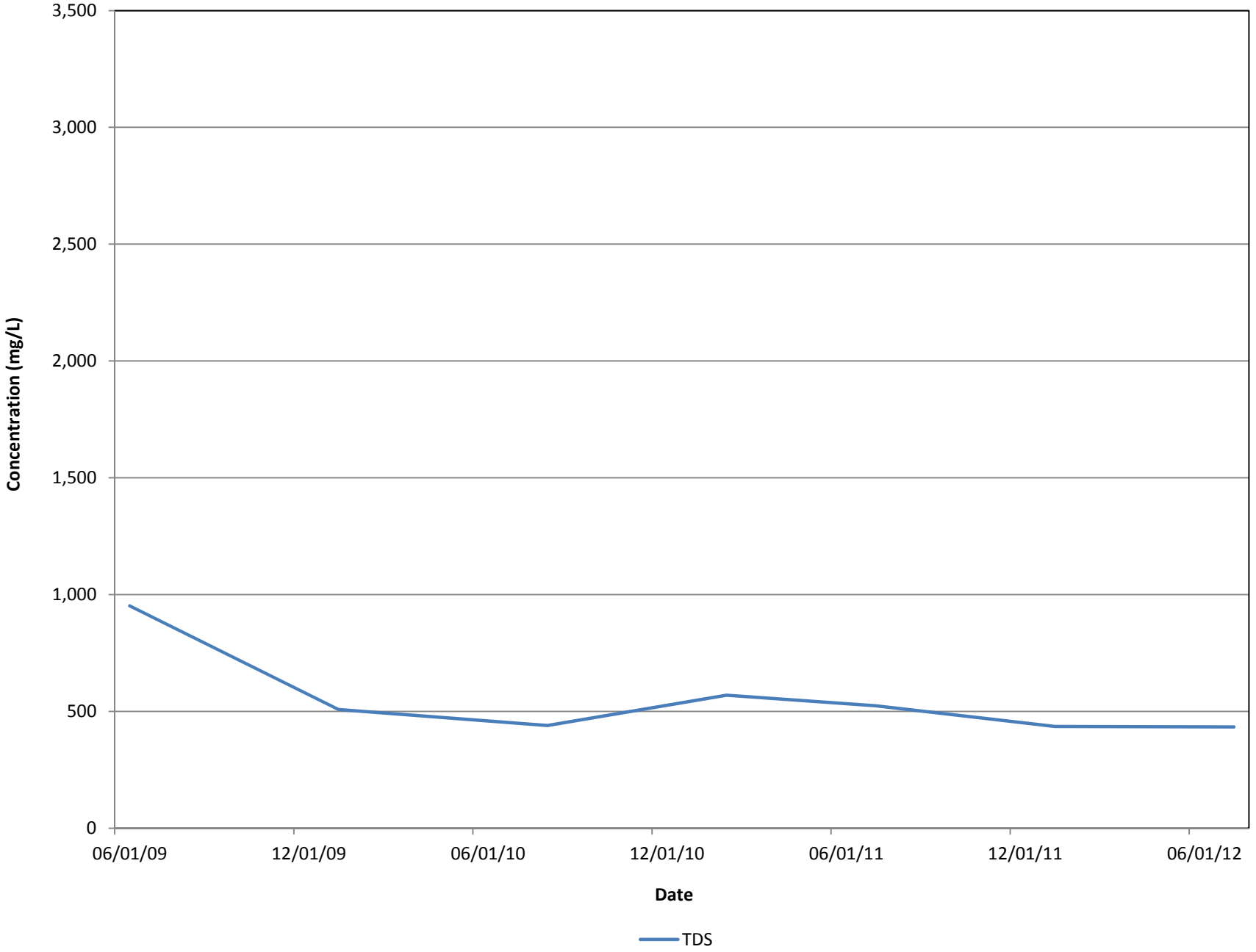
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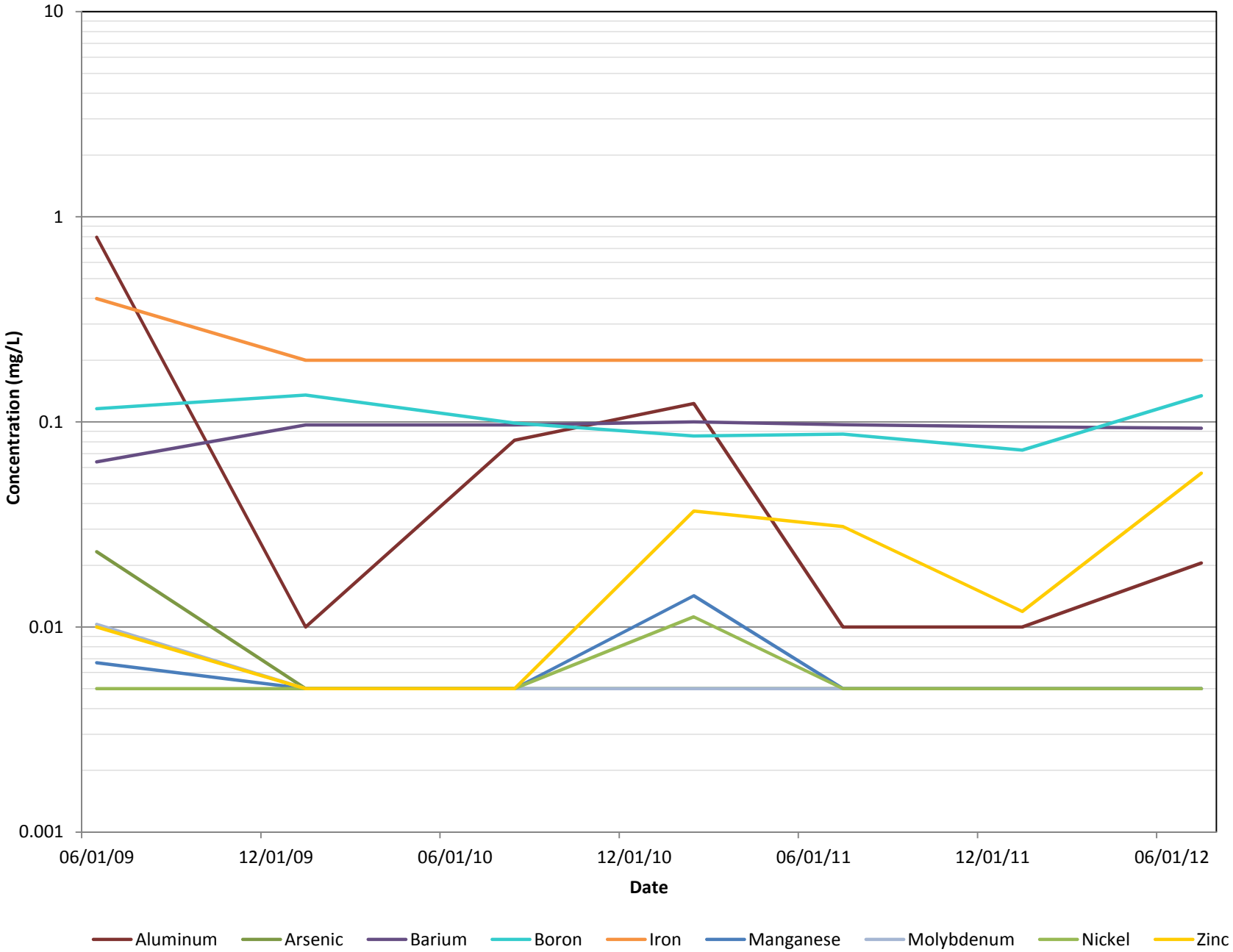
MW-5: ANION CONCENTRATIONS OVER TIME



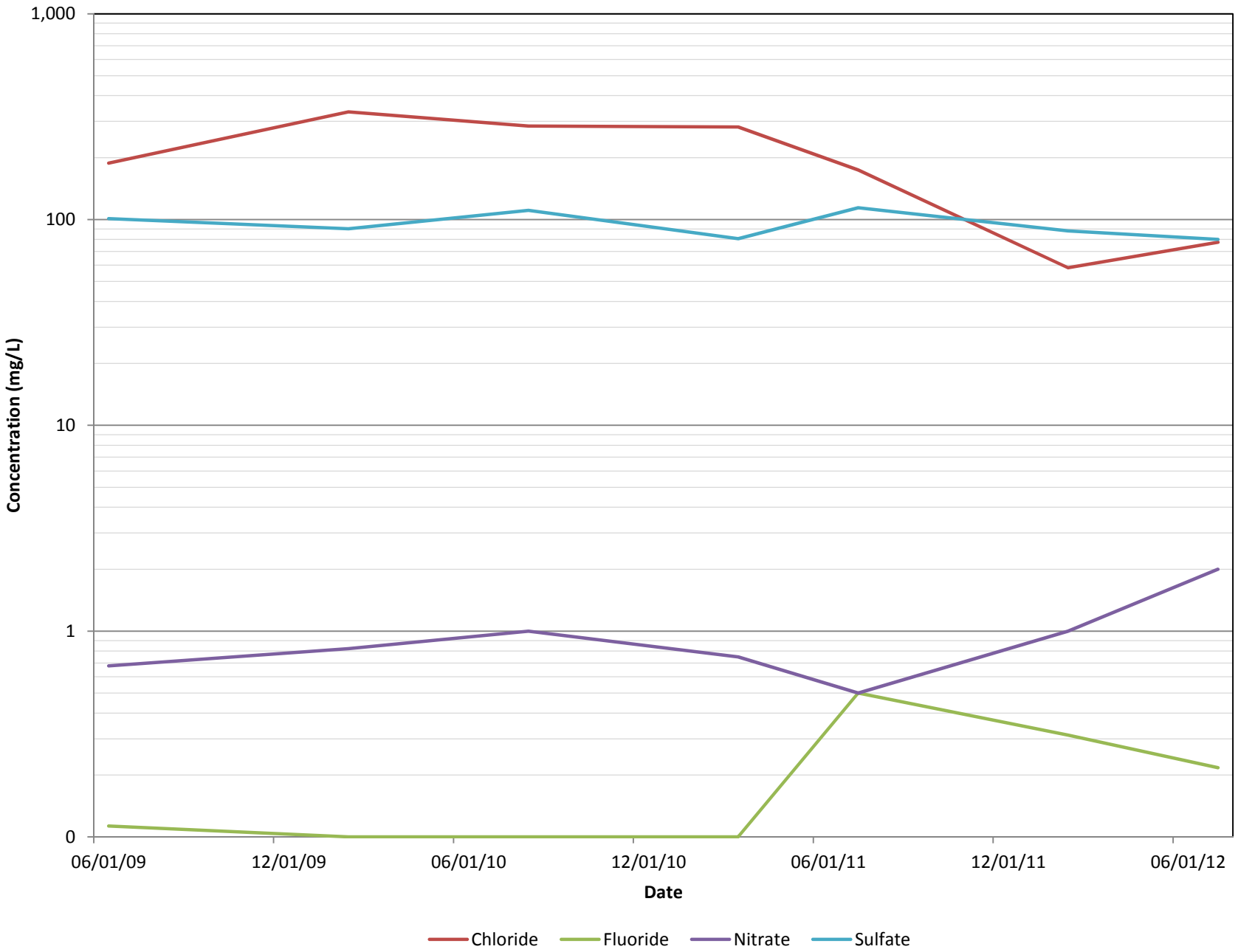
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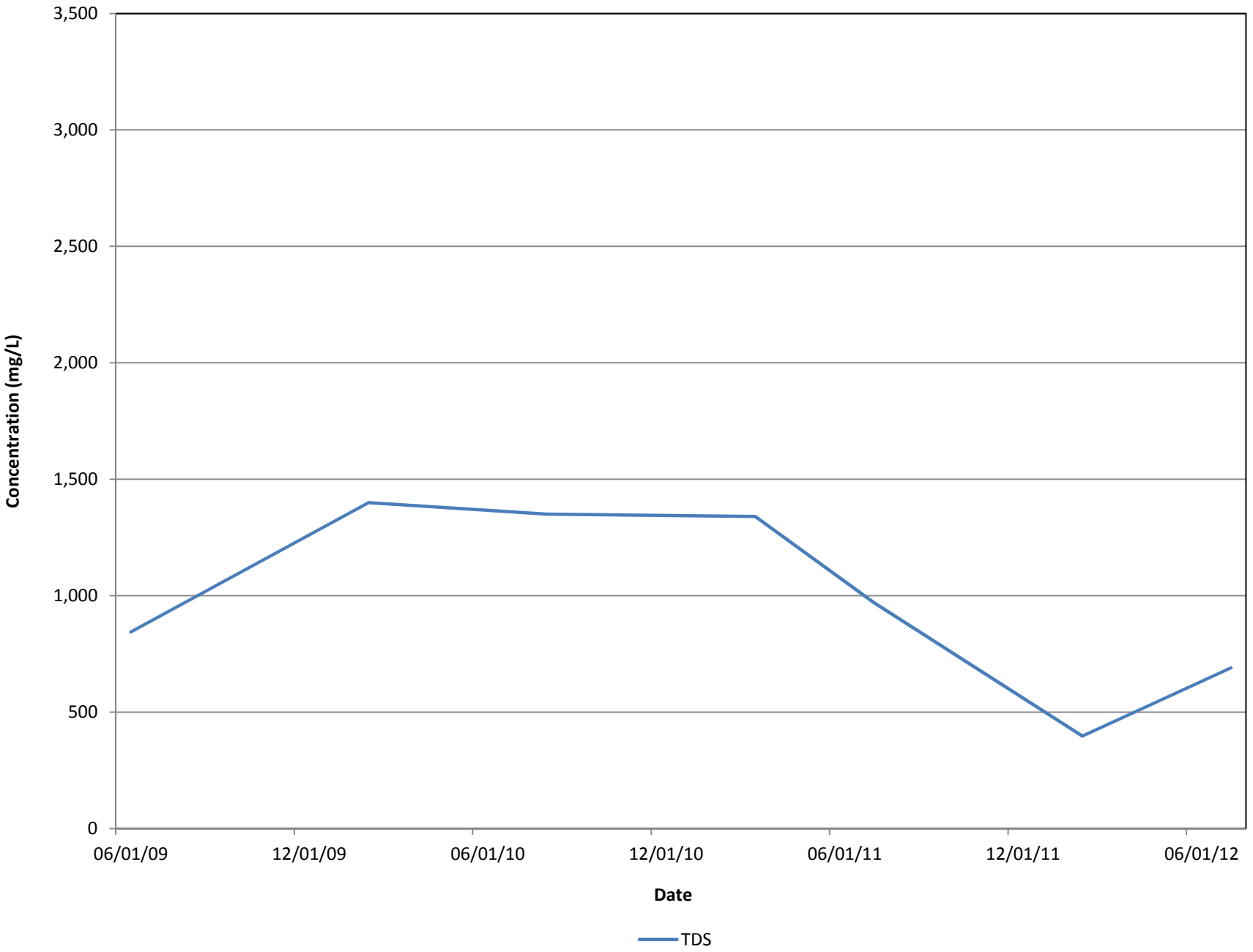
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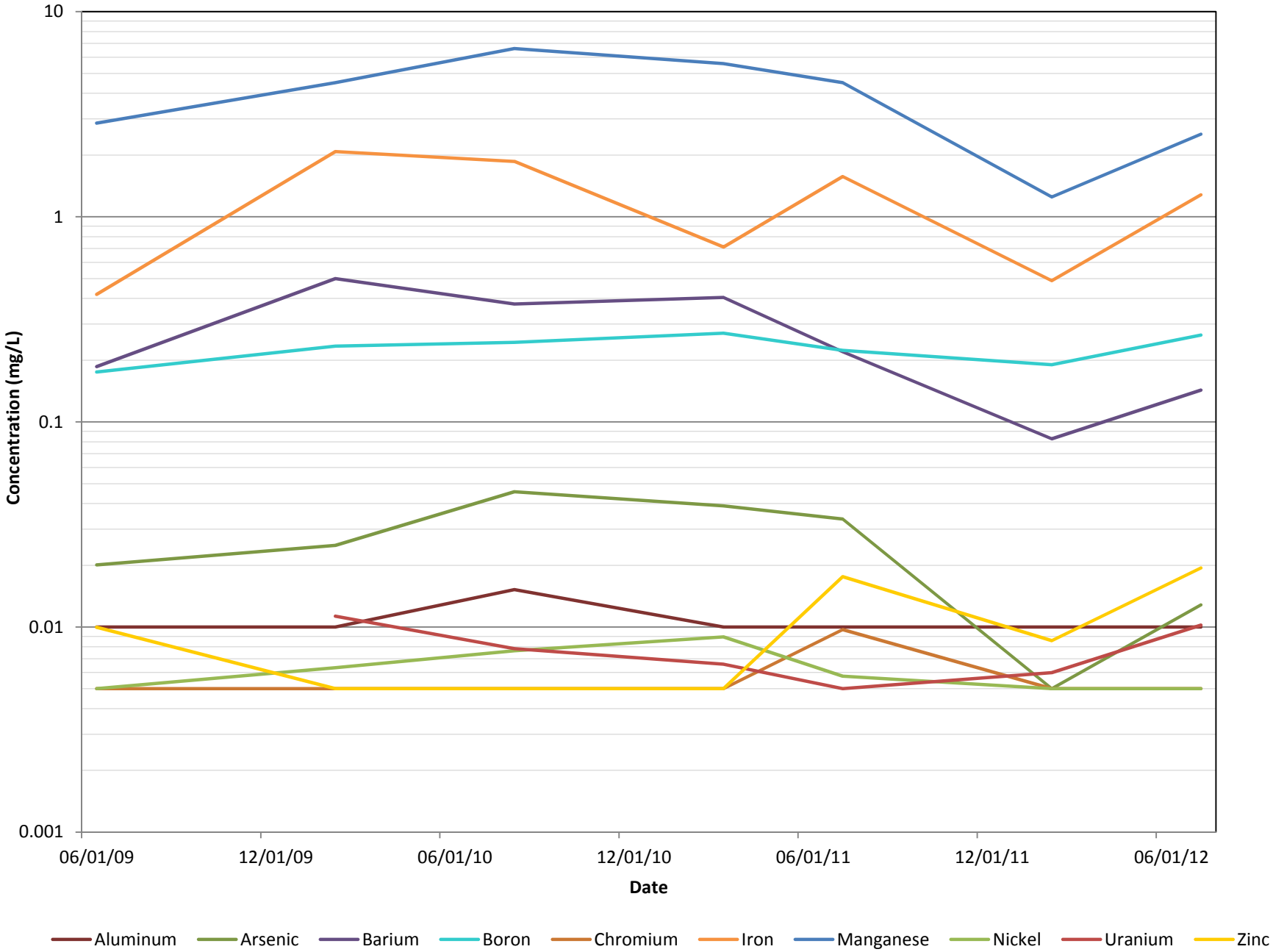
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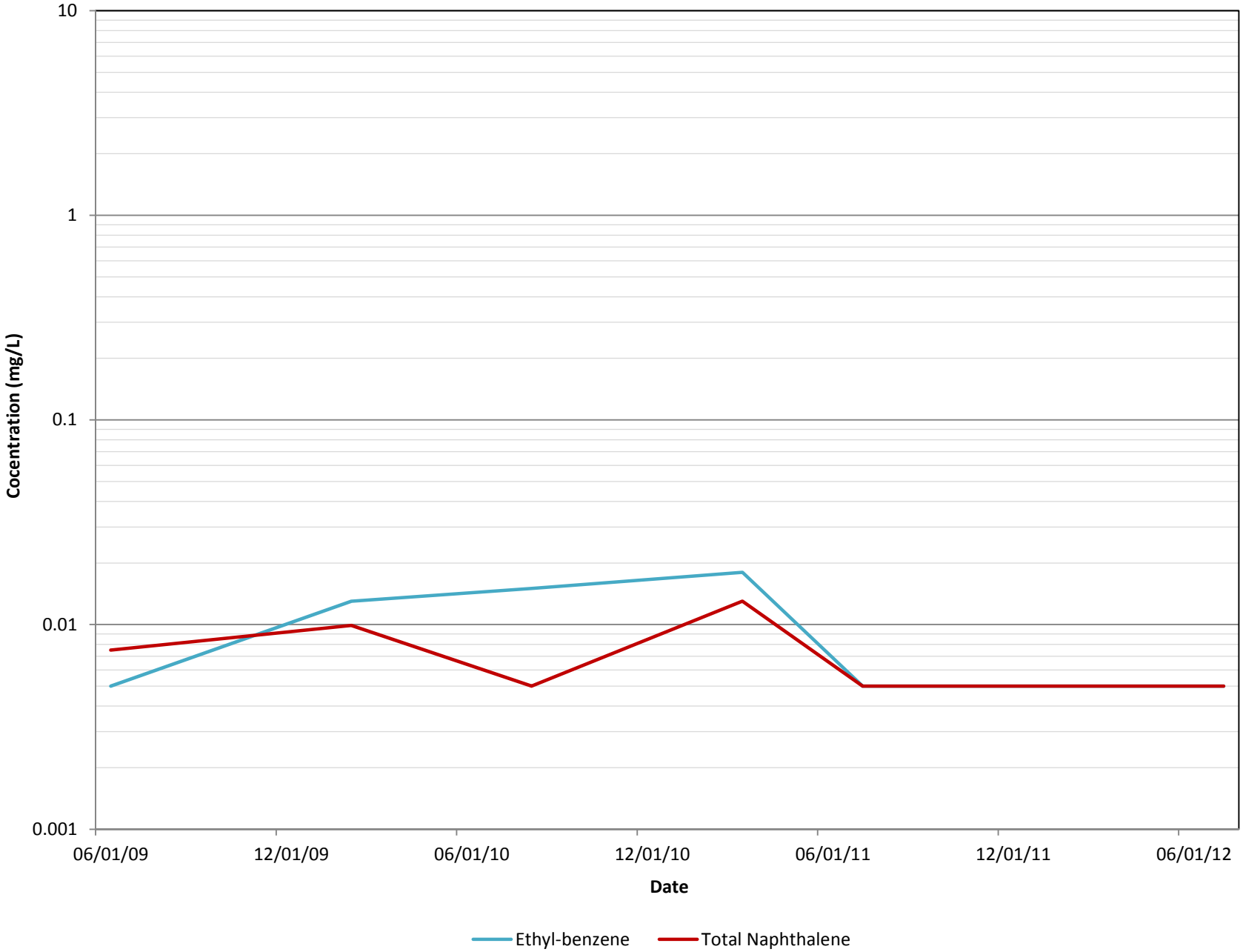
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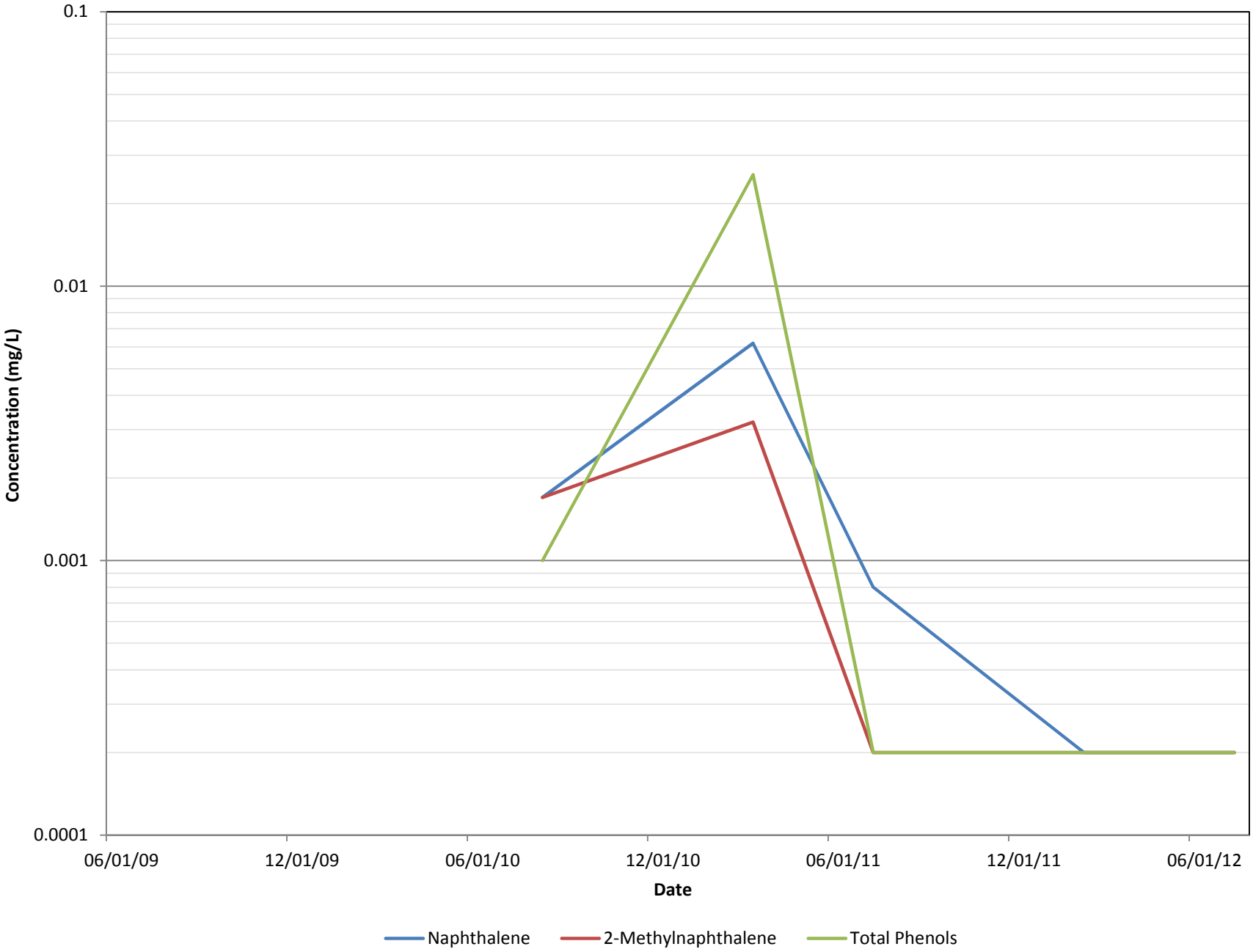
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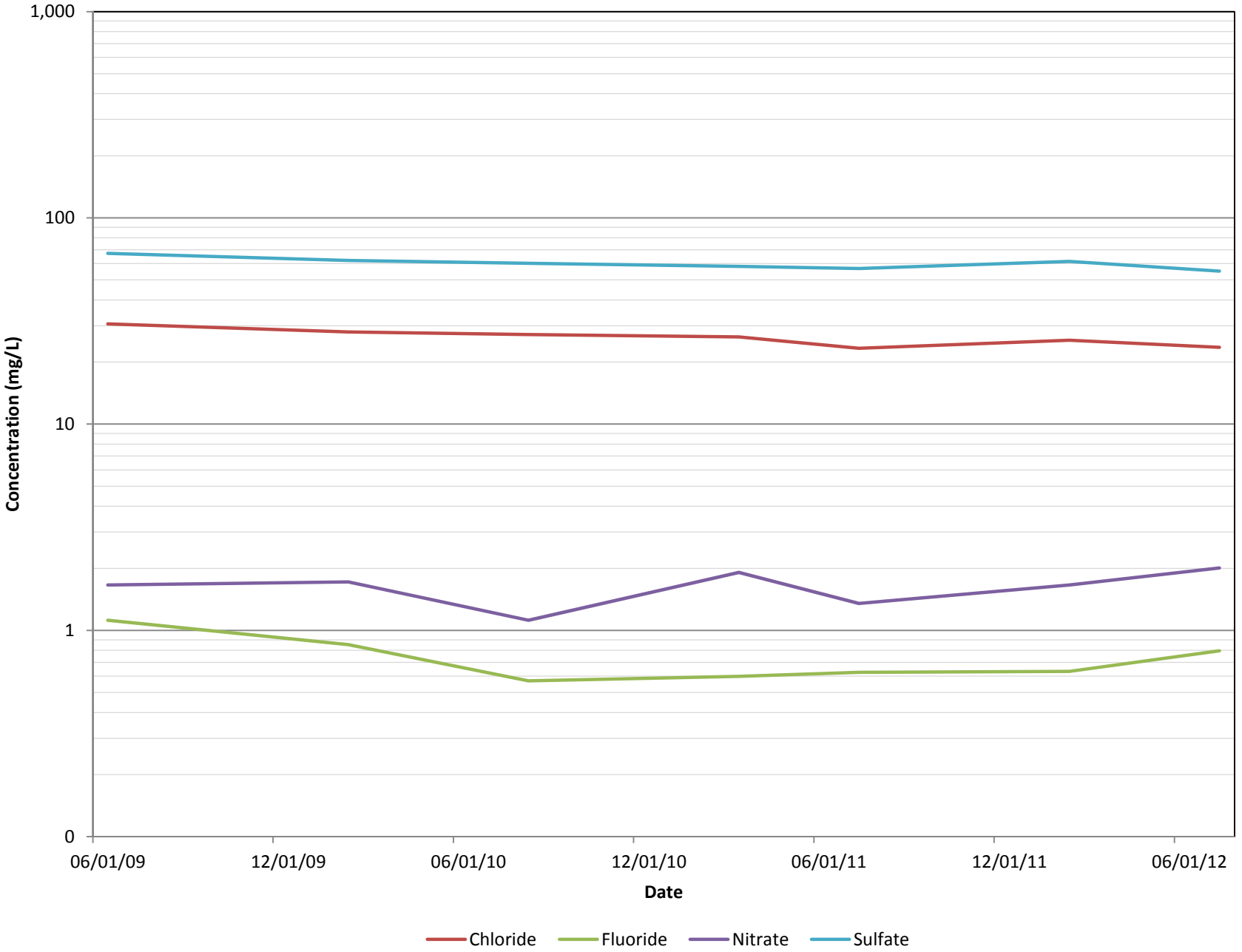
MW-6: VOC CONCENTRATIONS OVER TIME



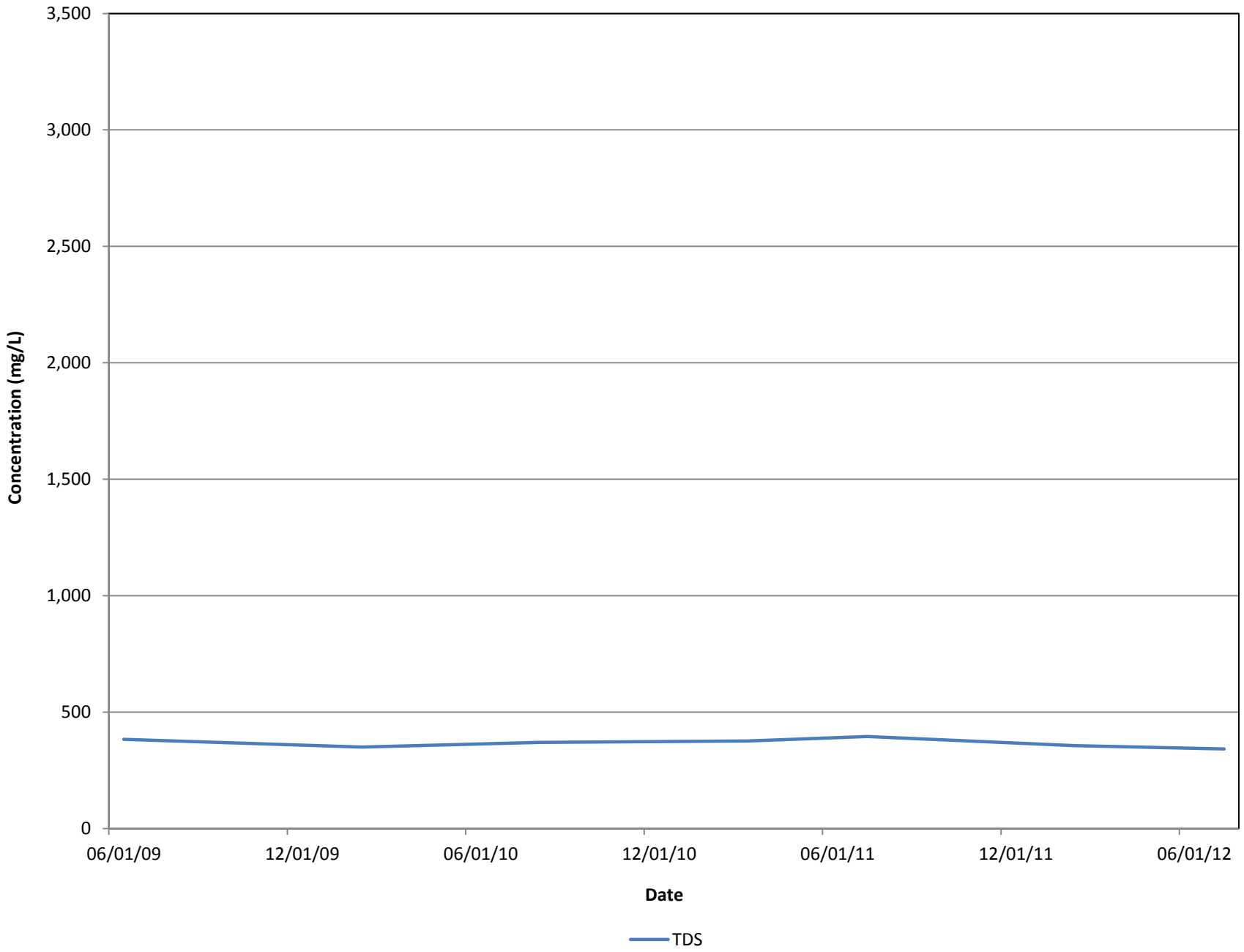
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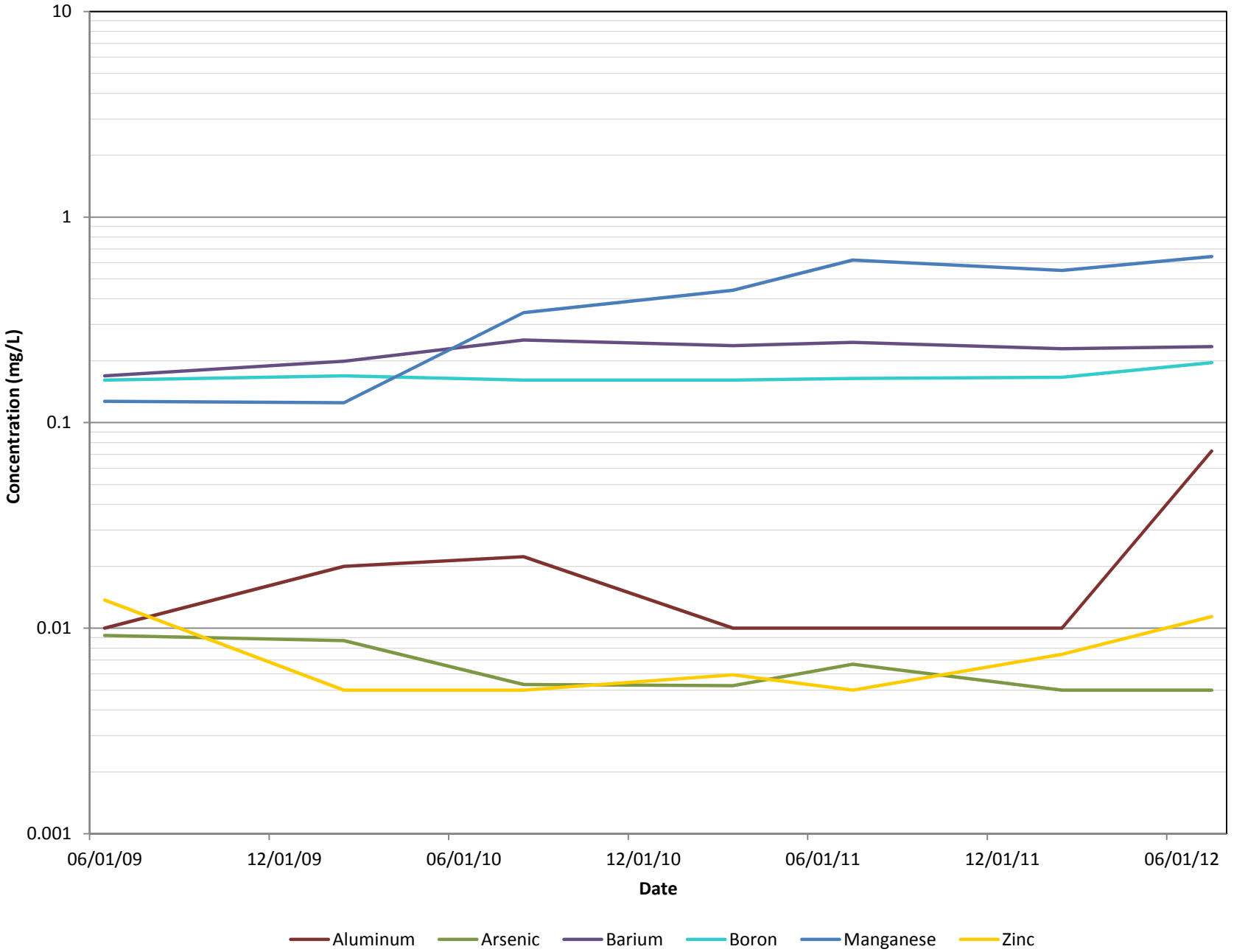
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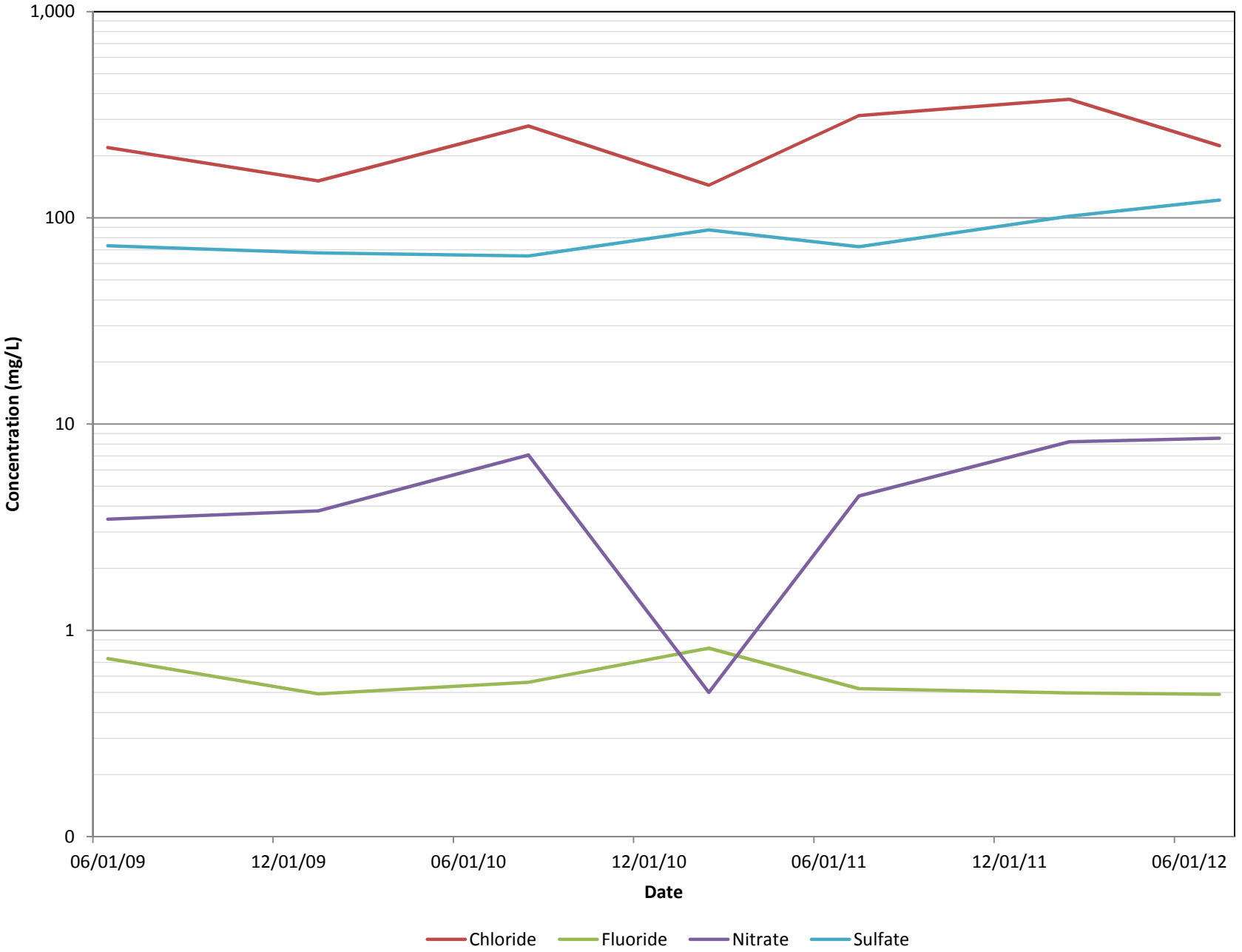
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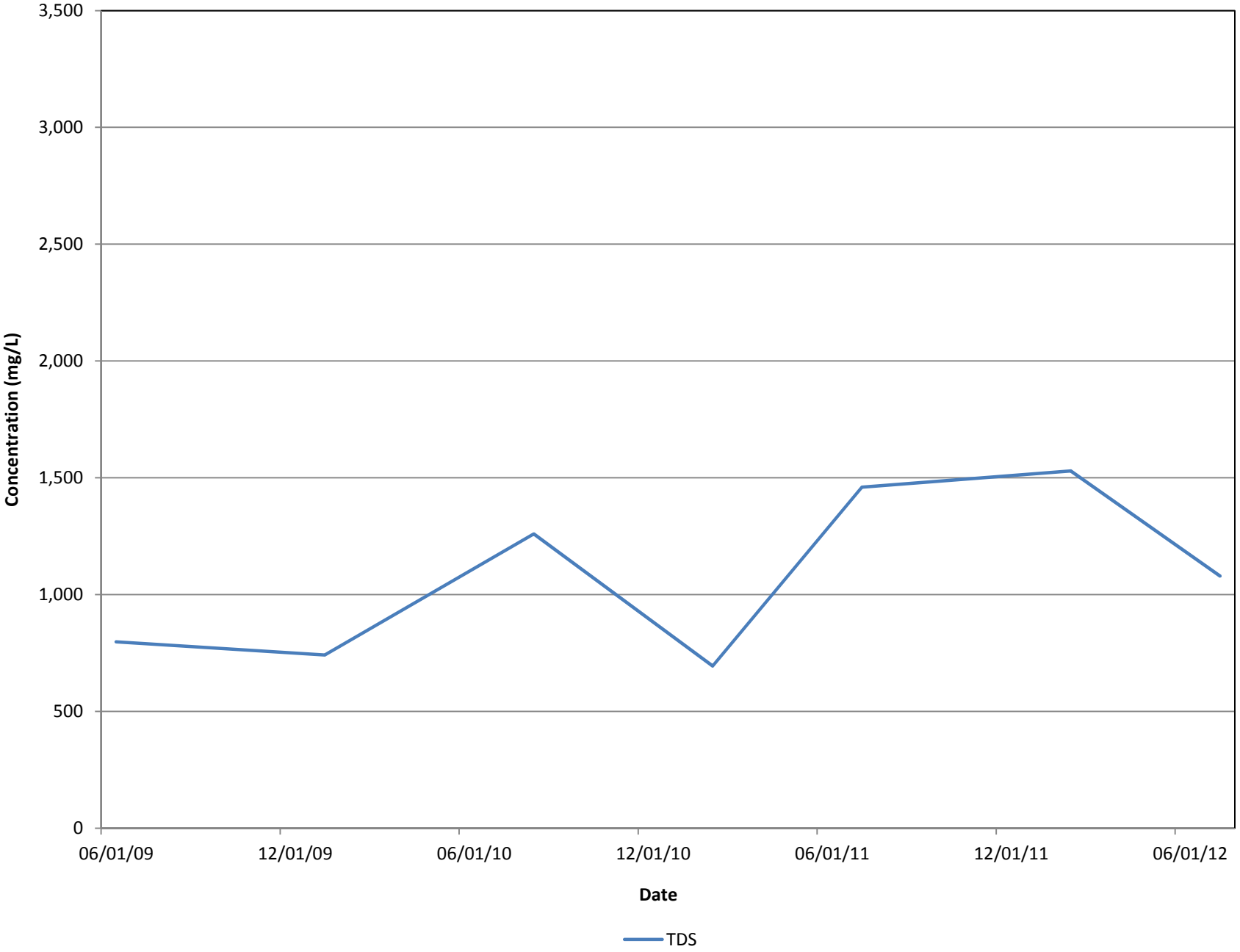
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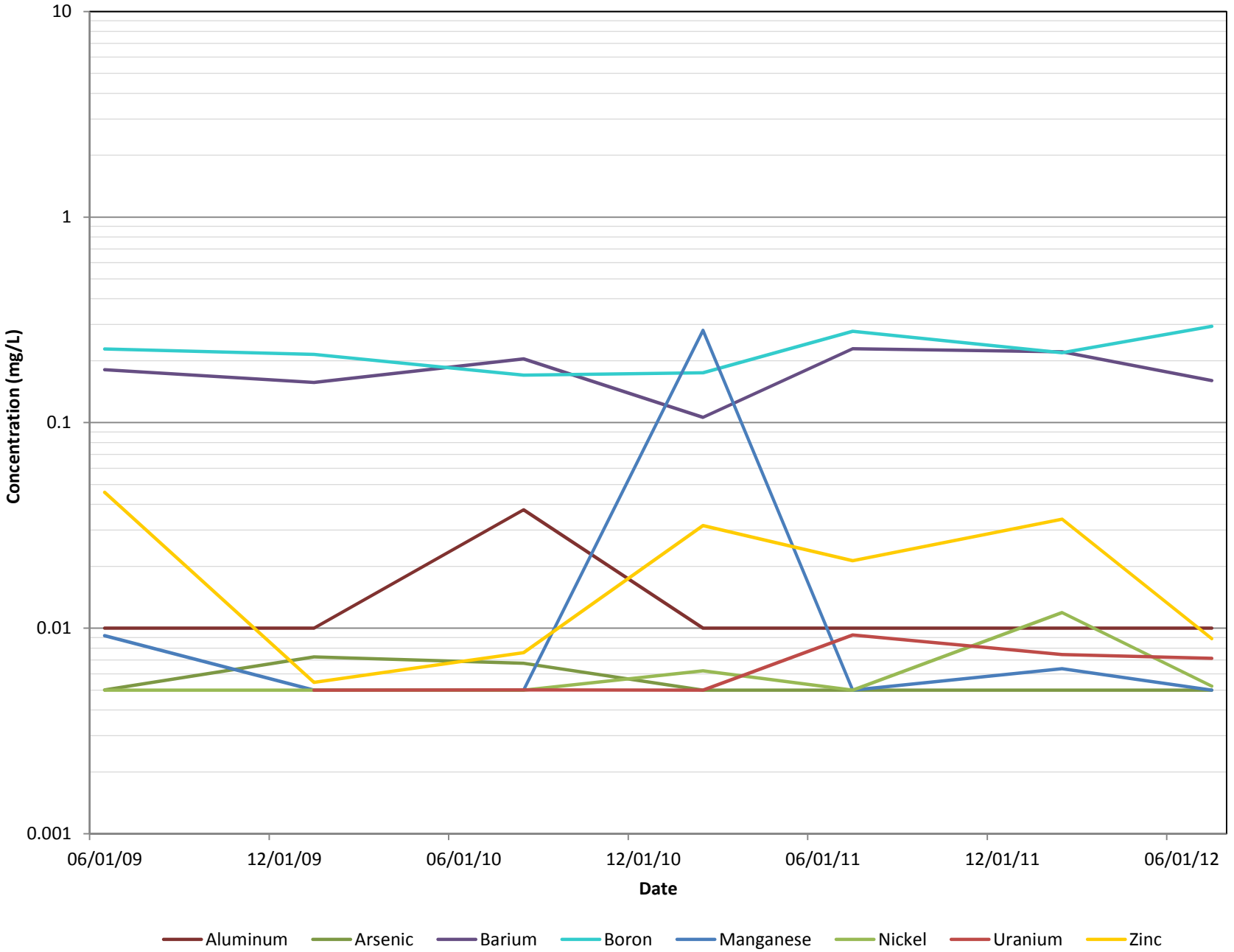
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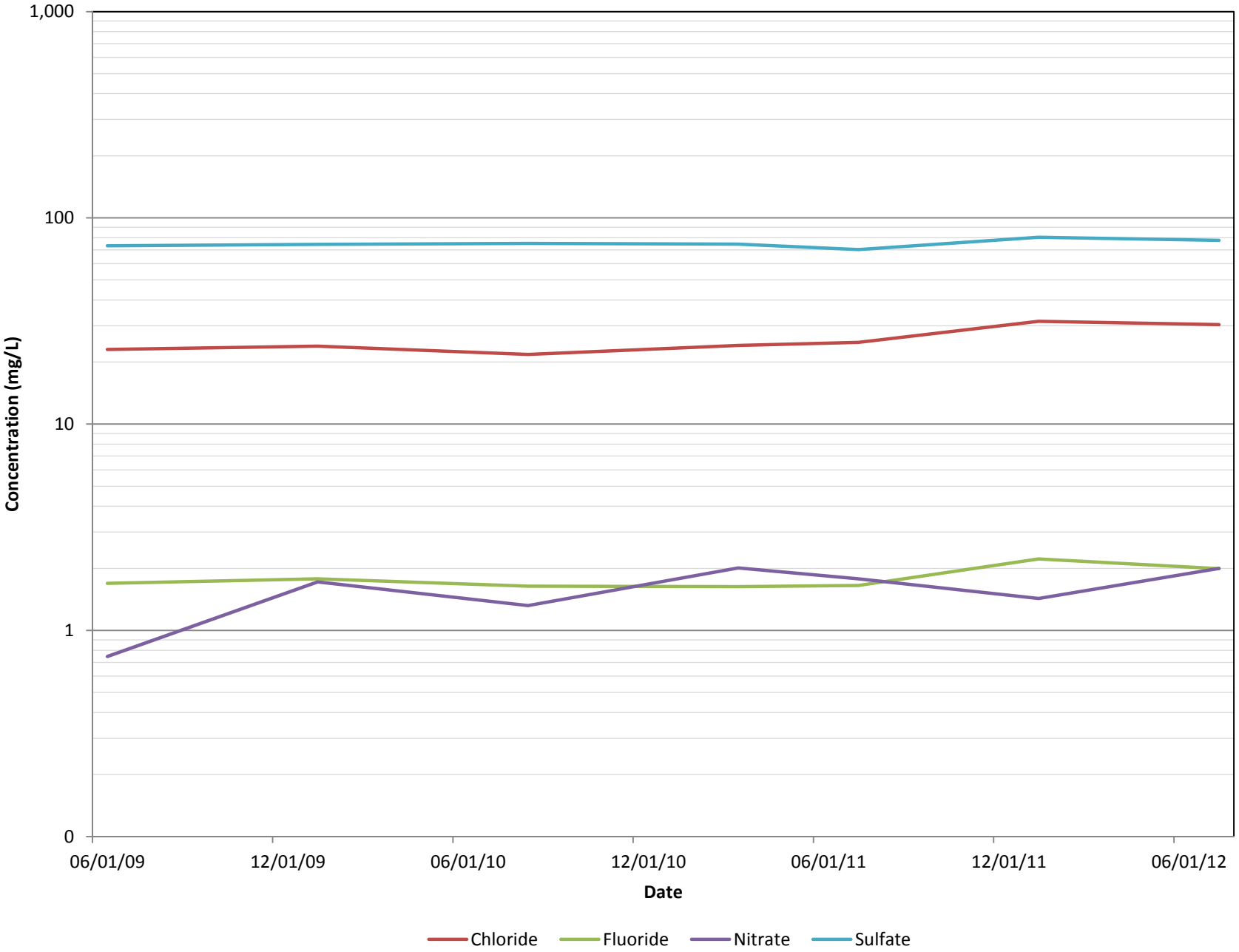
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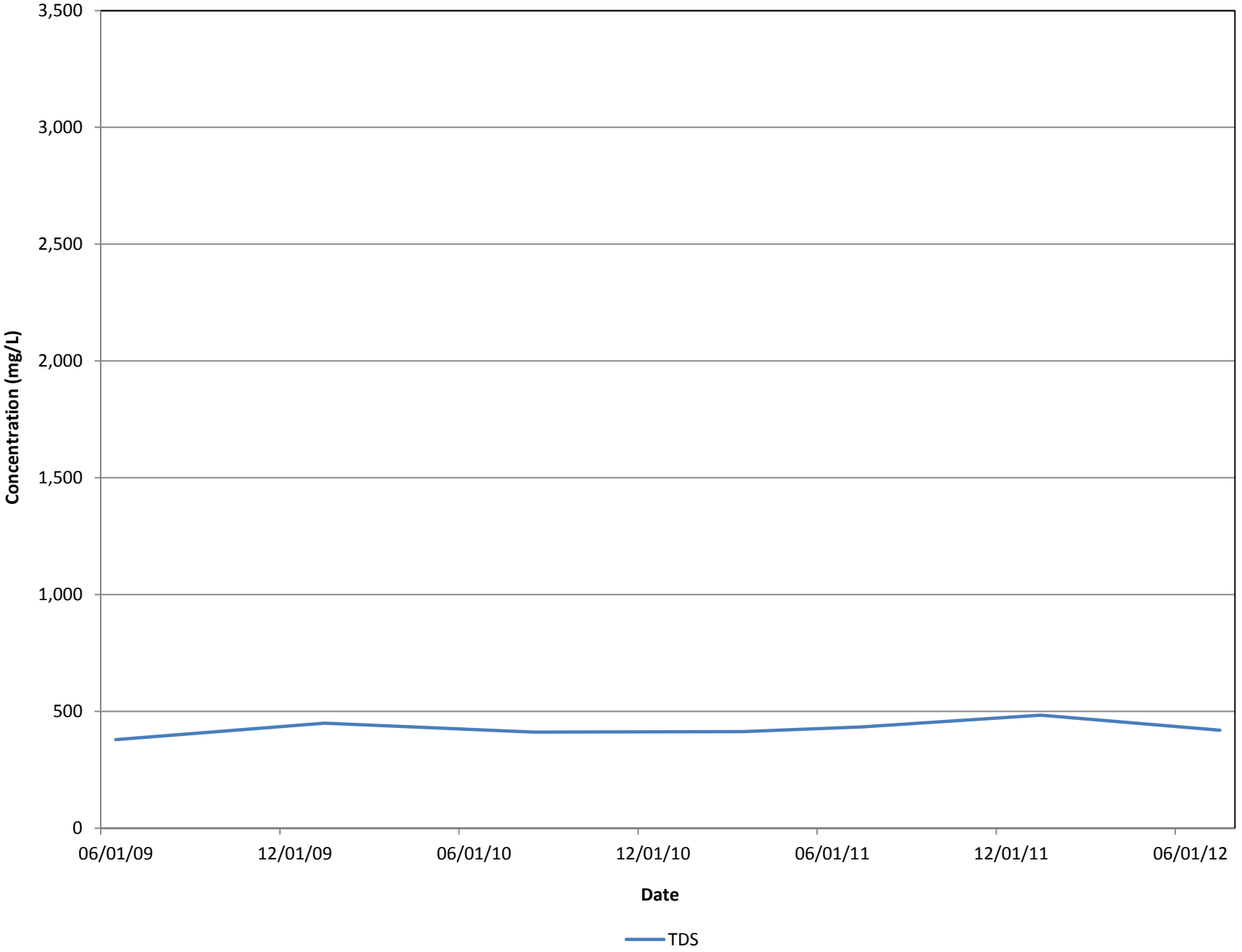
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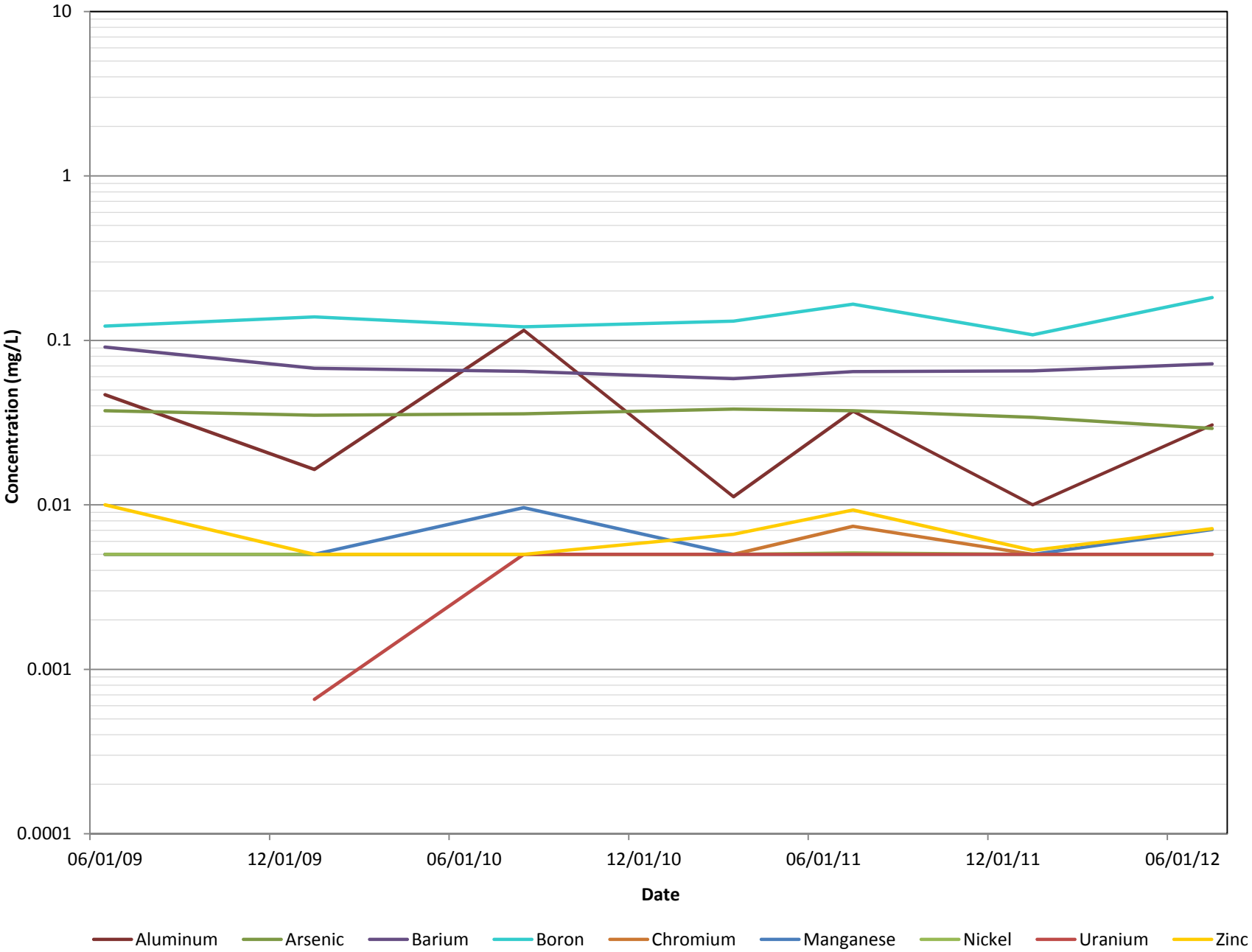
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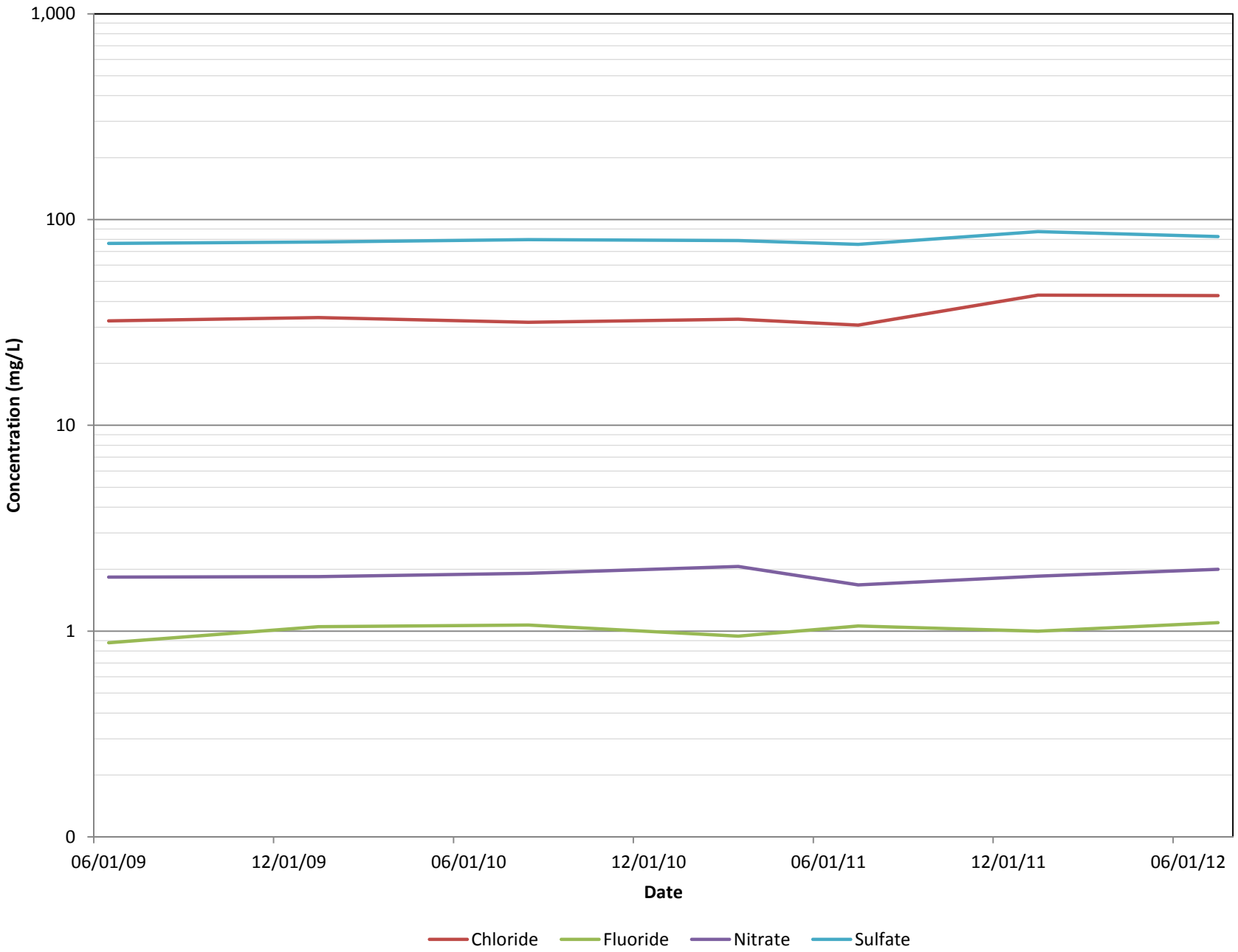
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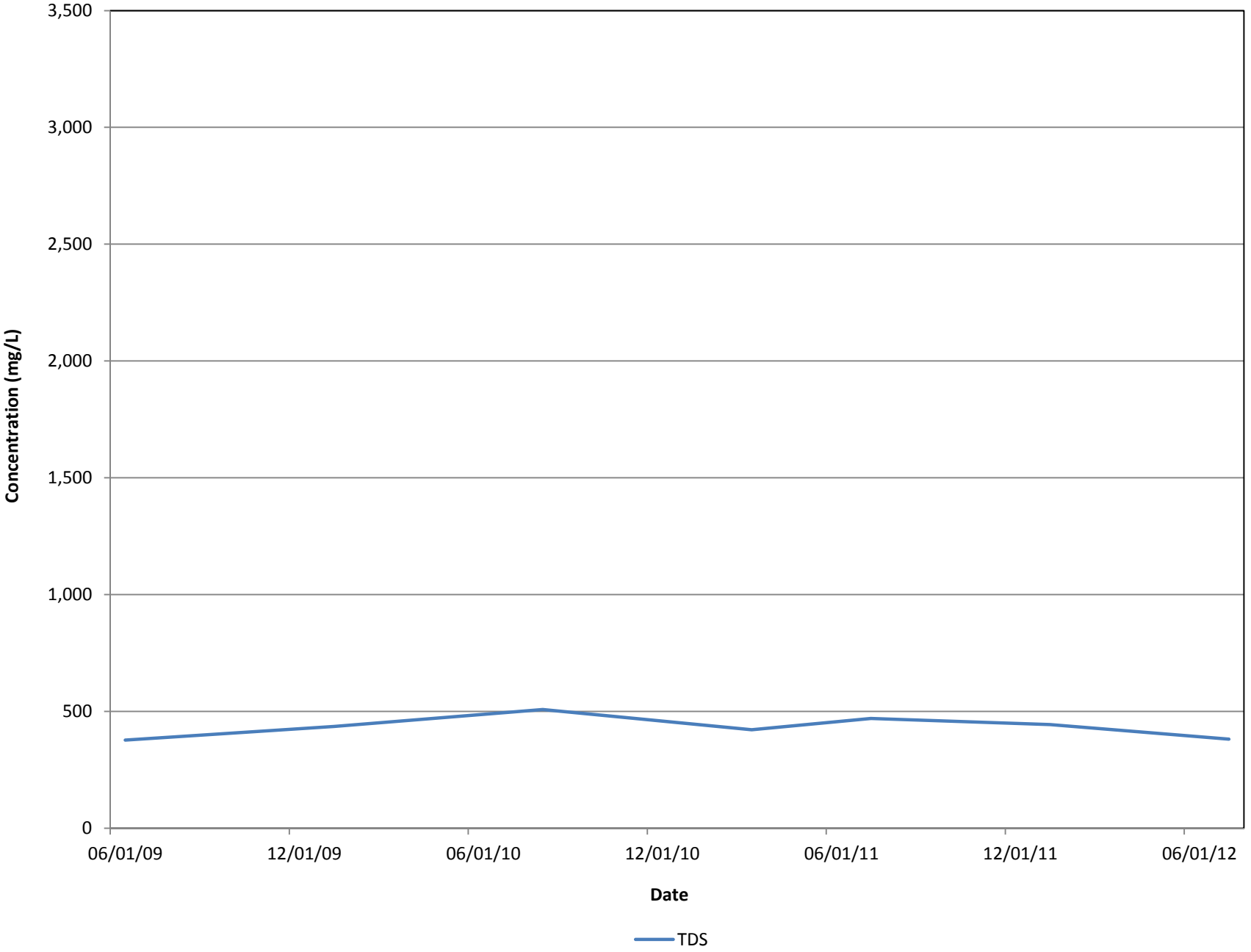
MW-9: METAL CONCENTRATIONS OVER TIME



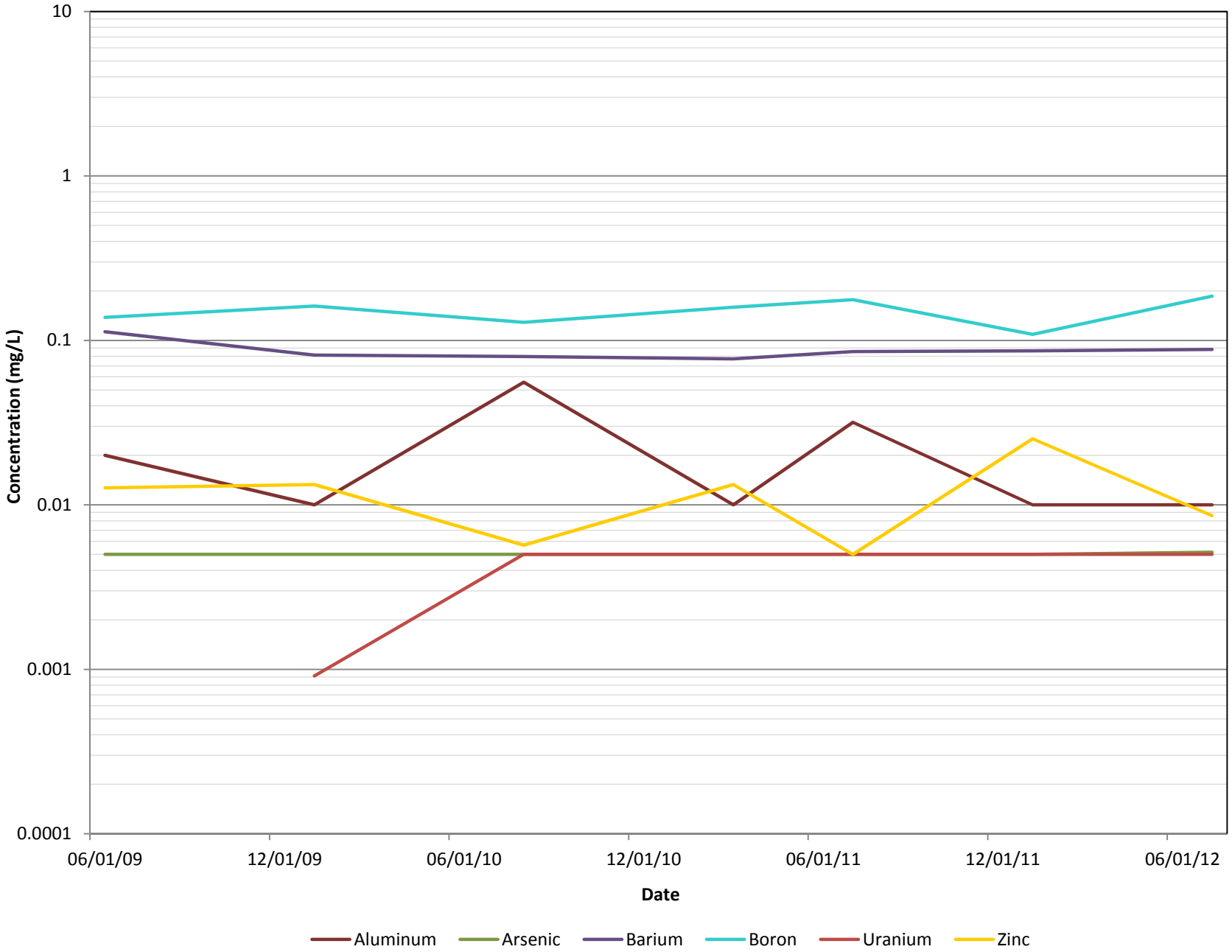
MW-10: ANION CONCENTRATIONS OVER TIME



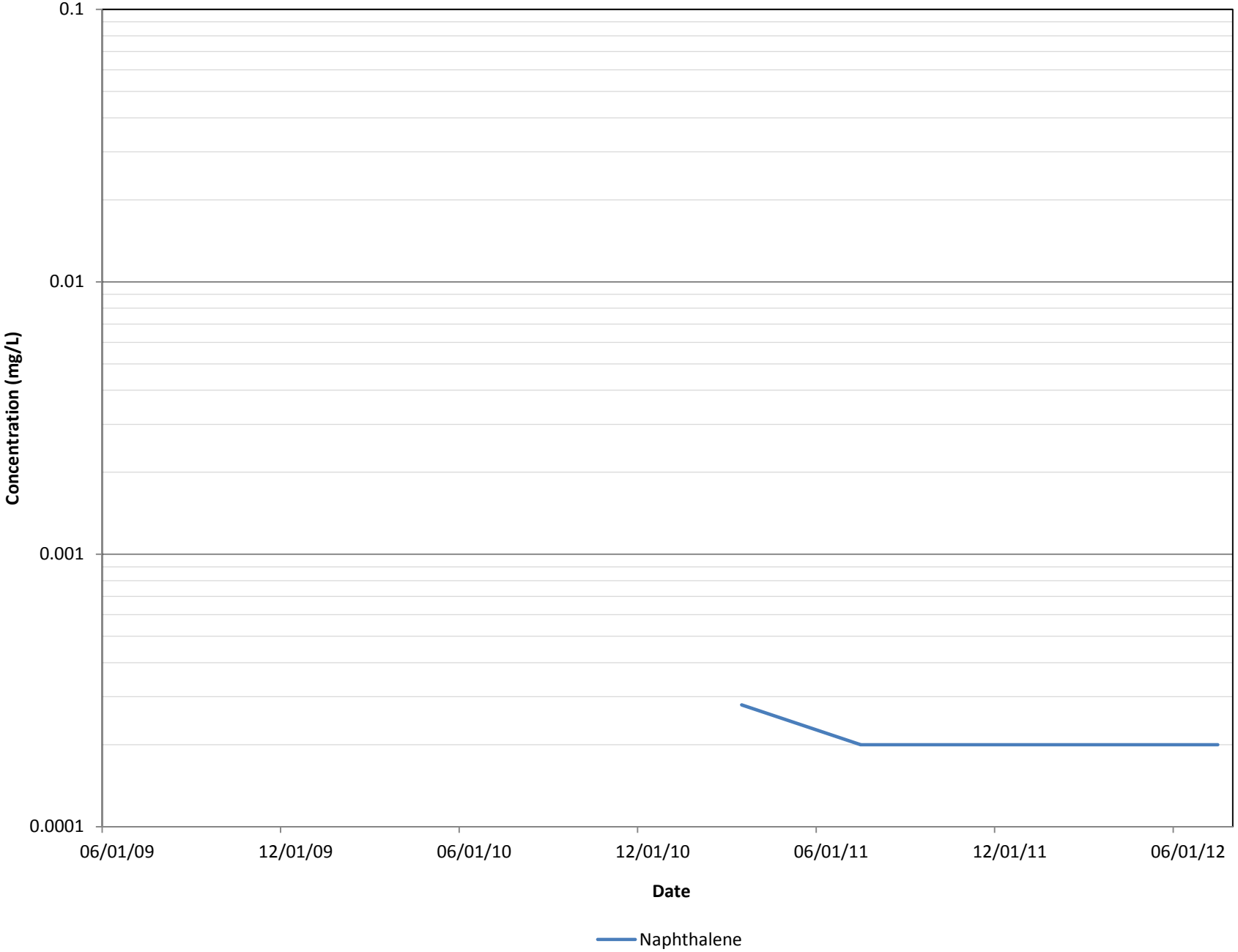
MW-10: TDS CONCENTRATIONS OVER TIME



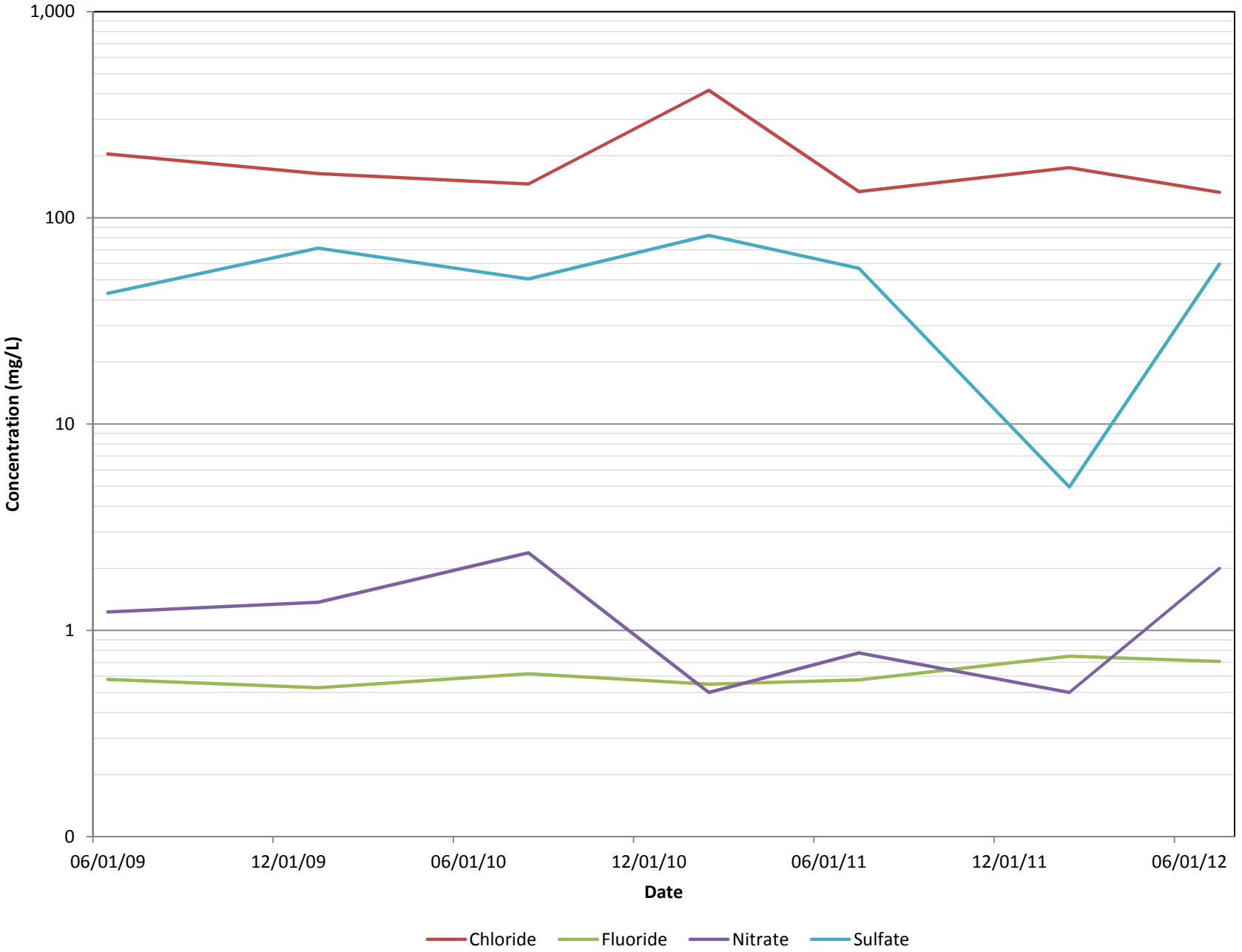
MW-10: METAL CONCENTRATIONS OVER TIME



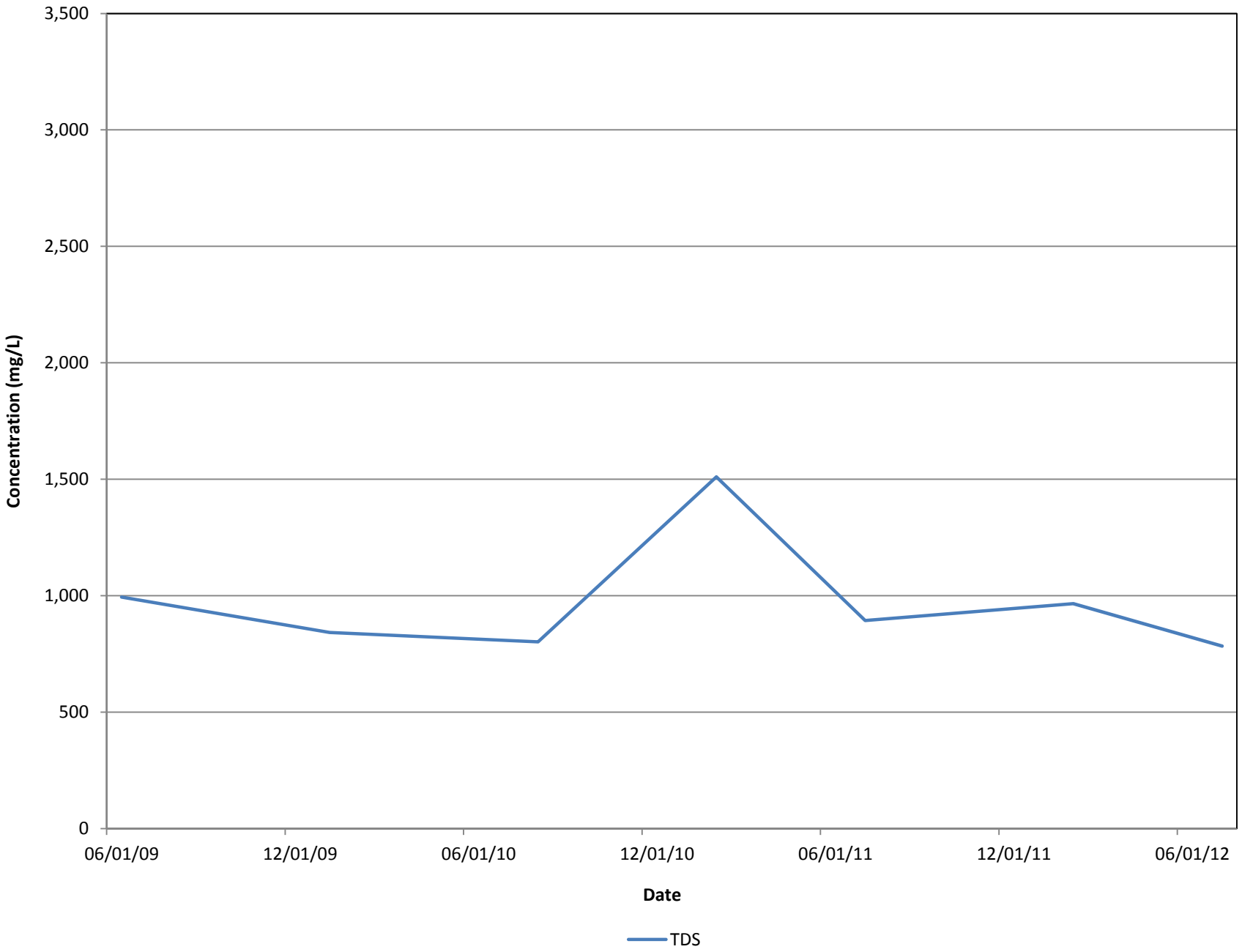
MW-10: SVOC CONCENTRATIONS OVER TIME



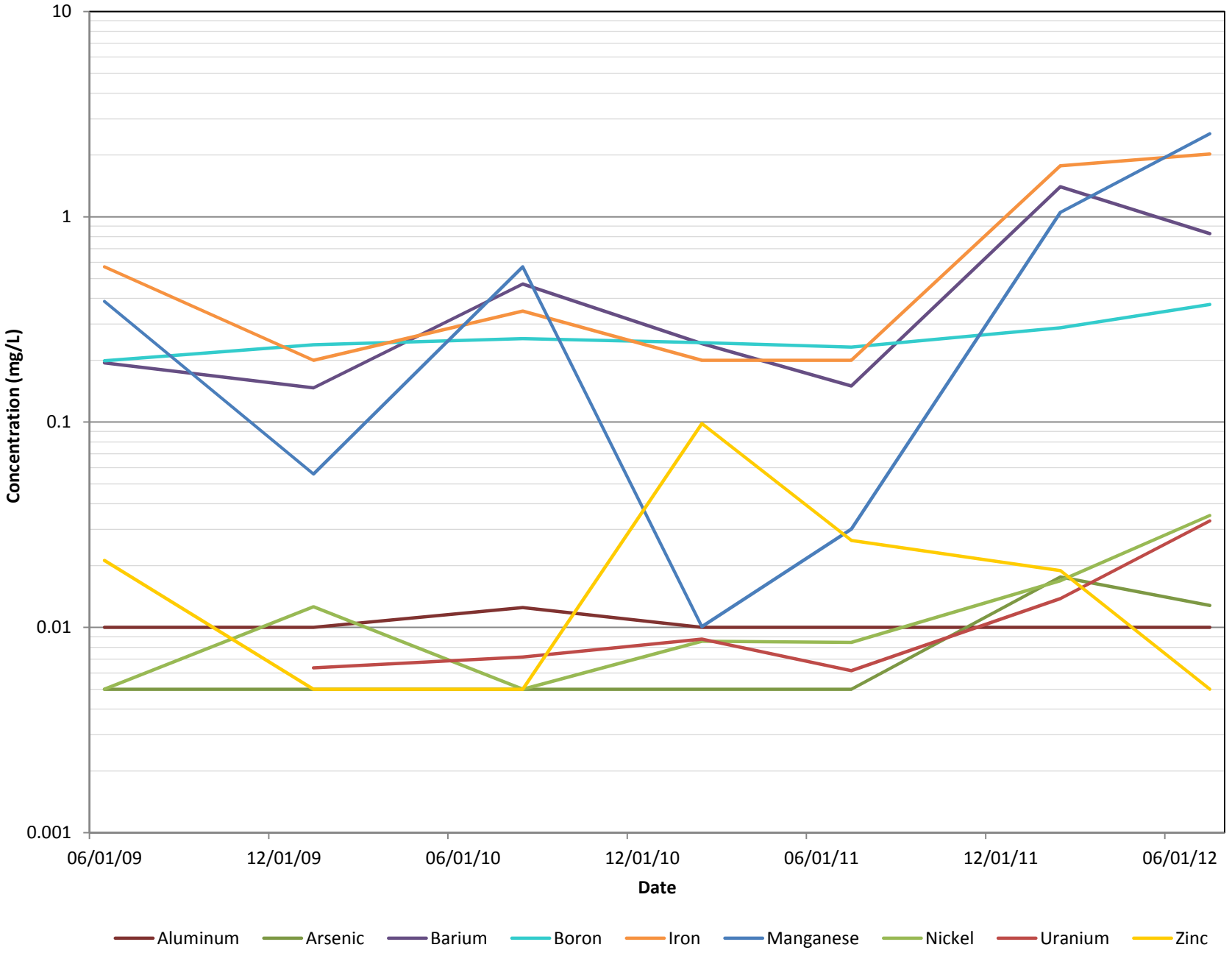
MW-11: ANION CONCENTRATIONS OVER TIME



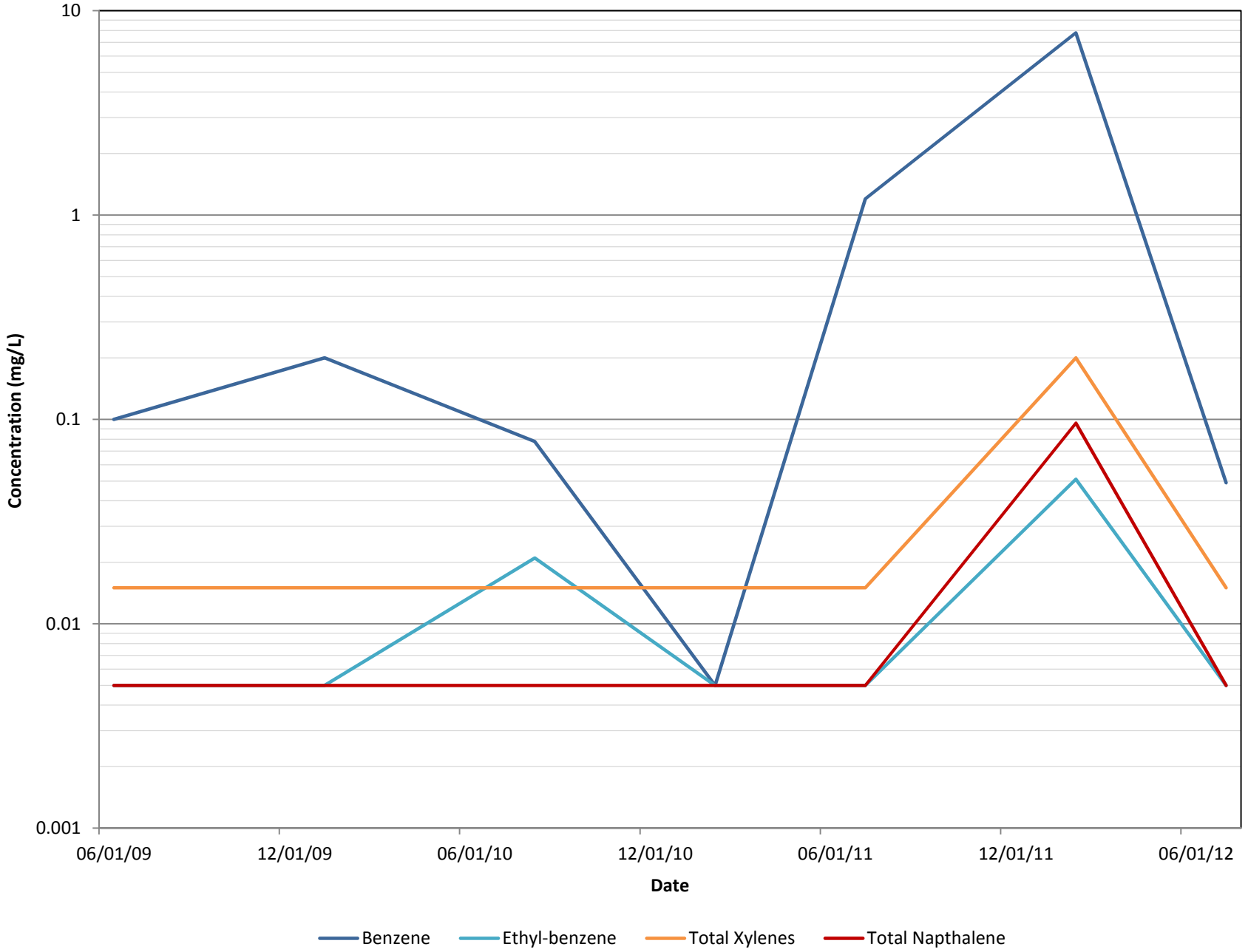
MW-11: TDS CONCENTRATIONS OVER TIME



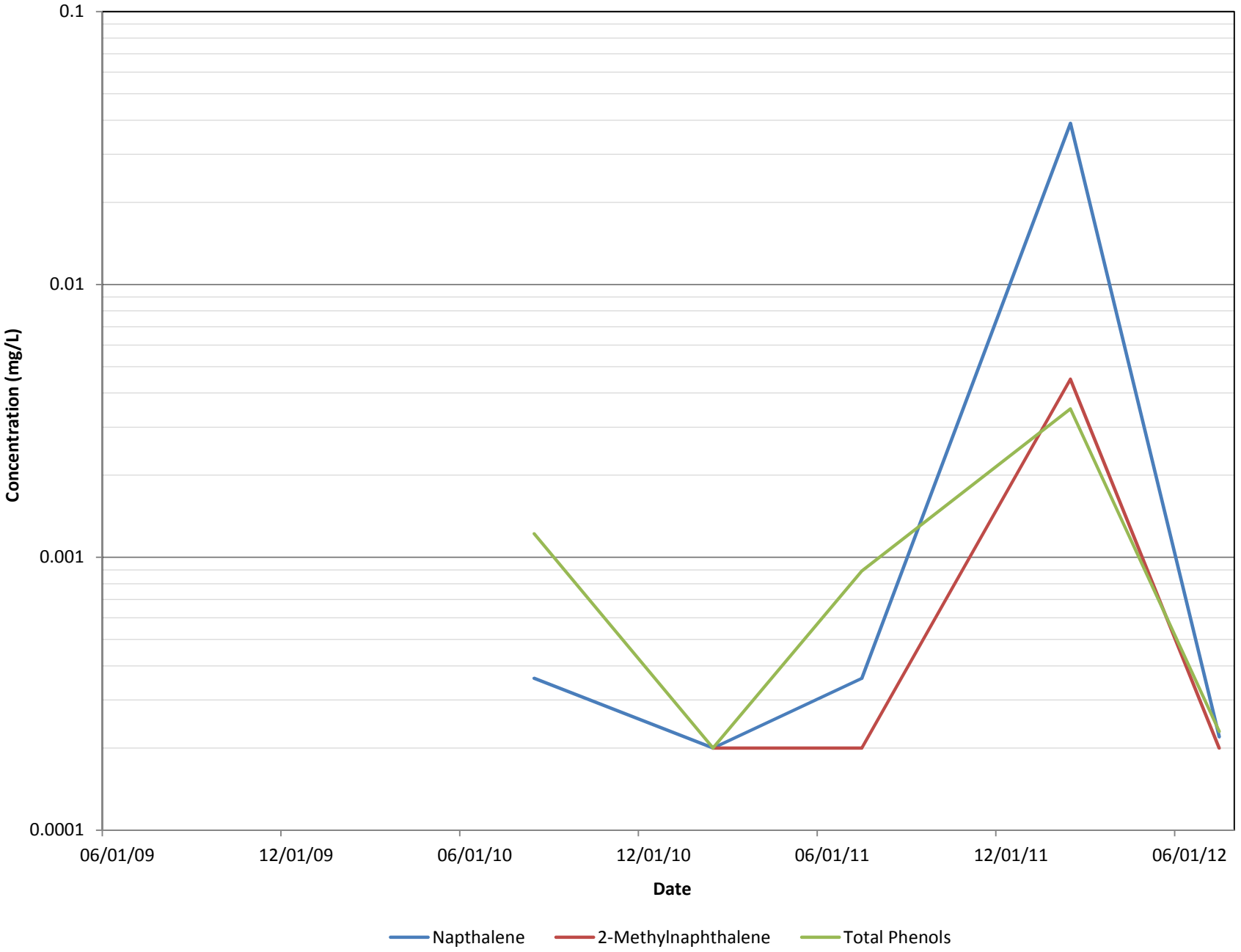
MW-11: METAL CONCENTRATIONS OVER TIME



MW-11: VOC CONCENTRATIONS OVER TIME



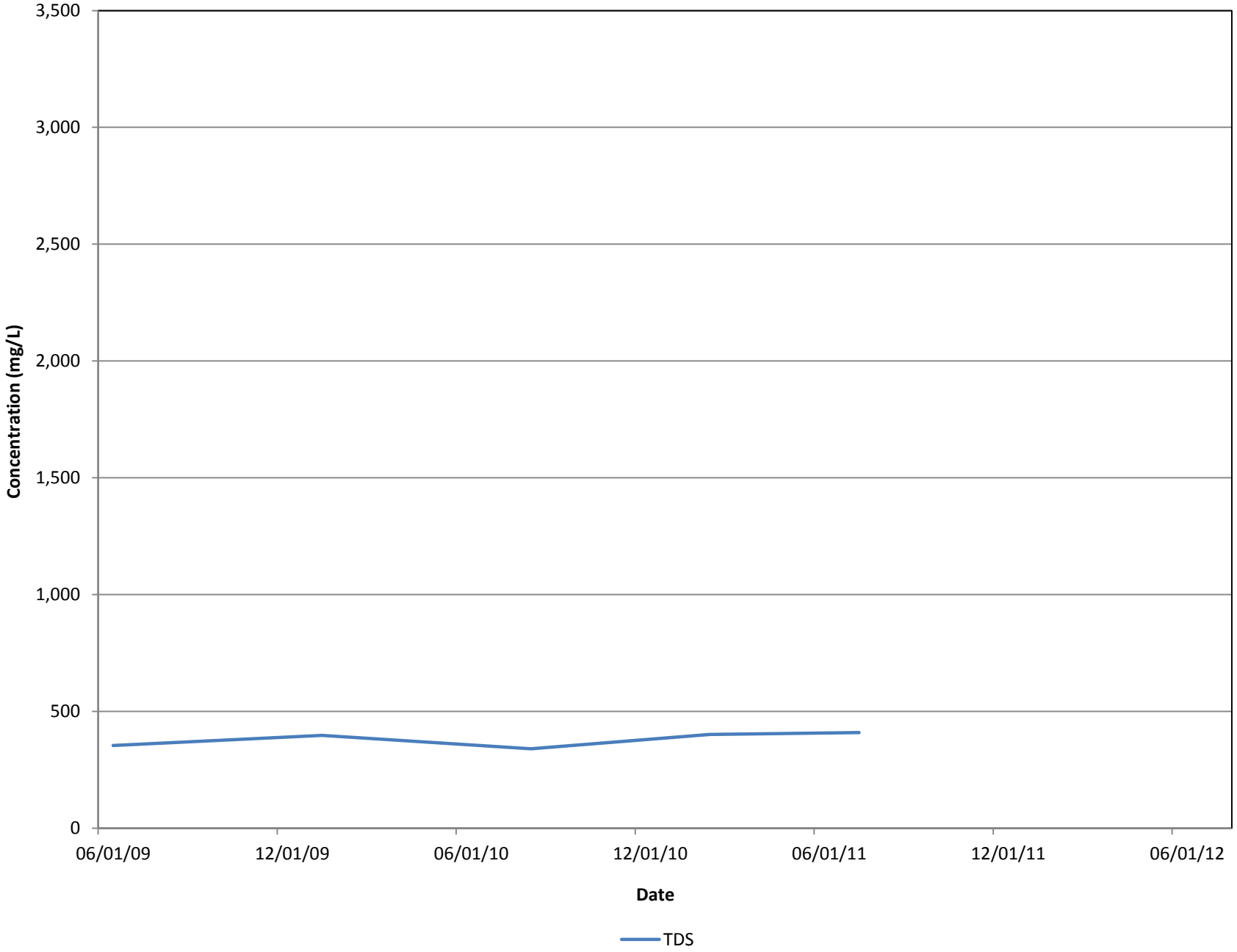
MW-11: SVOC CONCENTRATIONS OVER TIME



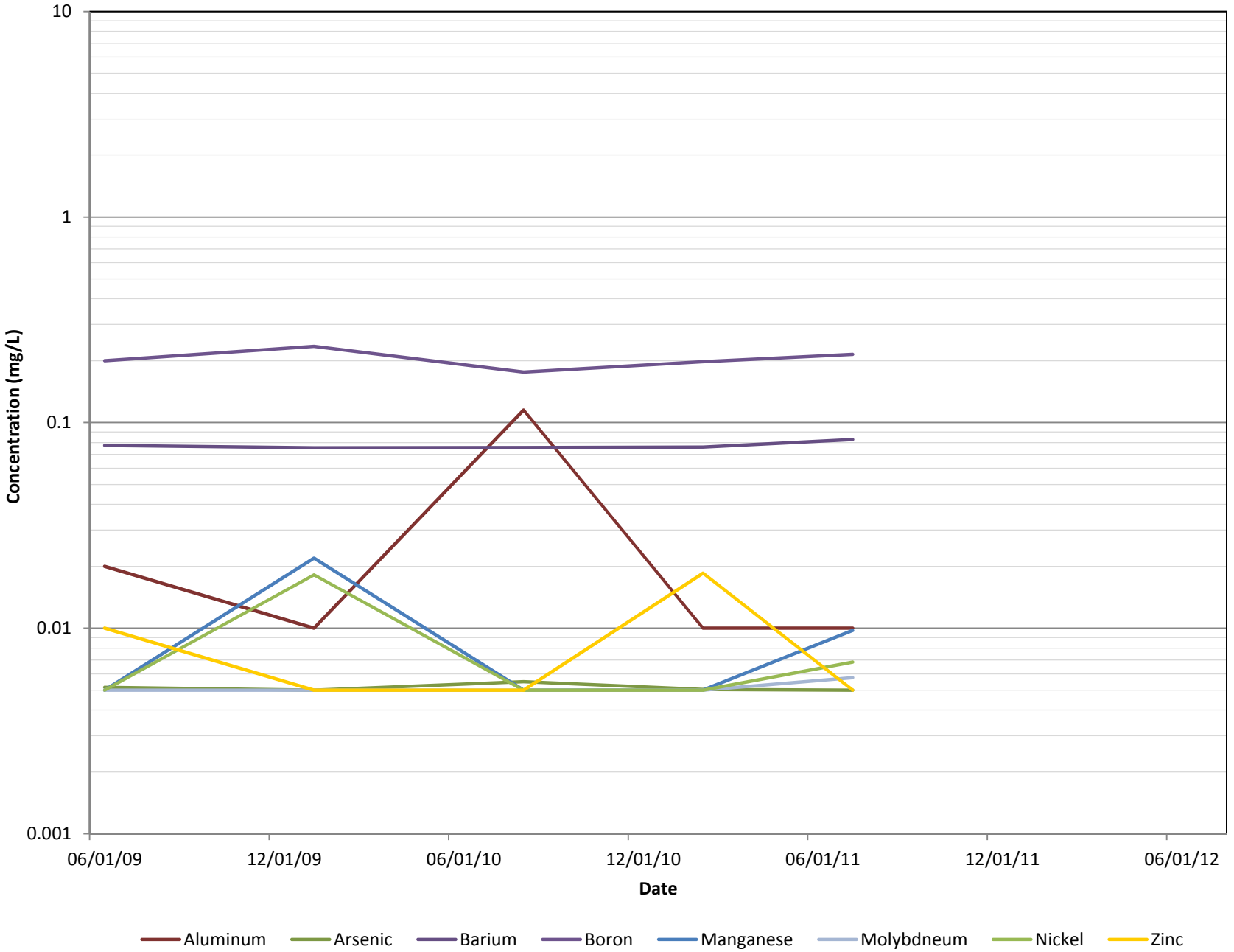
MW-12: ANION CONCENTRATIONS OVER TIME



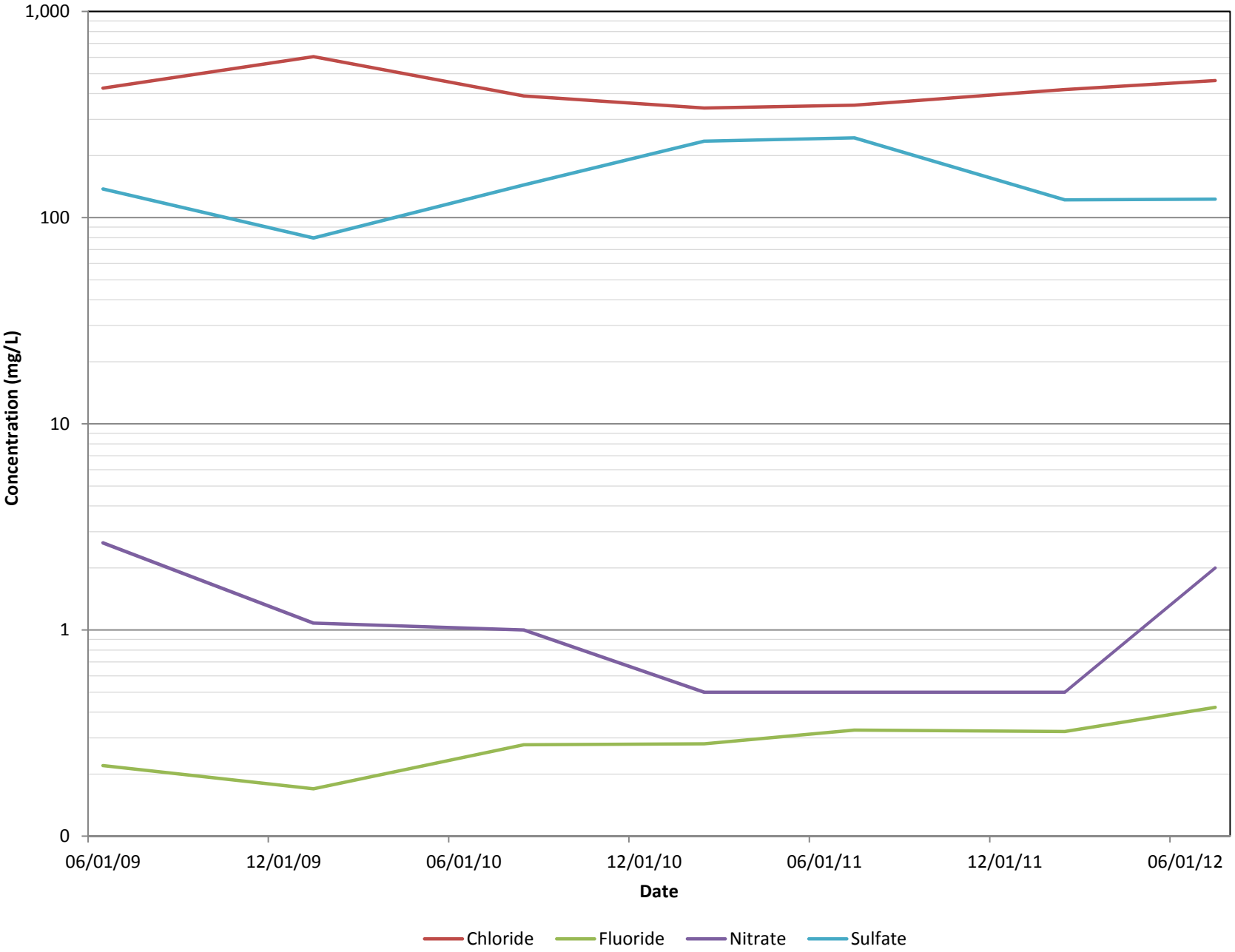
MW-12: TDS CONCENTRATIONS OVER TIME



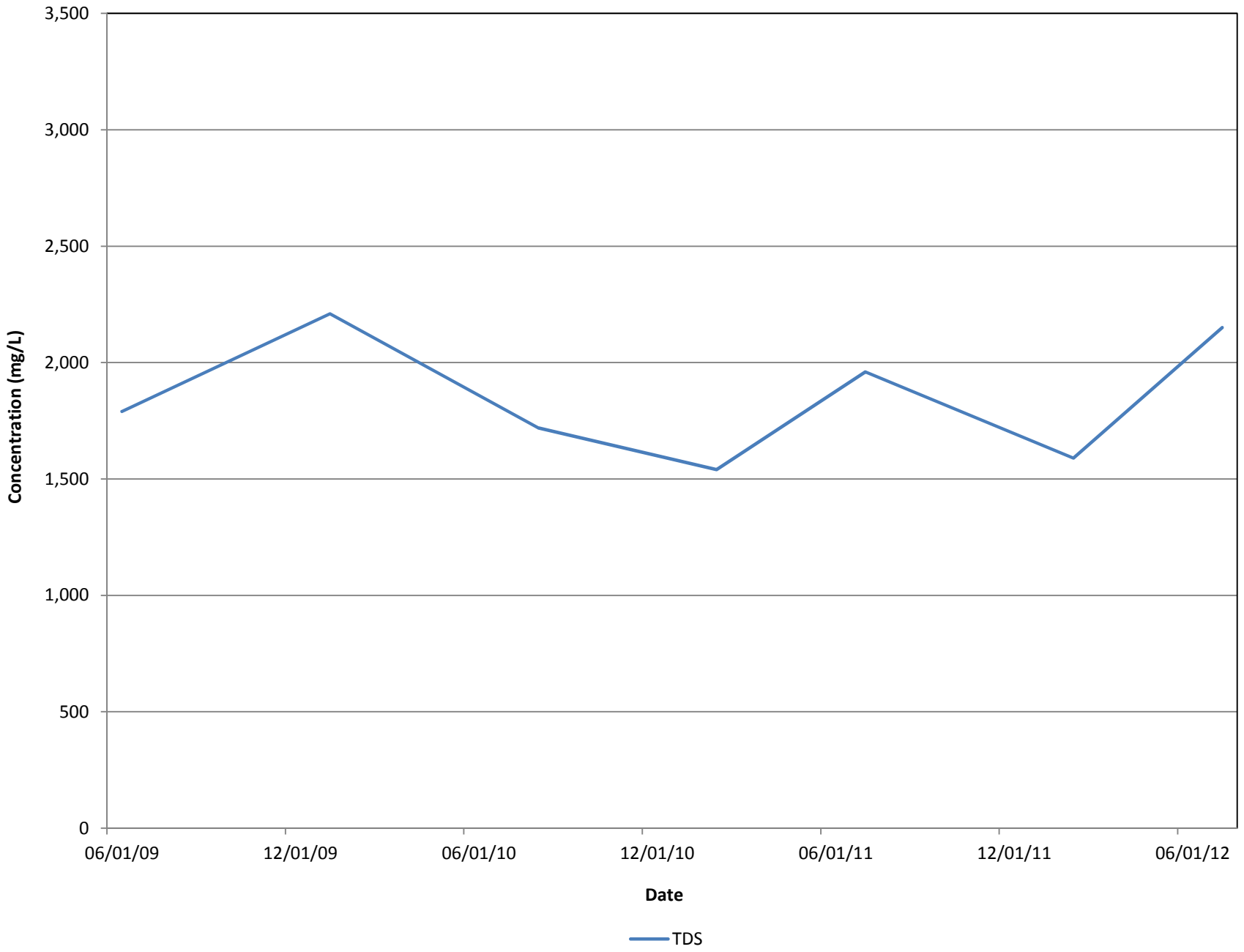
MW-12: METAL CONCENTRATIONS OVER TIME



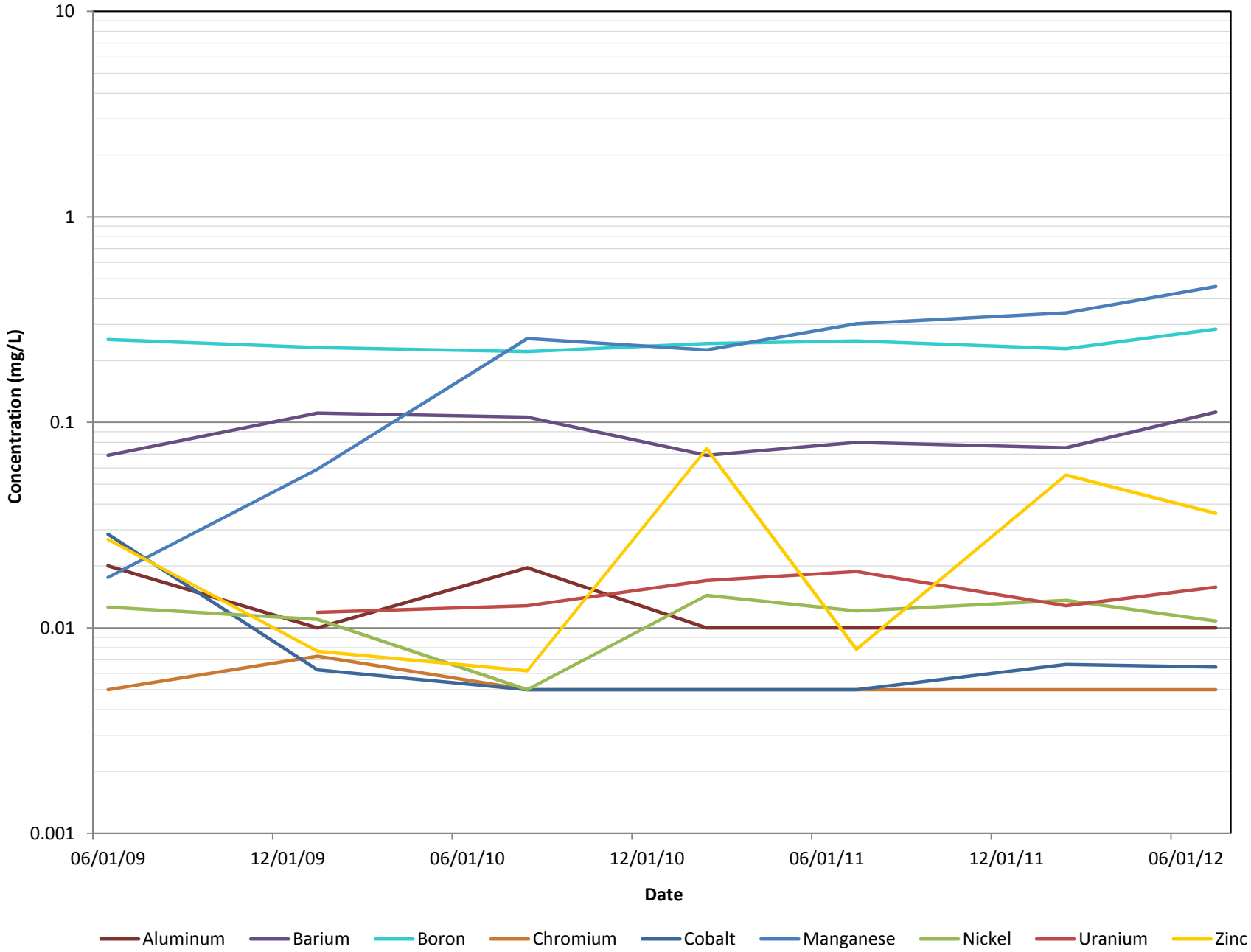
MW-13: ANION CONCENTRATIONS OVER TIME



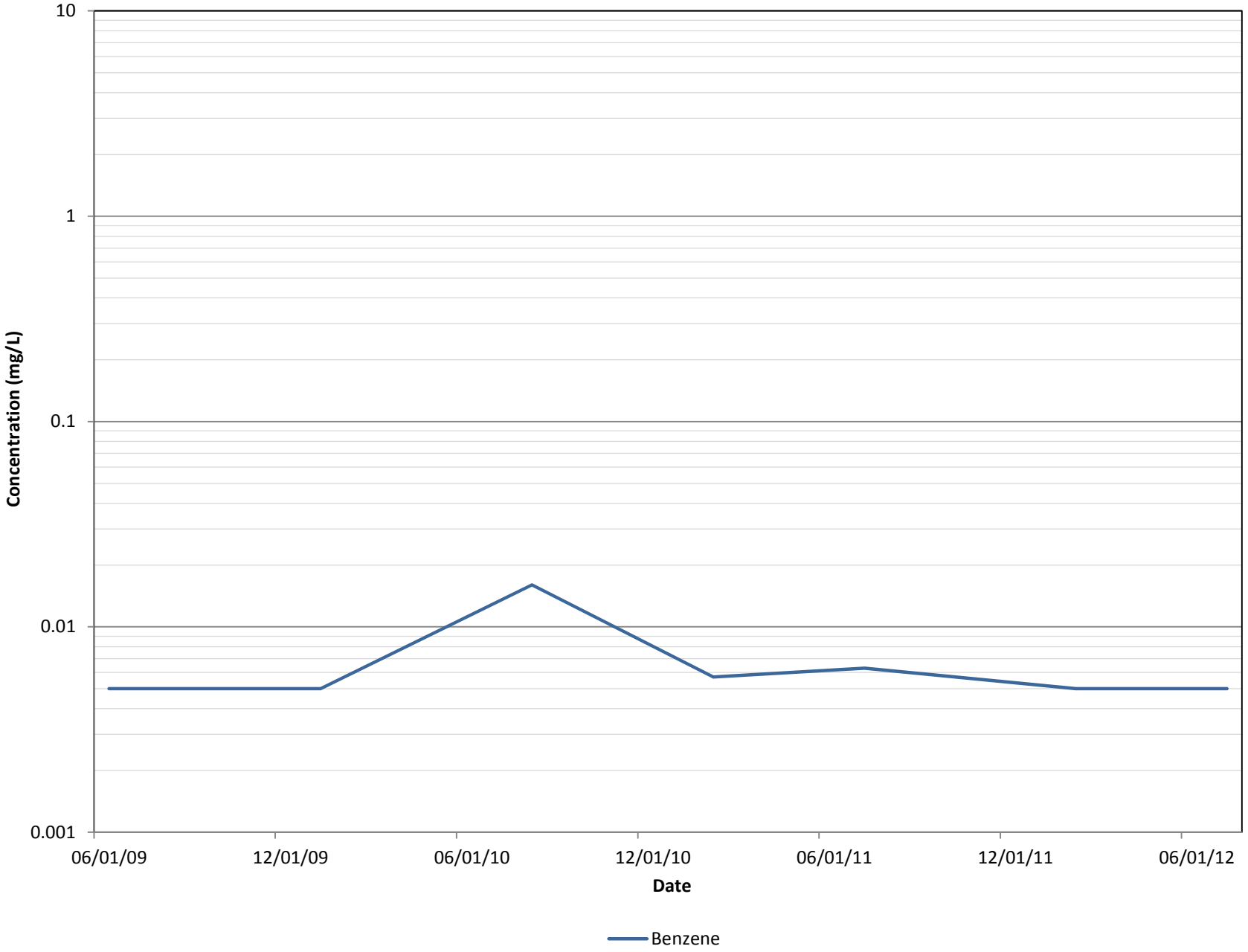
MW-13: TDS CONCENTRATIONS OVER TIME



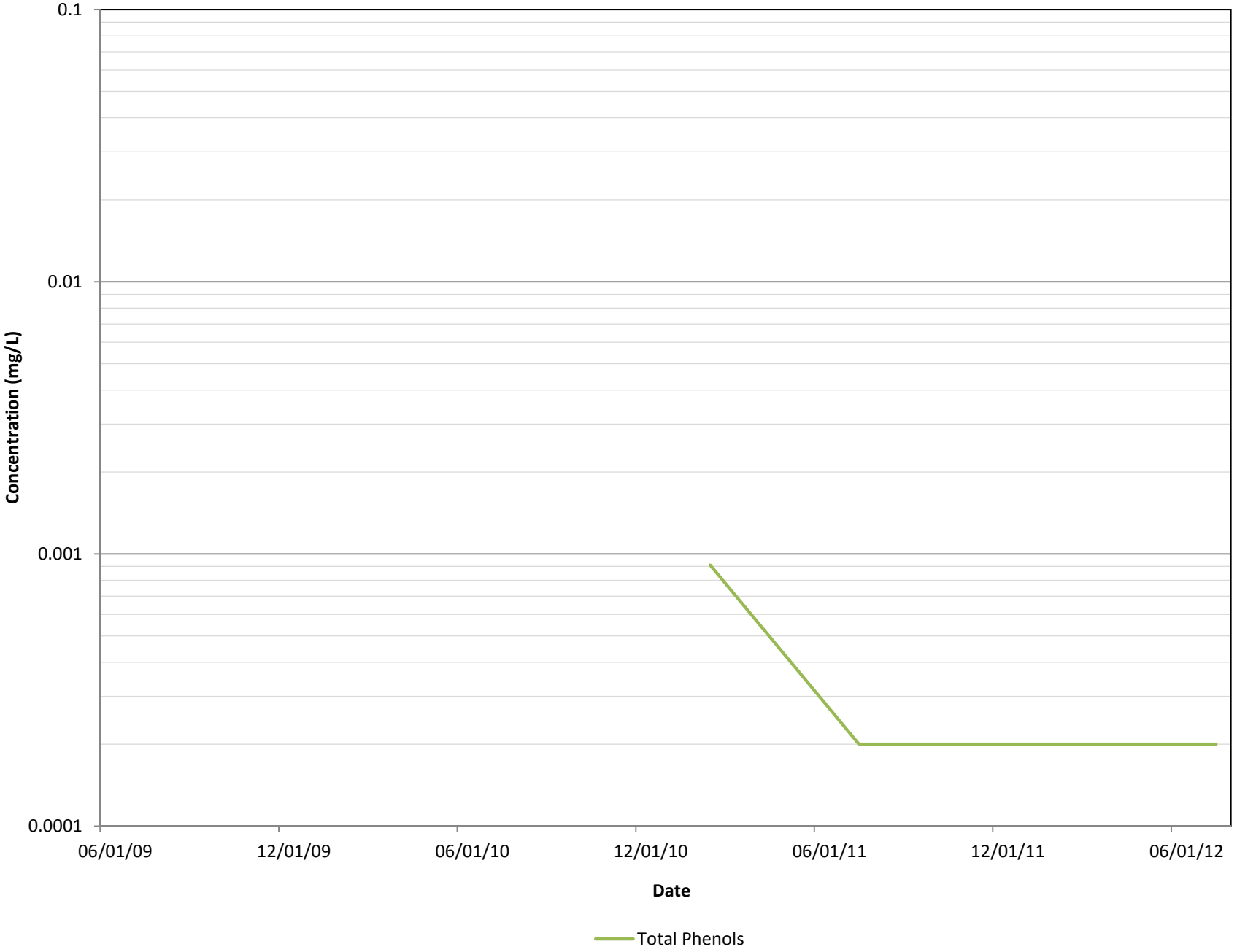
MW-13: METAL CONCENTRATIONS OVER TIME



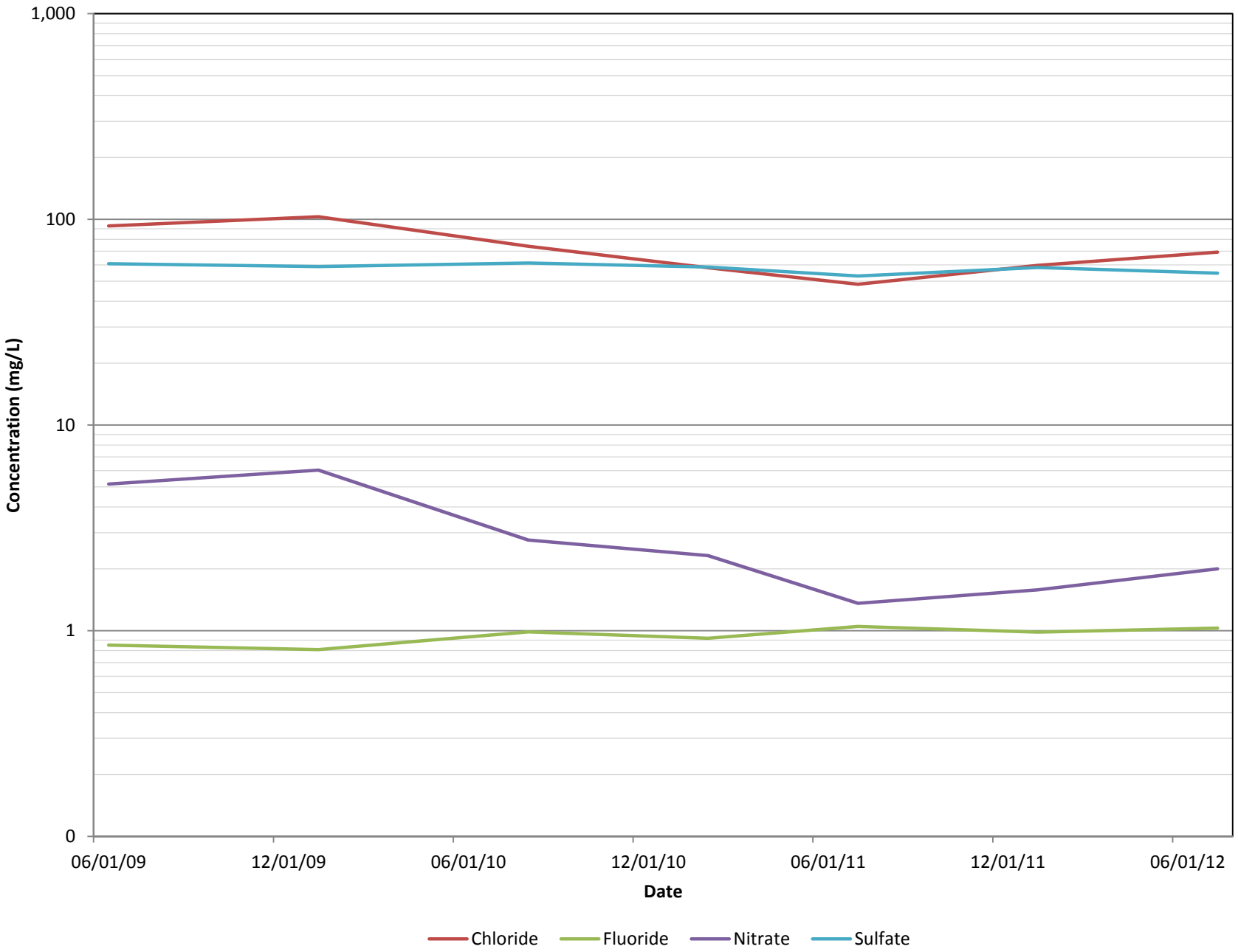
MW-13: VOC CONCENTRATIONS OVER TIME



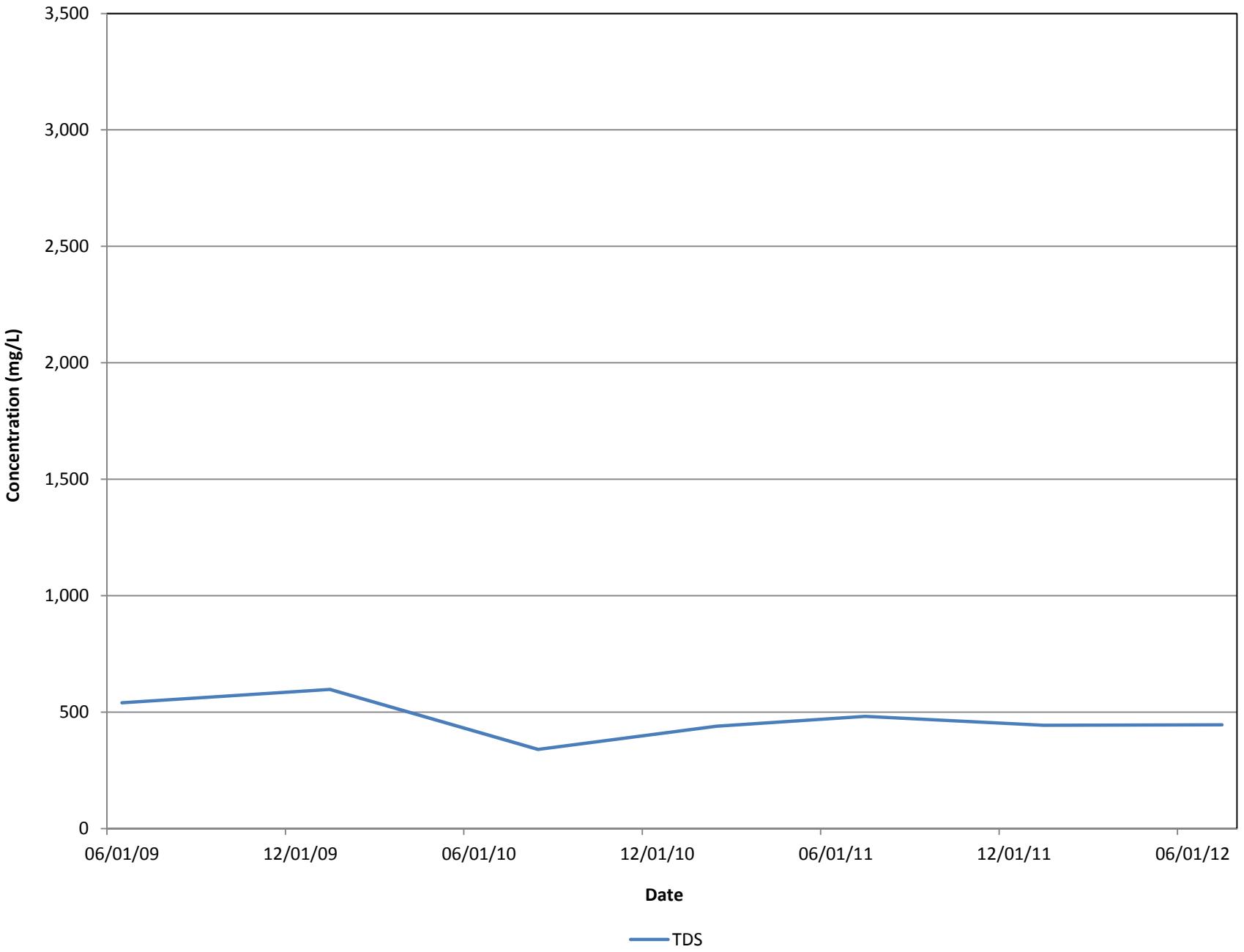
MW-13: SVOC CONCENTRATIONS OVER TIME



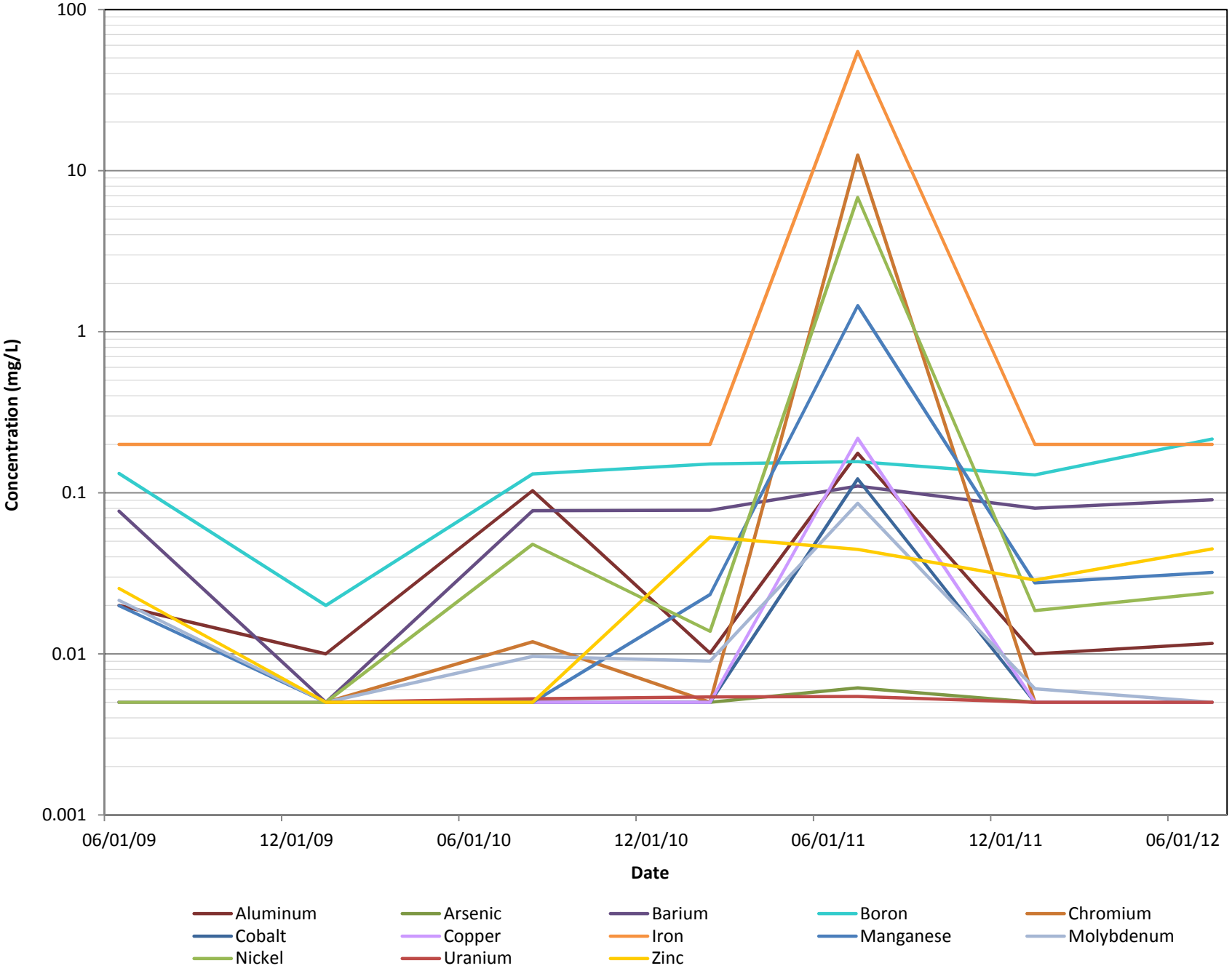
MW-14: ANION CONCENTRATIONS OVER TIME



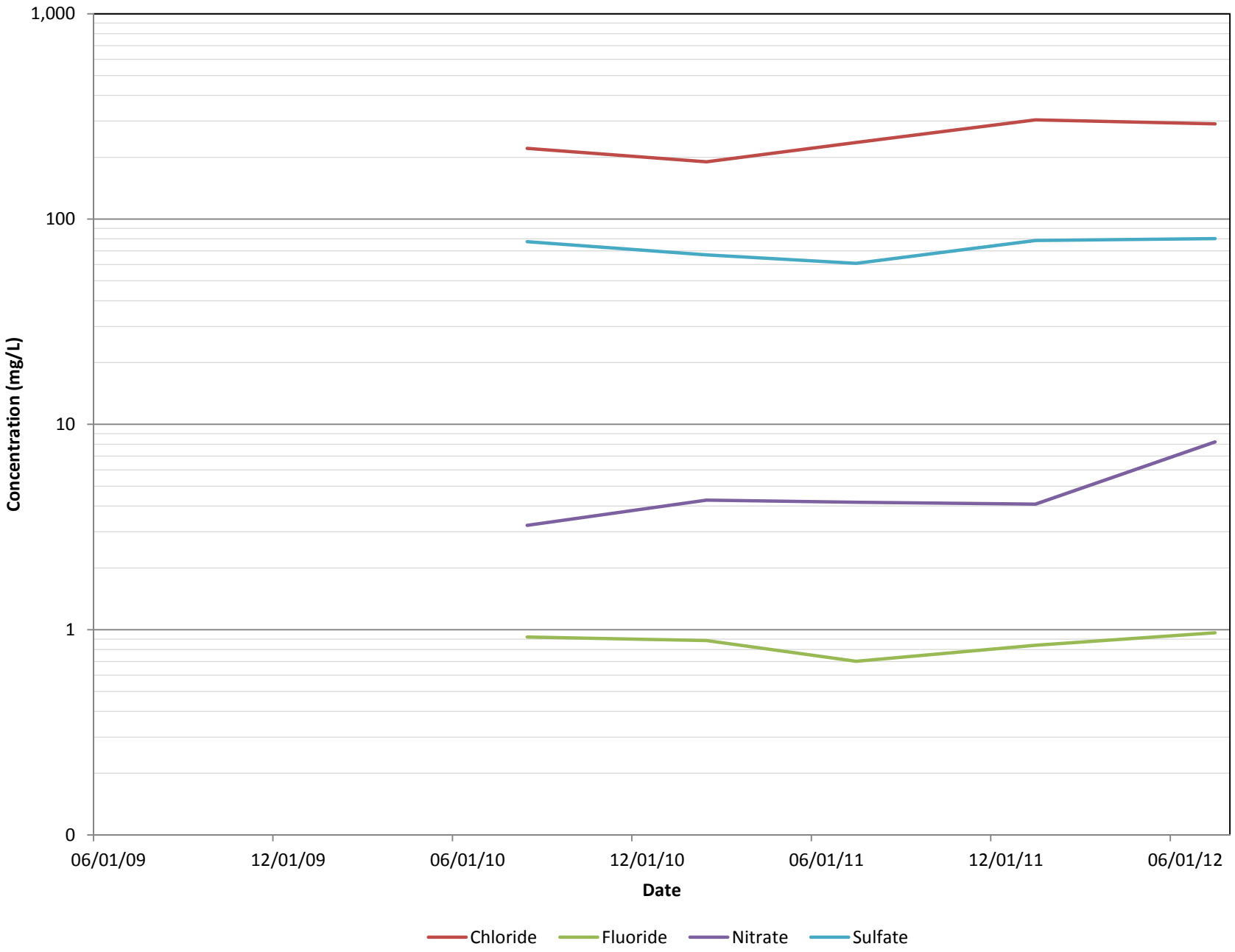
MW-14: TDS CONCENTRATIONS OVER TIME



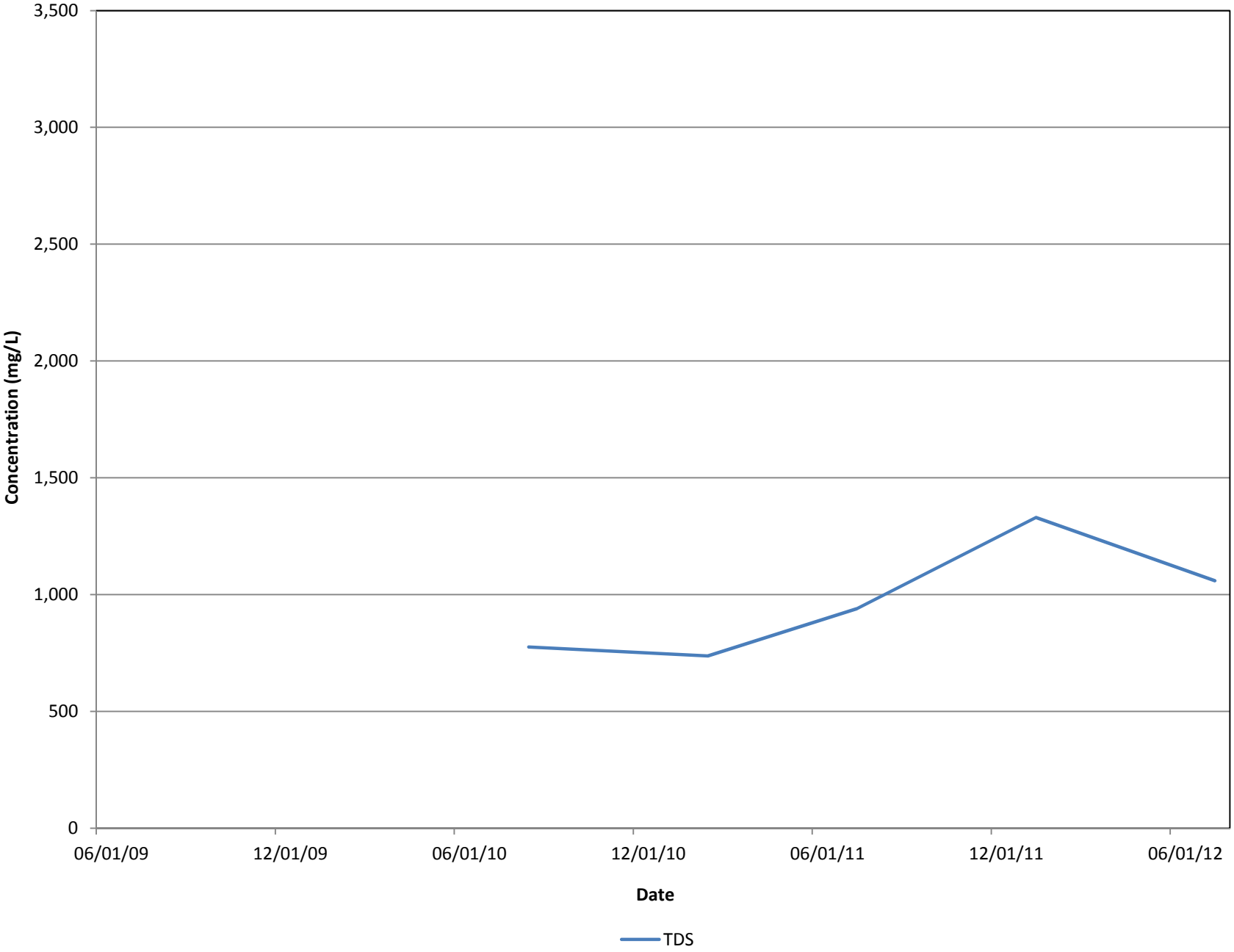
MW-14: METAL CONCENTRATIONS OVER TIME



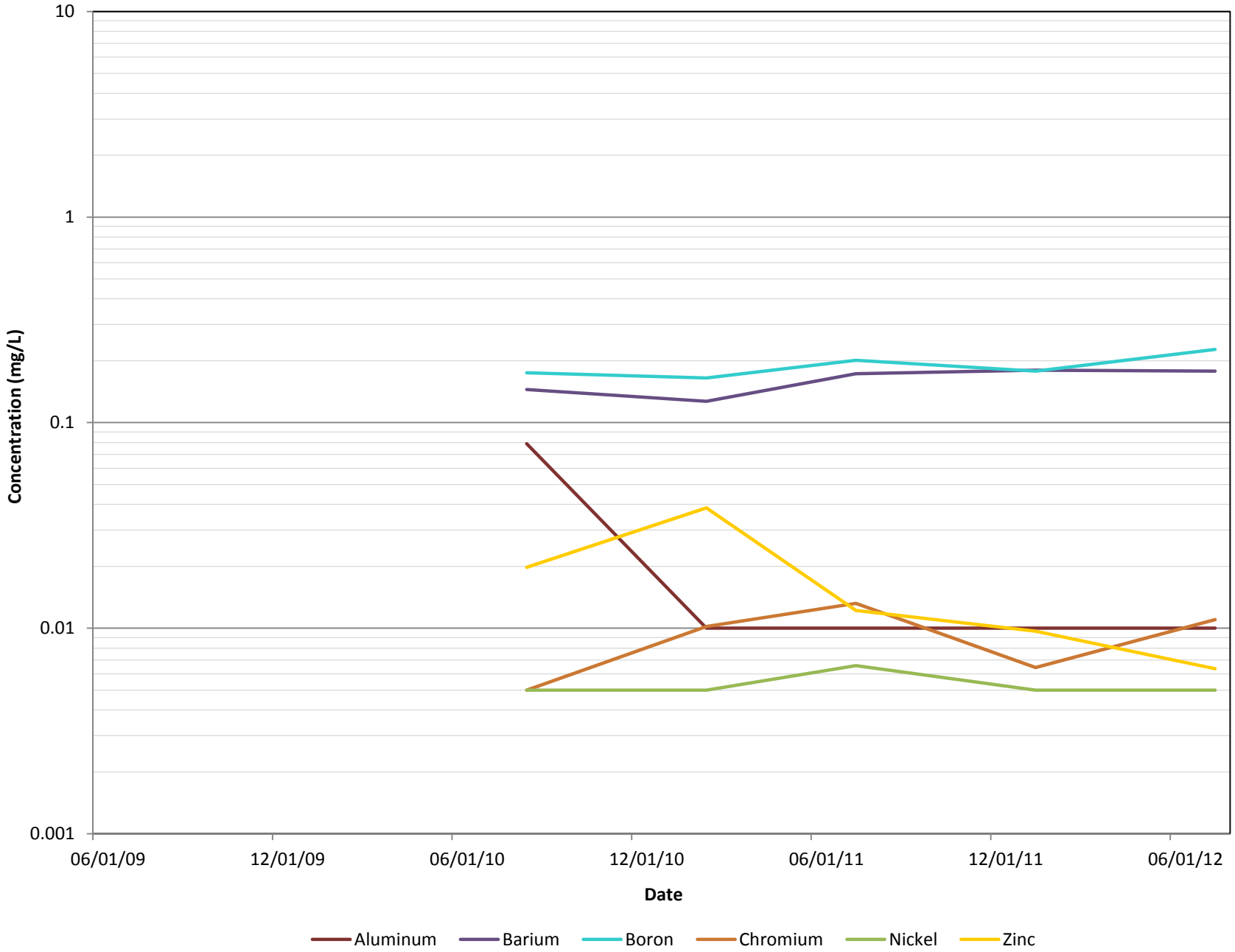
MW-15: ANION CONCENTRATIONS OVER TIME



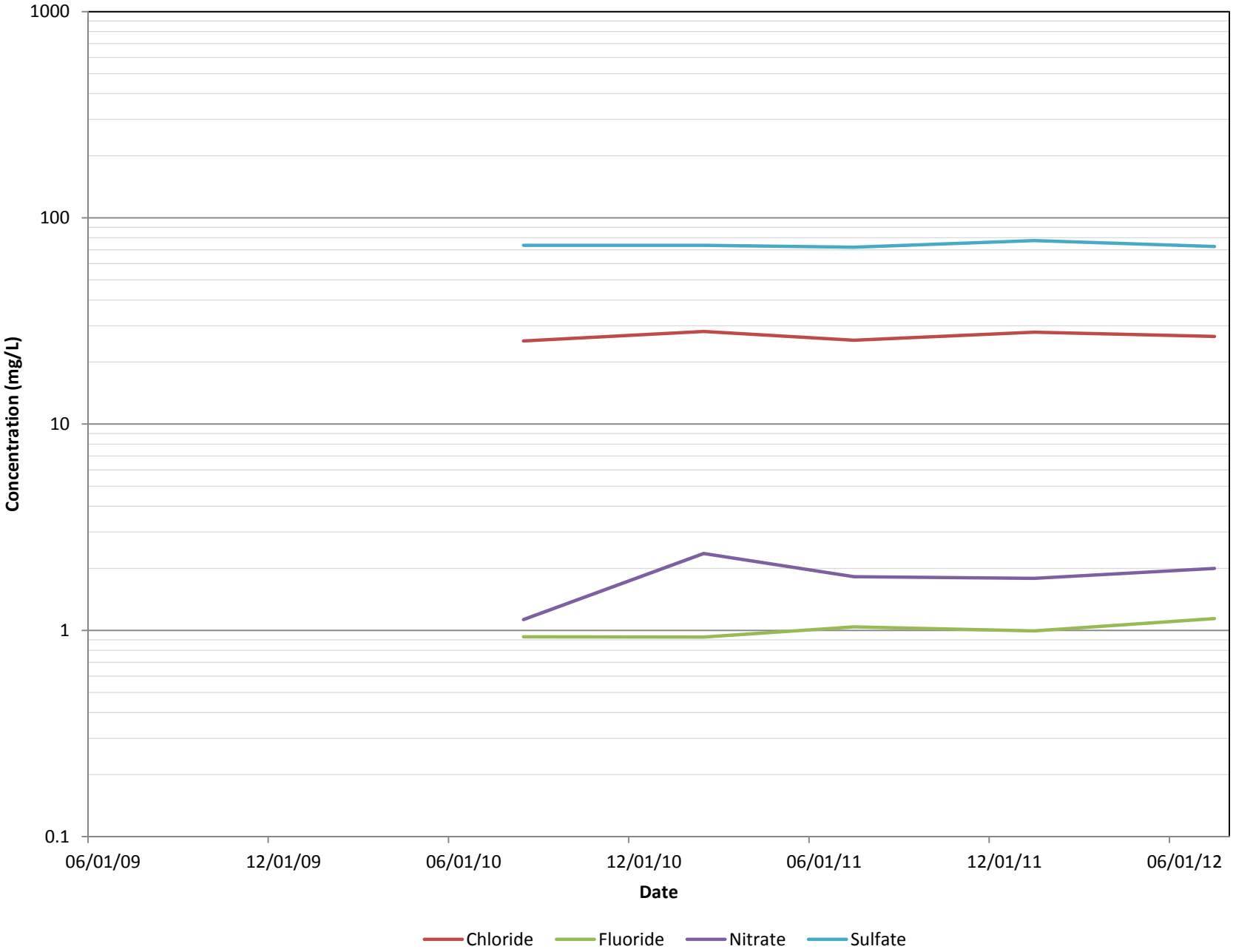
MW-15: TDS CONCENTRATIONS OVER TIME



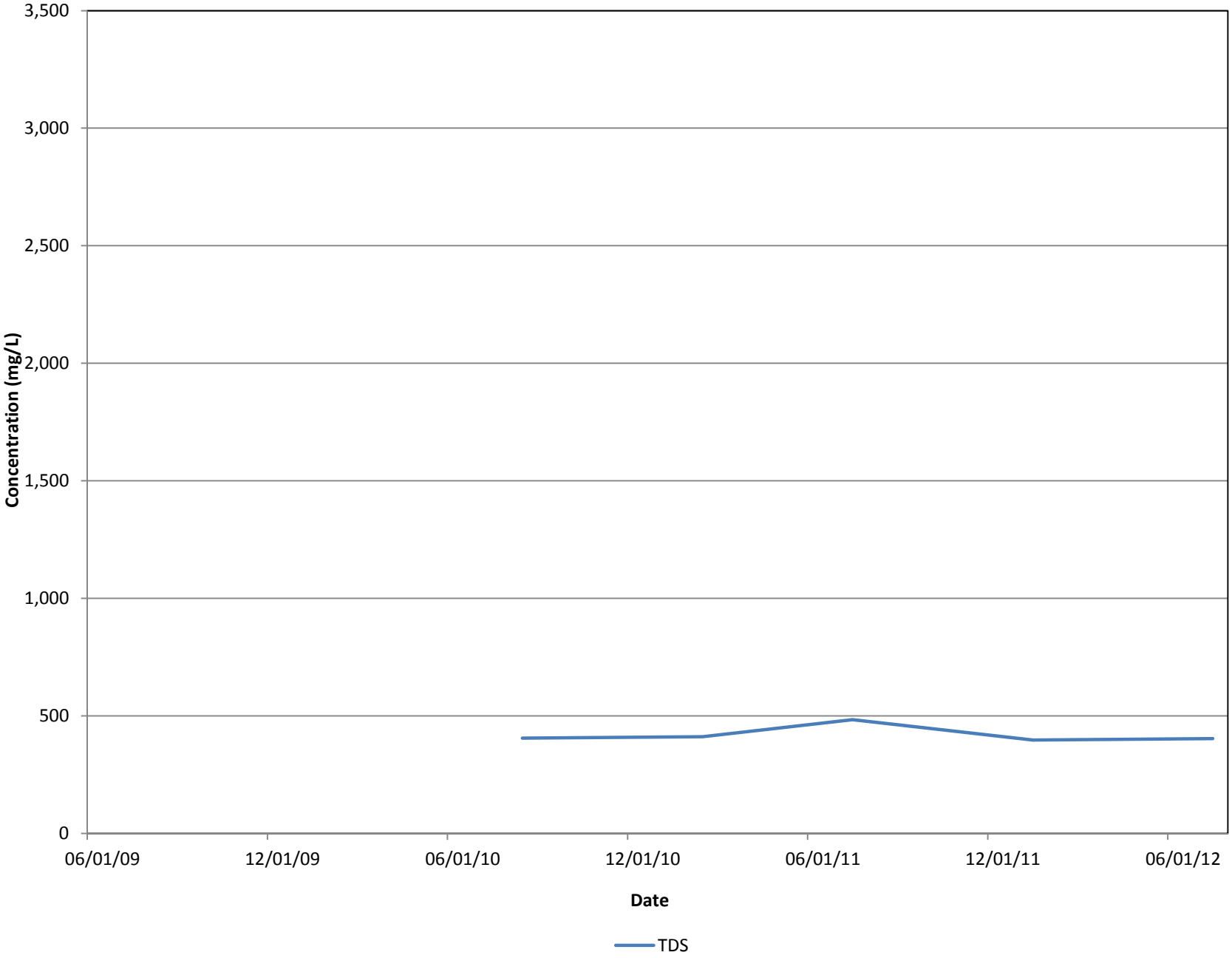
MW-15: METAL CONCENTRATIONS OVER TIME



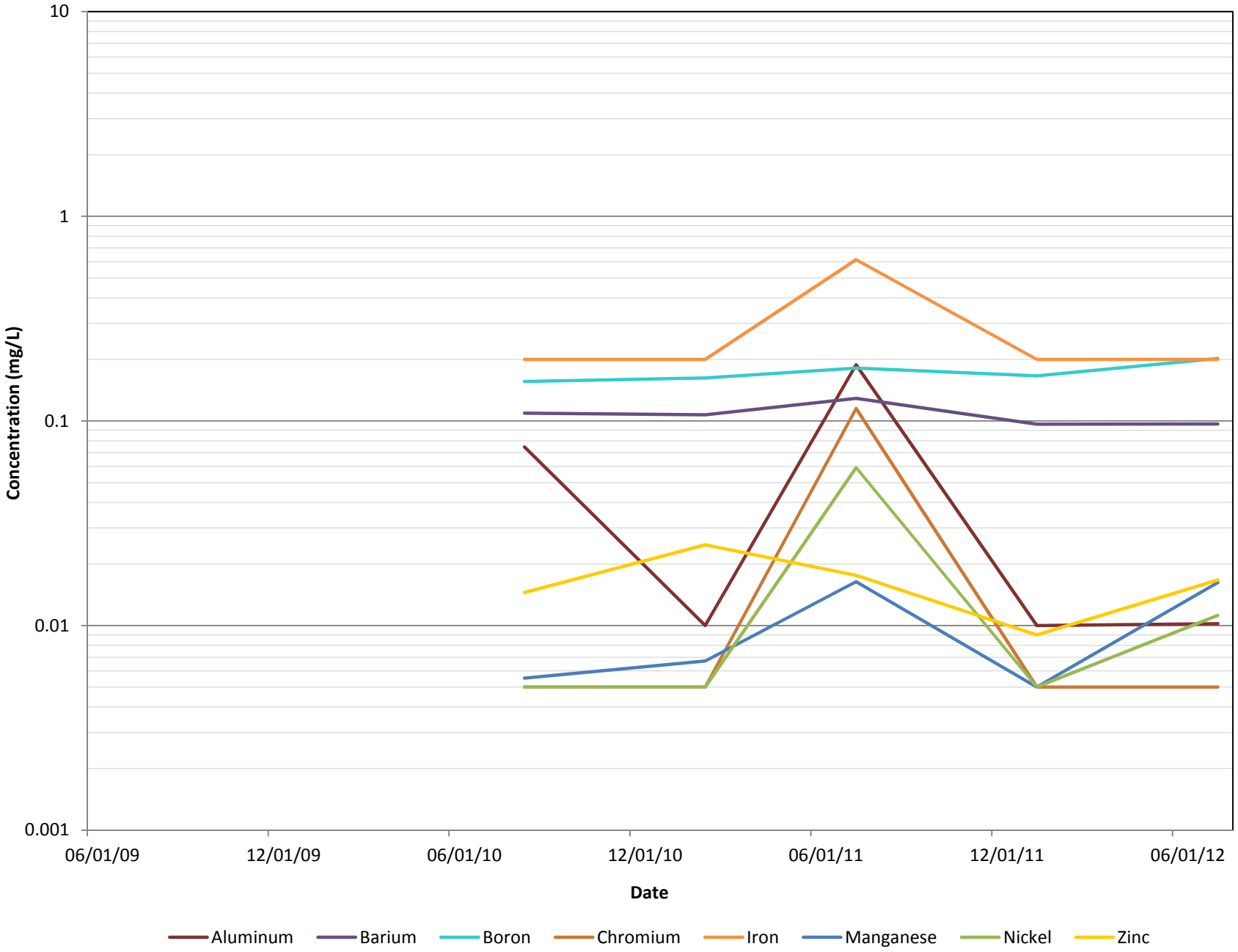
MW-16: ANION CONCENTRATIONS OVER TIME



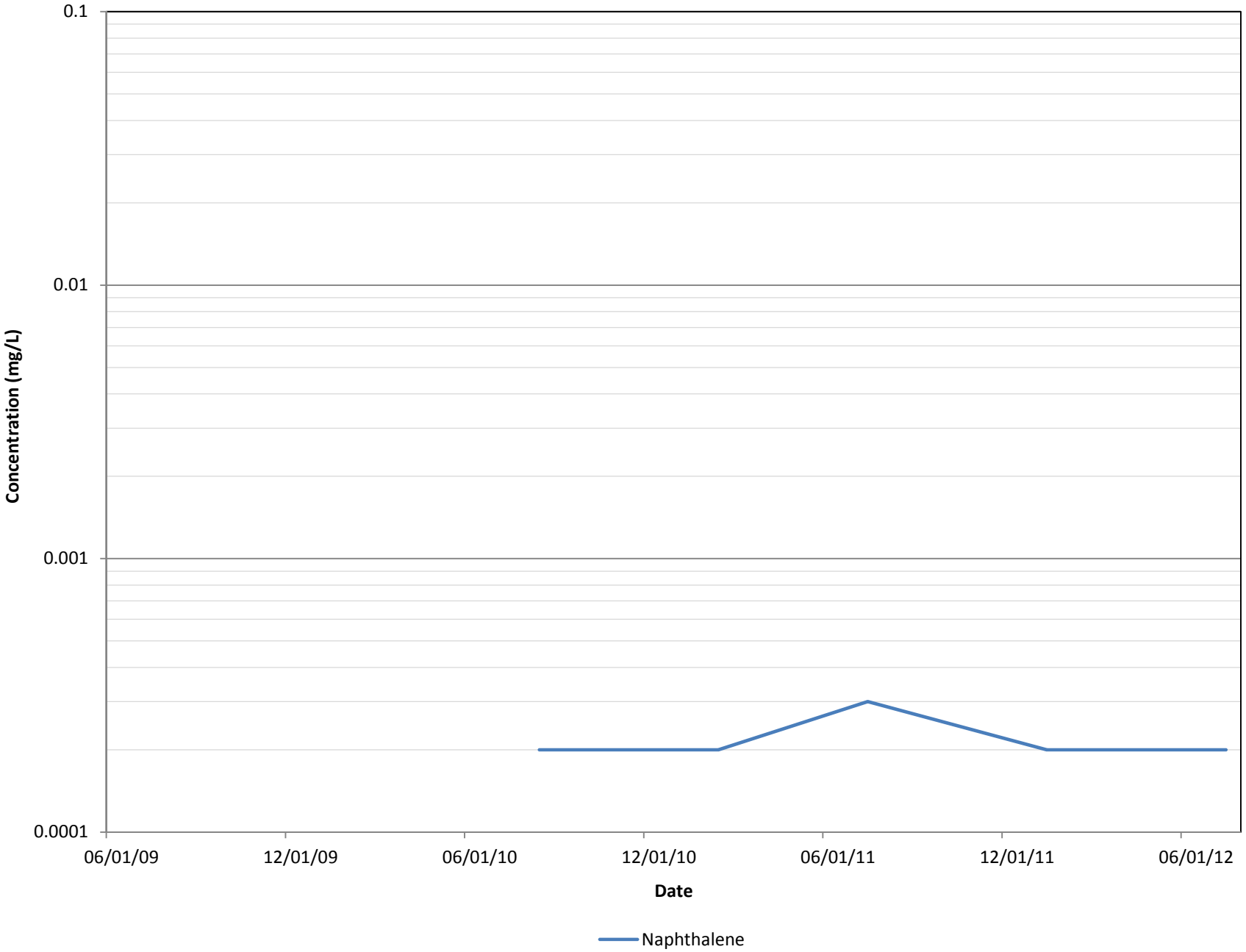
MW-16: TDS CONCENTRATIONS OVER TIME



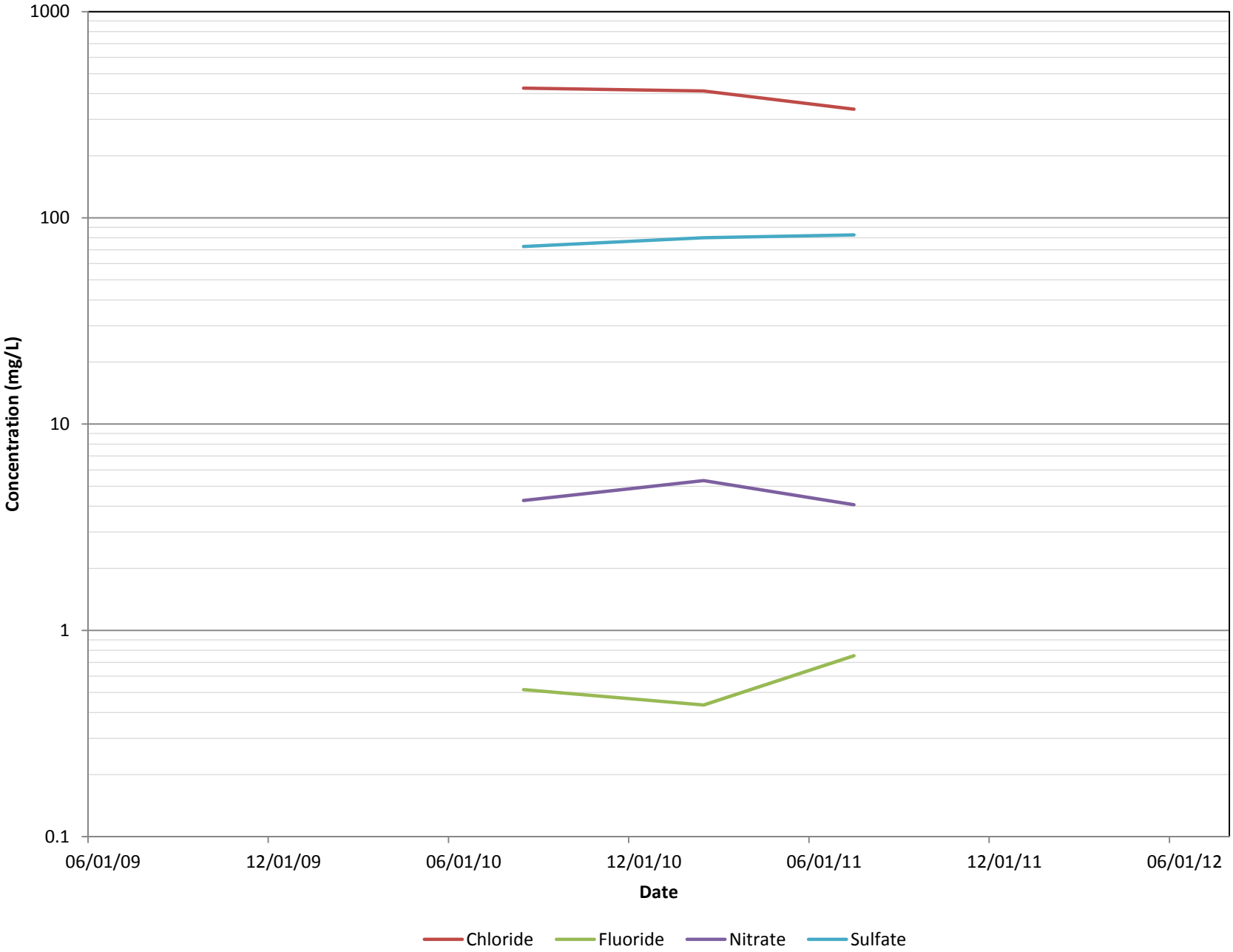
MW-16: METAL CONCENTRATIONS OVER TIME



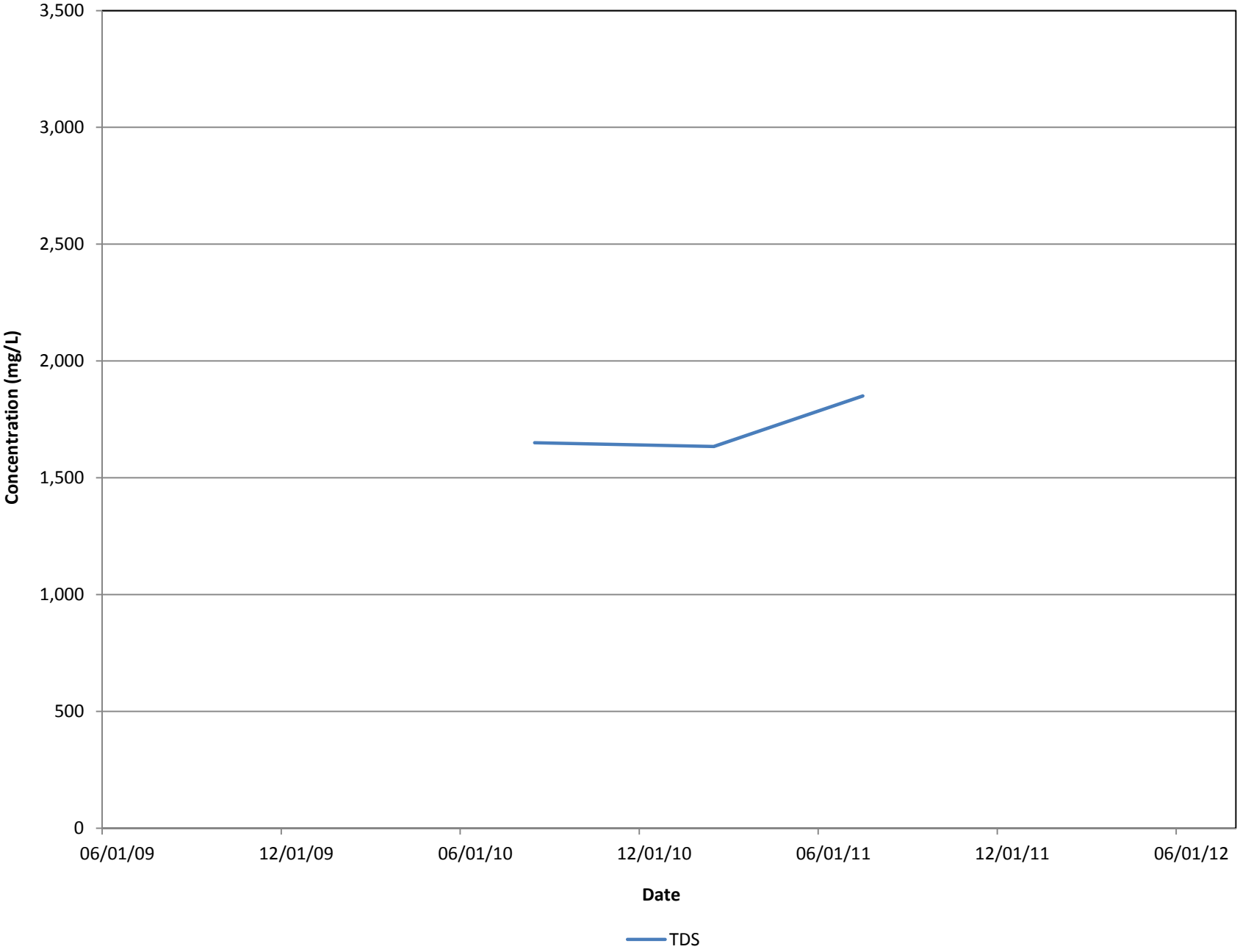
MW-16: SVOC CONCENTRATIONS OVER TIME



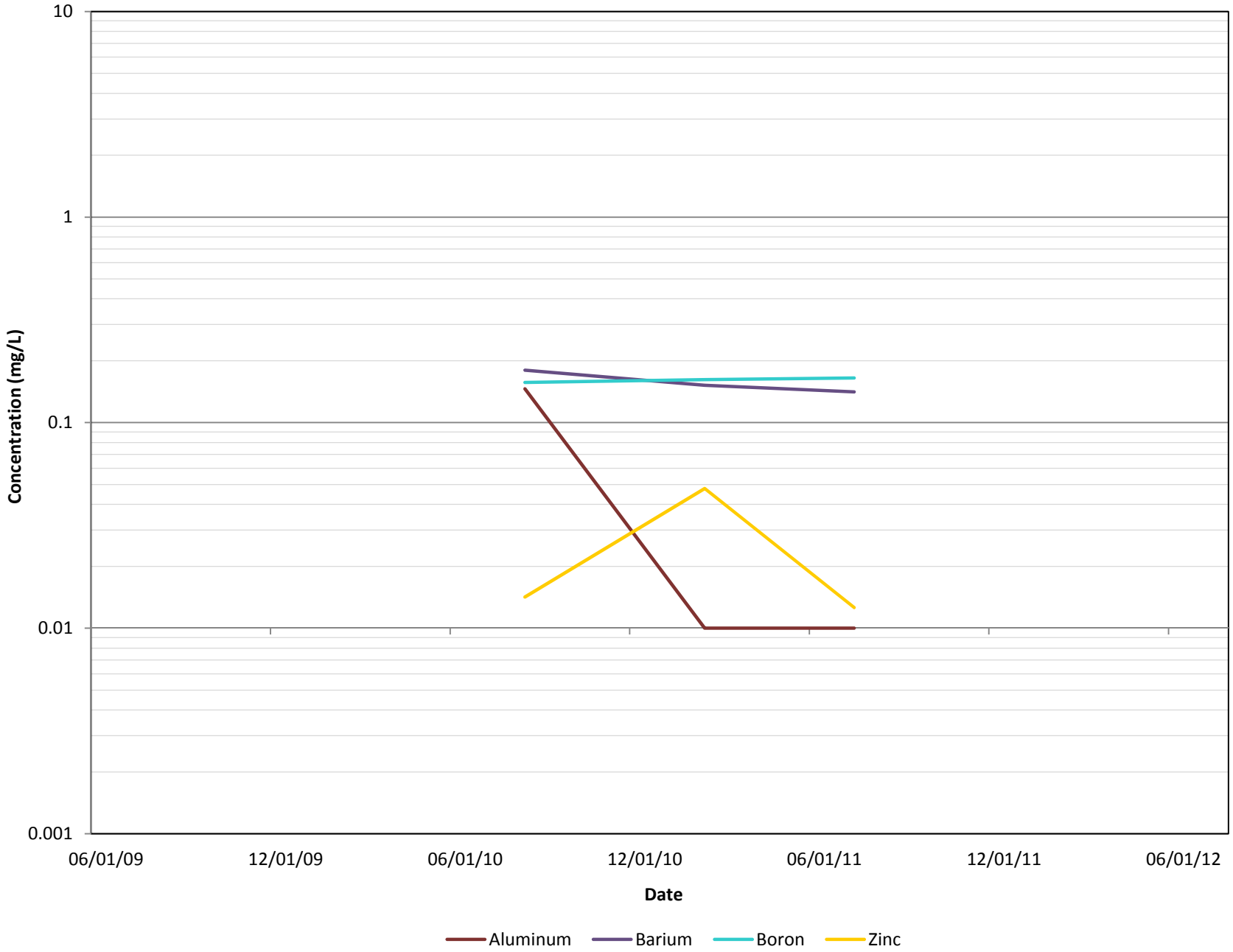
MW-17: ANION CONCENTRATIONS OVER TIME



MW-17: TDS CONCENTRATIONS OVER TIME



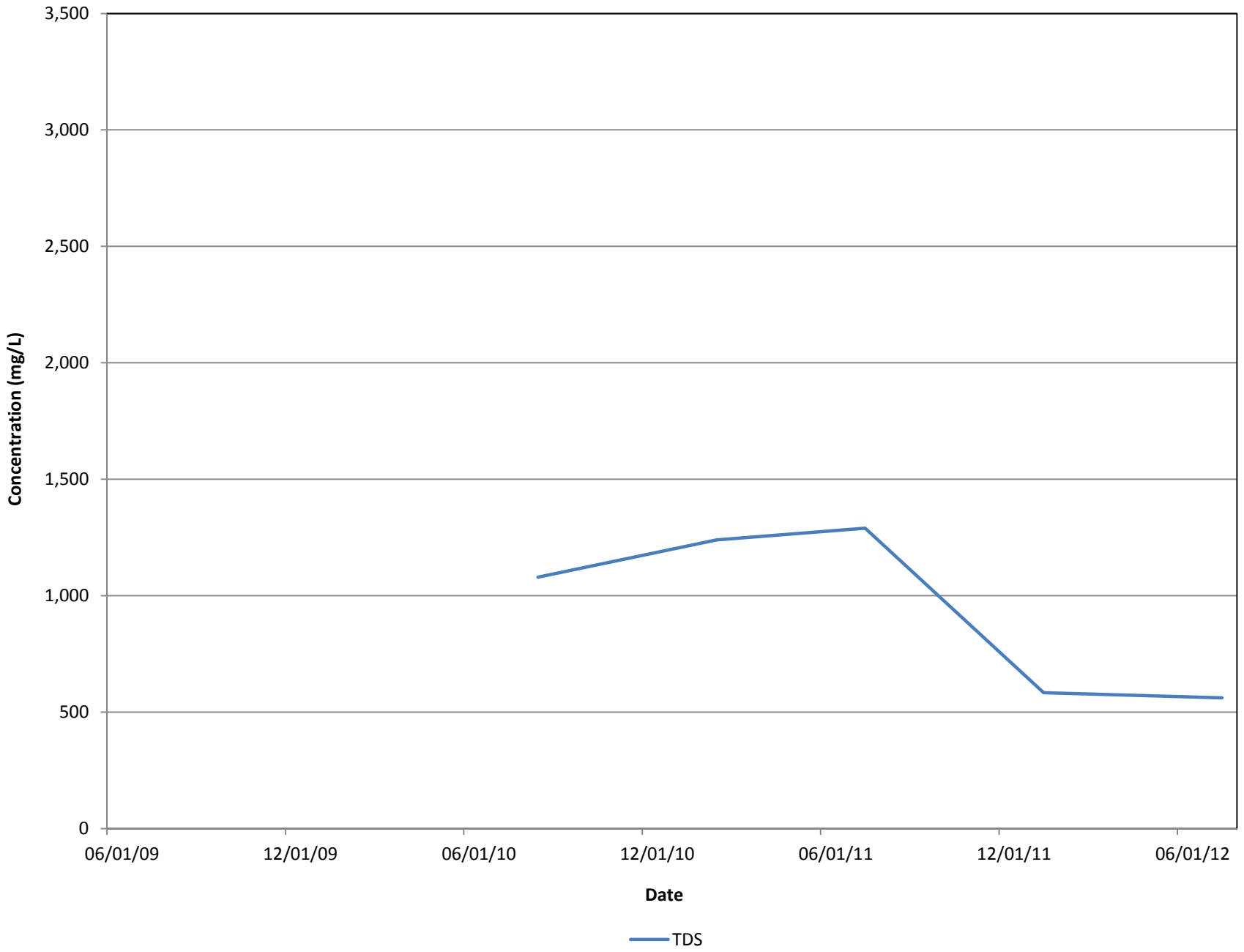
MW-17: METAL CONCENTRATIONS OVER TIME



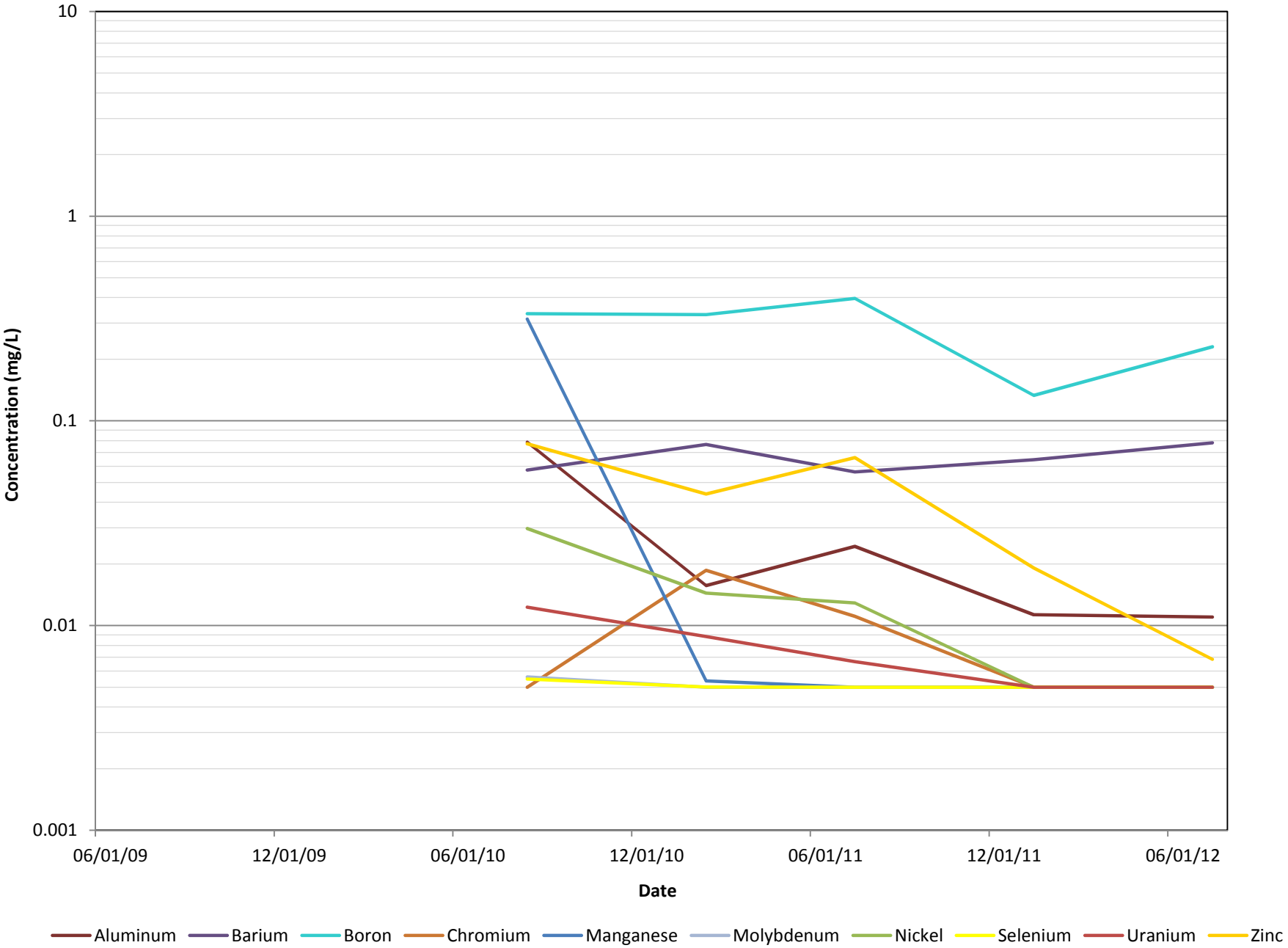
MW-18: ANION CONCENTRATIONS OVER TIME



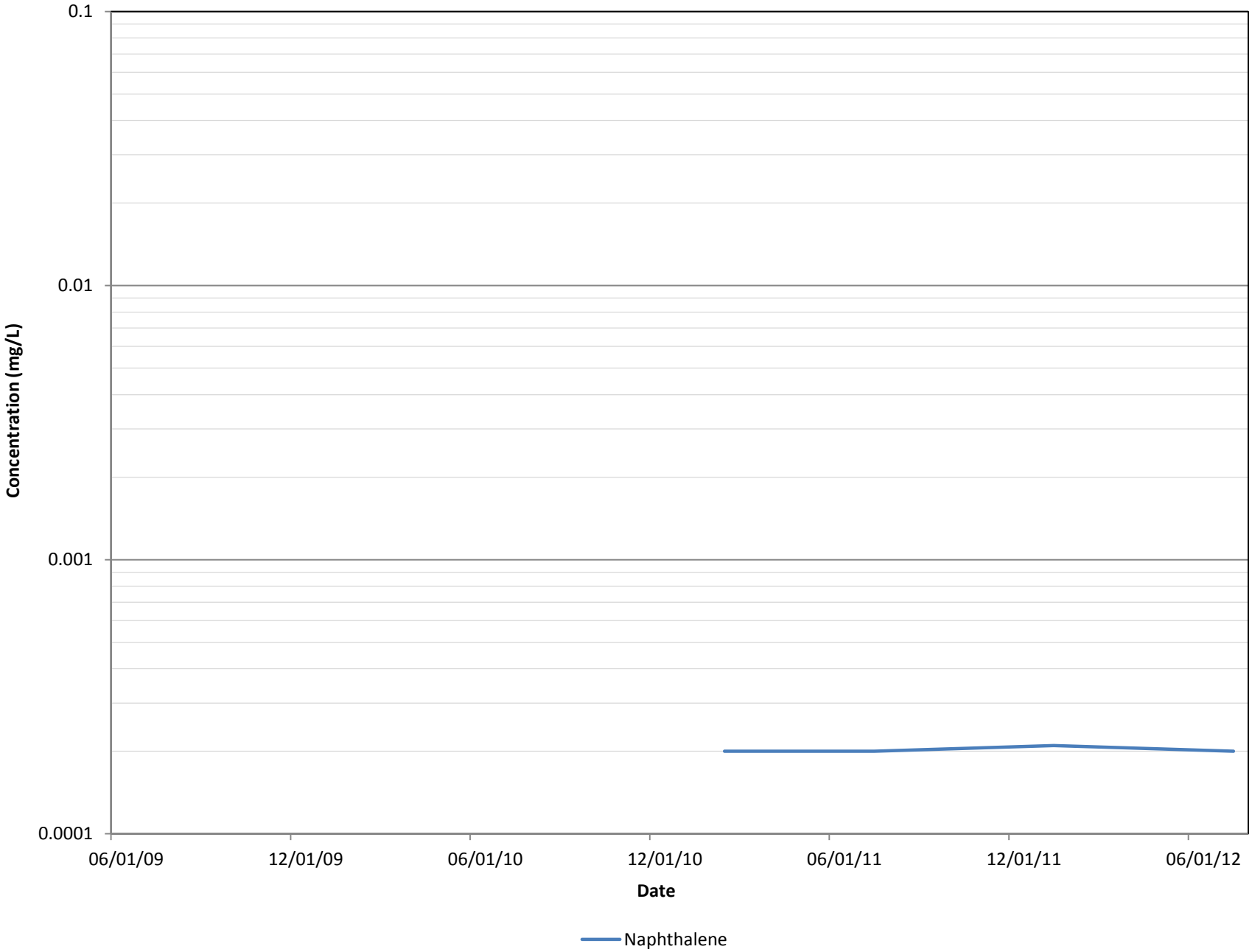
MW-18: TDS CONCENTRATIONS OVER TIME



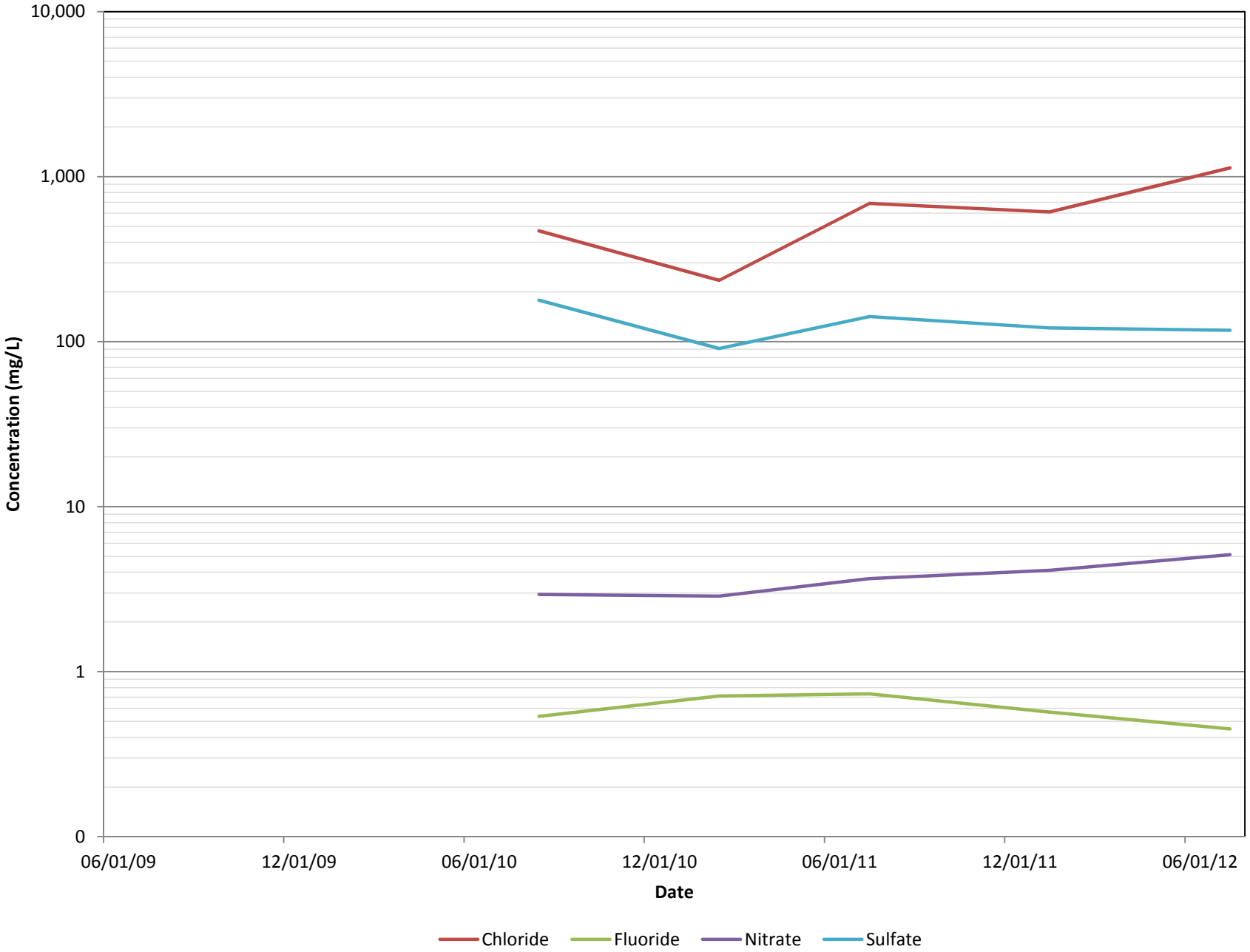
MW-18: METAL CONCENTRATIONS OVER TIME



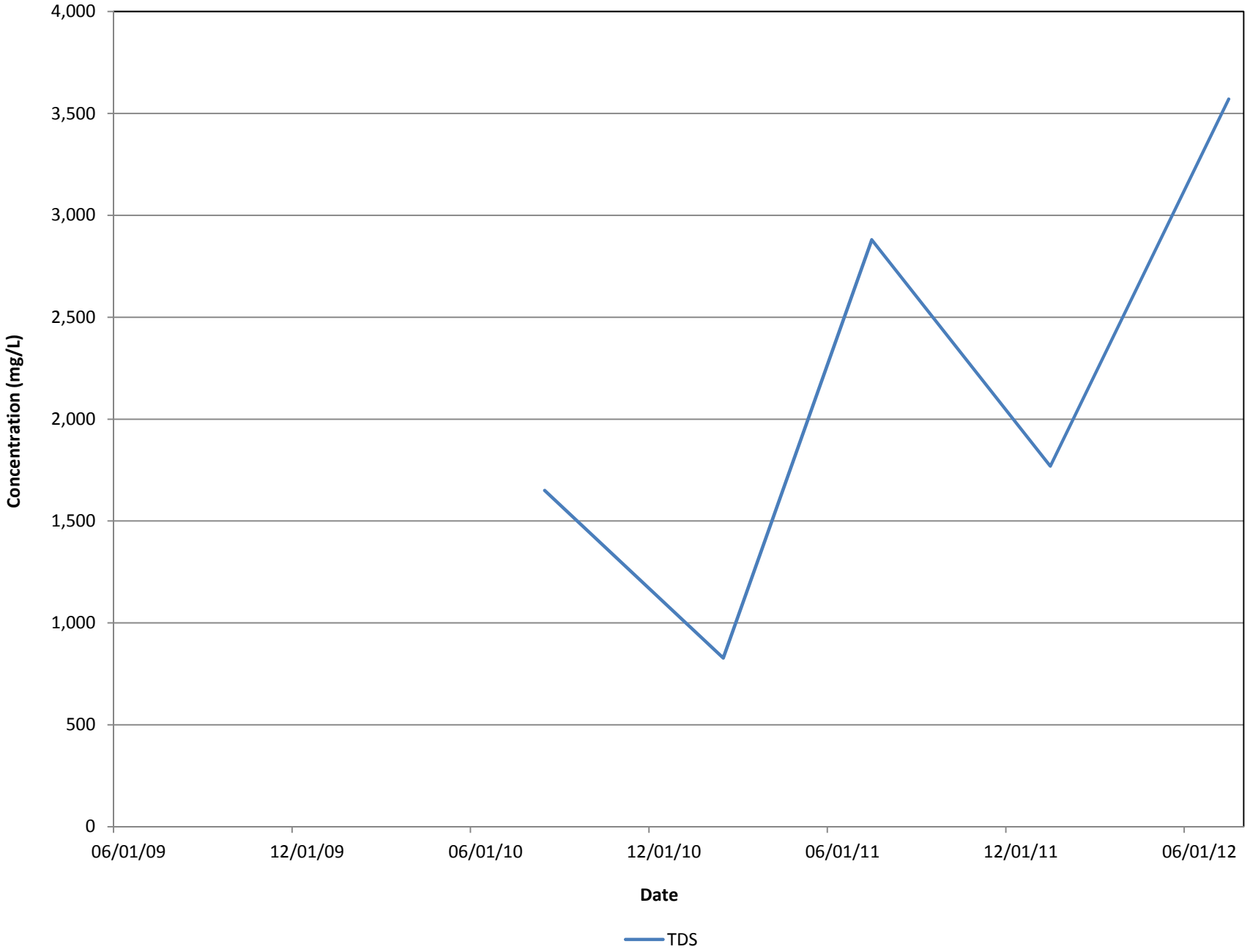
MW-18: SVOC CONCENTRATIONS OVER TIME



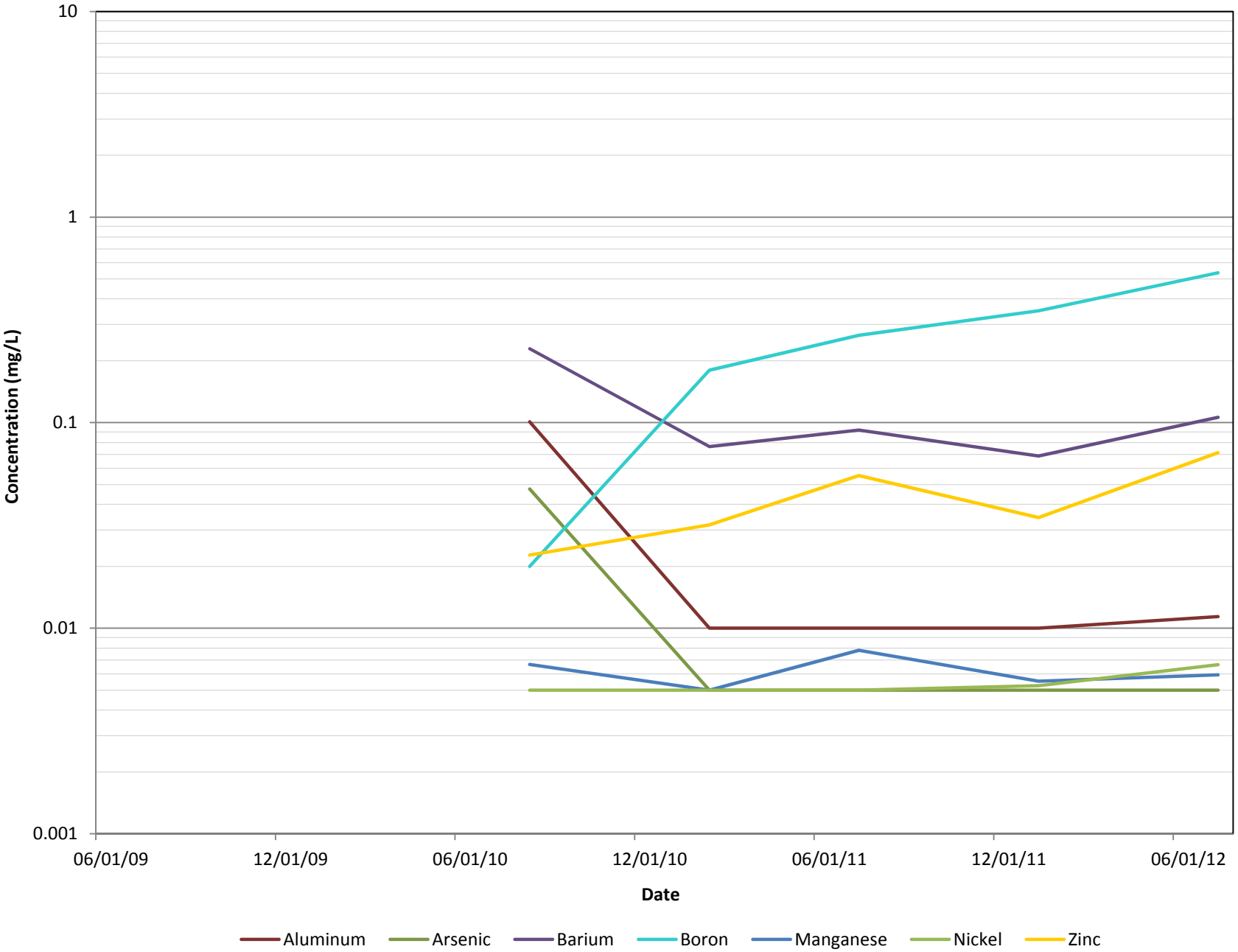
MW-19: ANION CONCENTRATIONS OVER TIME



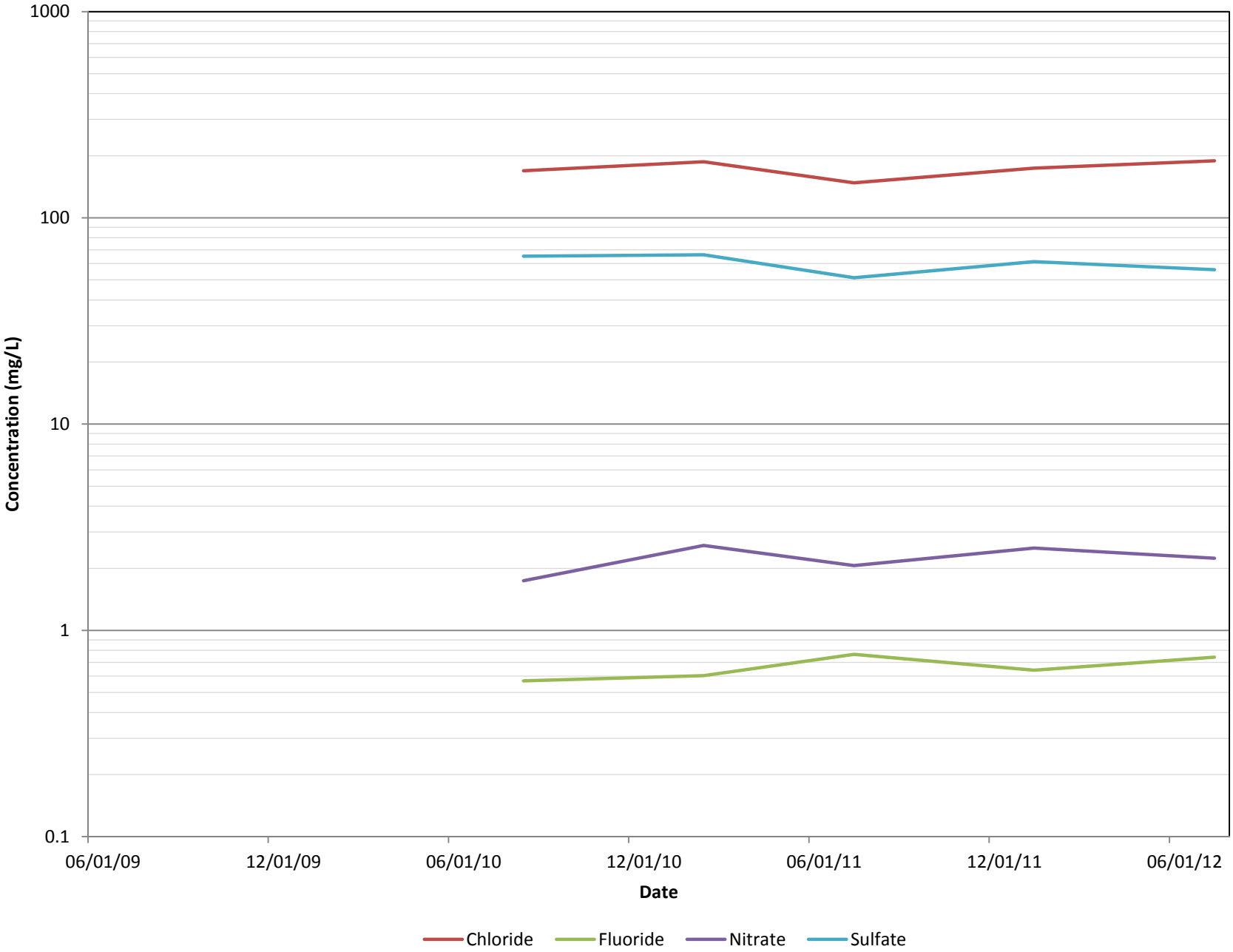
MW-19: TDS CONCENTRATIONS OVER TIME



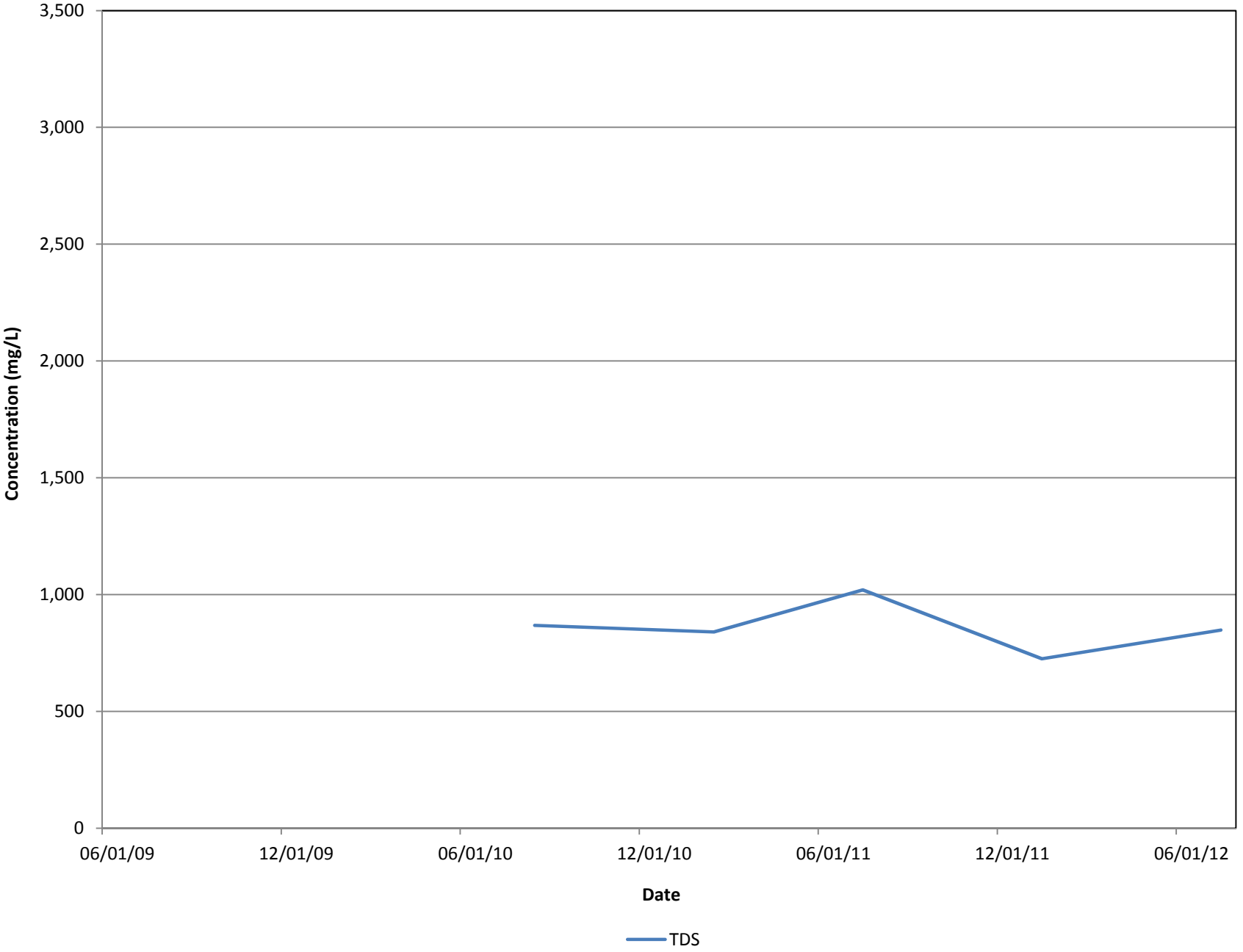
MW-19: METAL CONCENTRATIONS OVER TIME



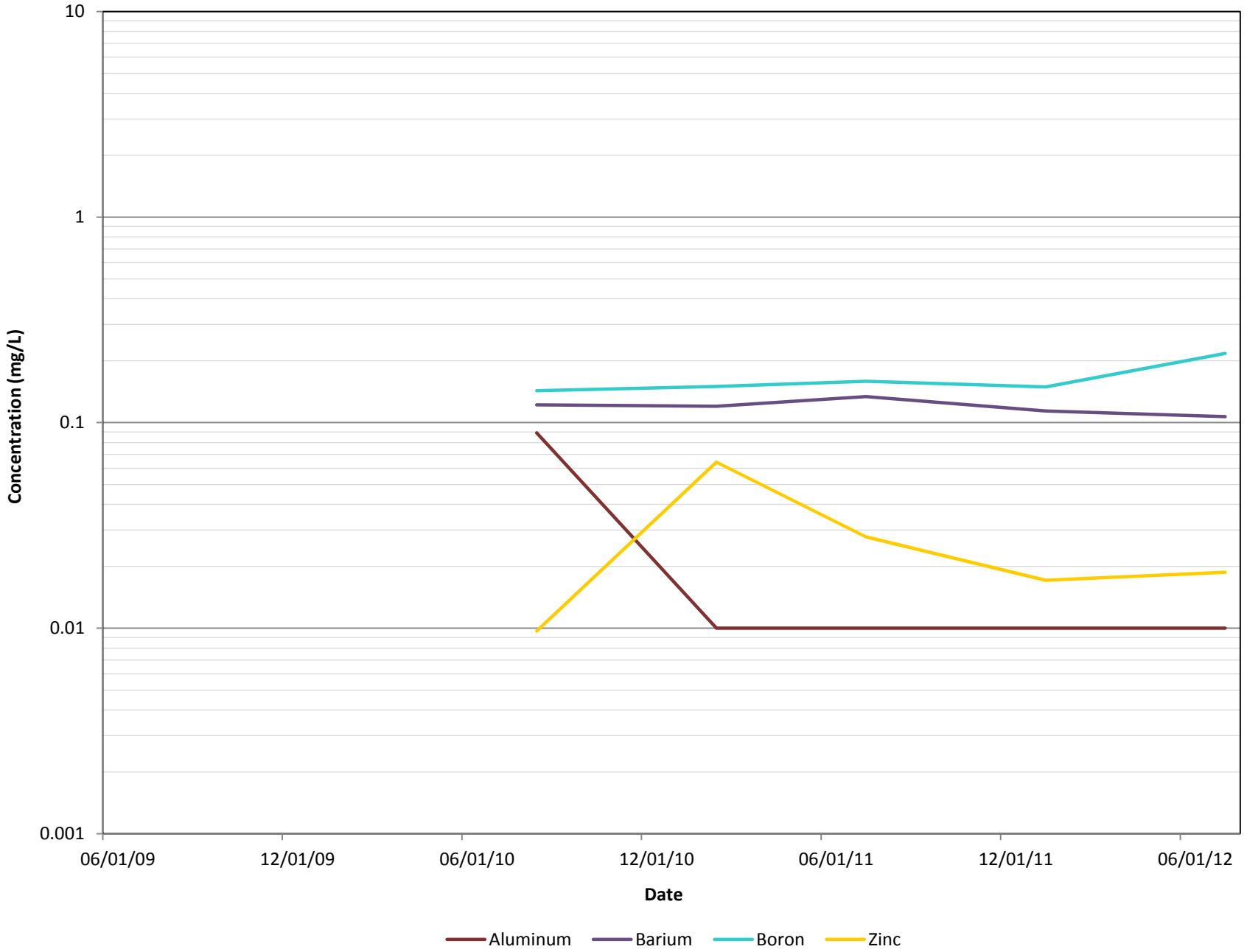
MW-20: ANION CONCENTRATIONS OVER TIME



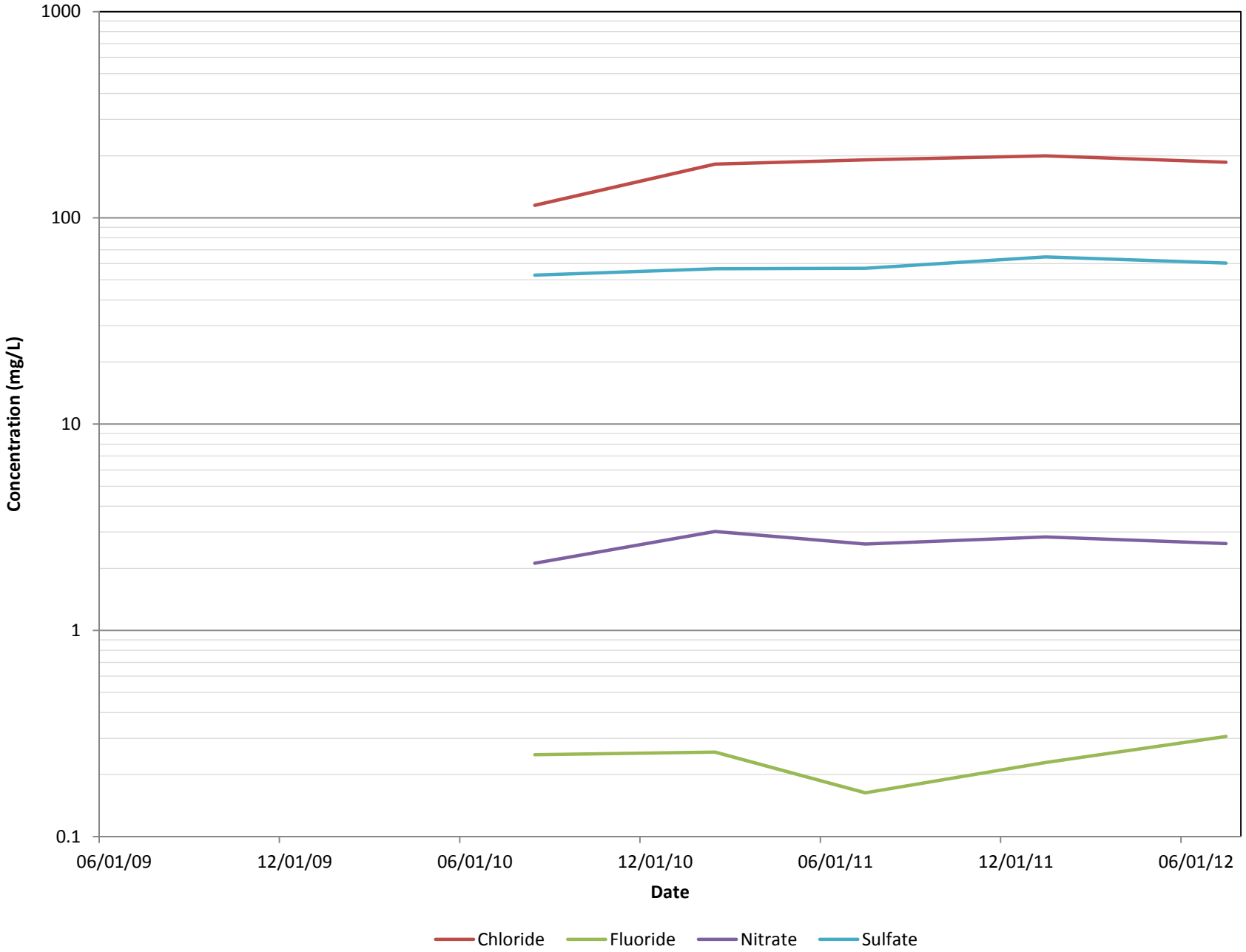
MW-20: TDS CONCENTRATIONS OVER TIME



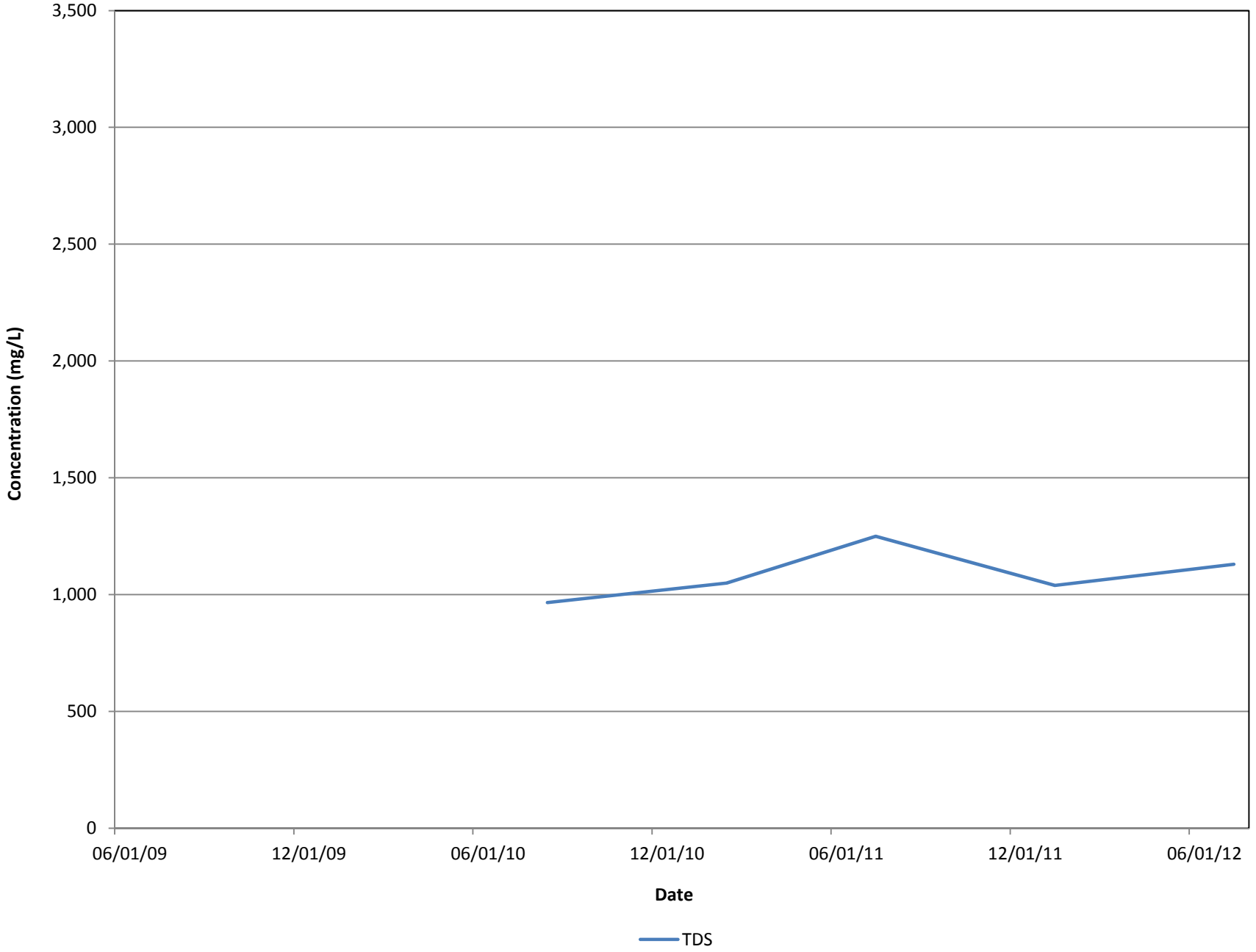
MW-20: METAL CONCENTRATIONS OVER TIME



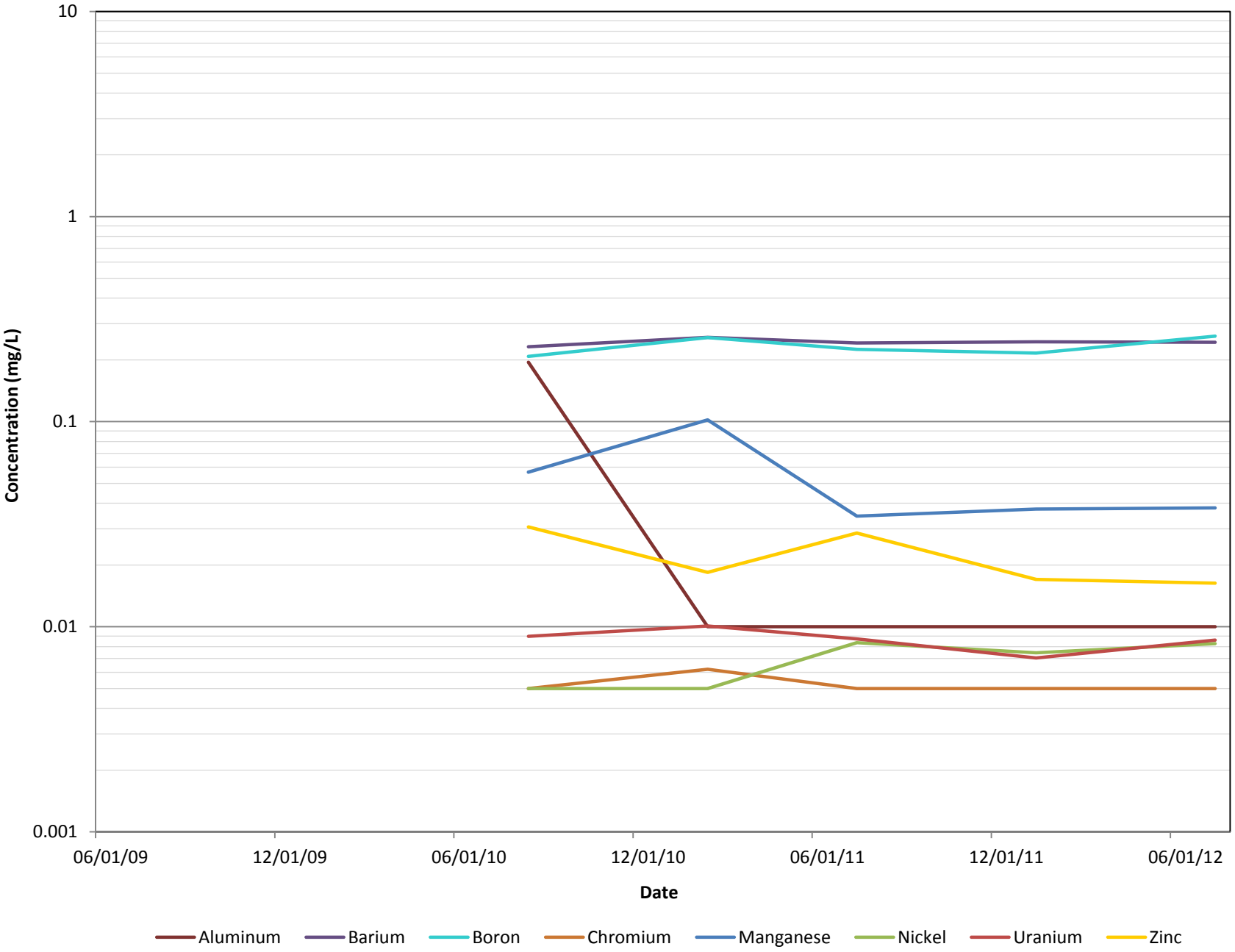
MW-21: ANION CONCENTRATIONS OVER TIME



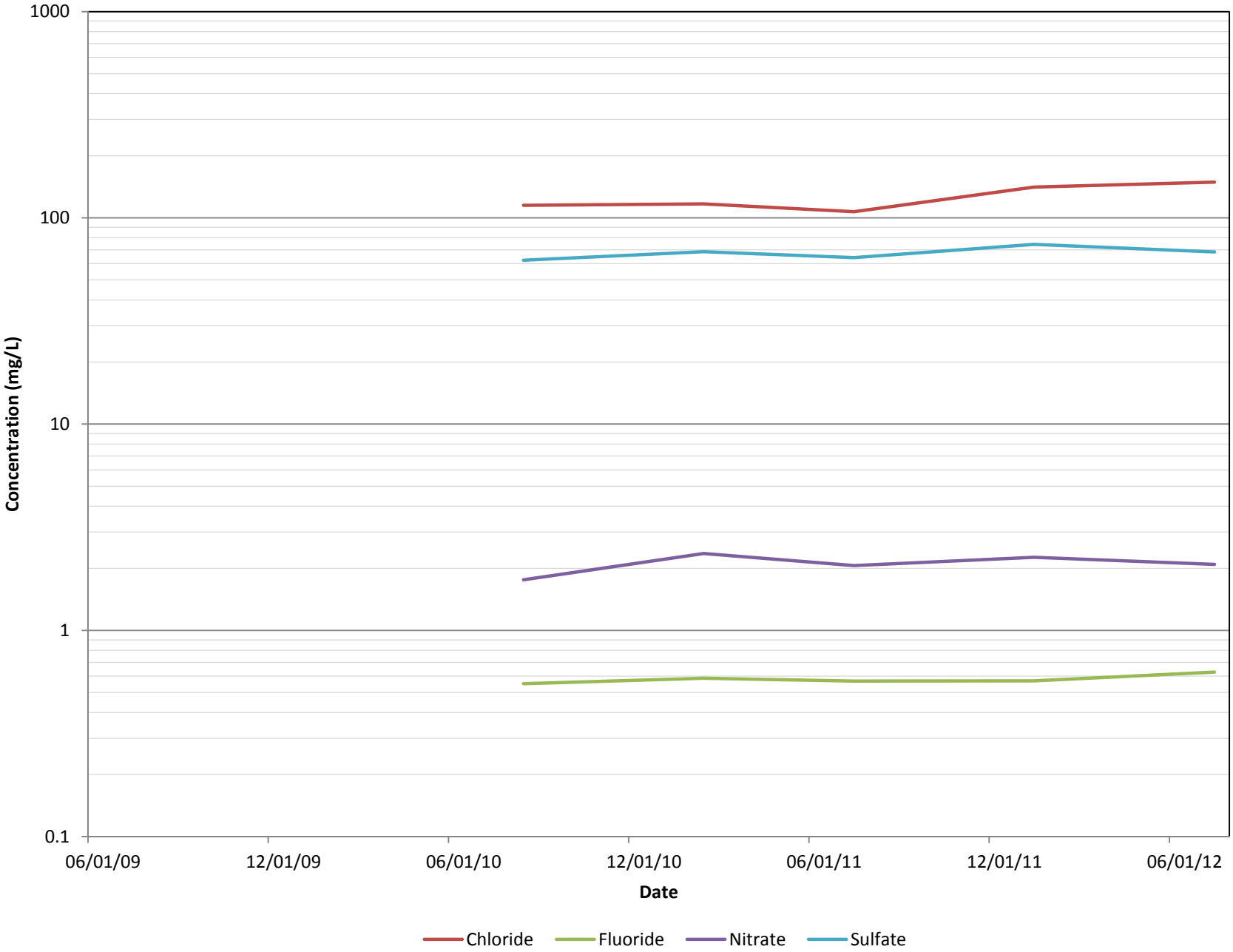
MW-21: TDS CONCENTRATIONS OVER TIME



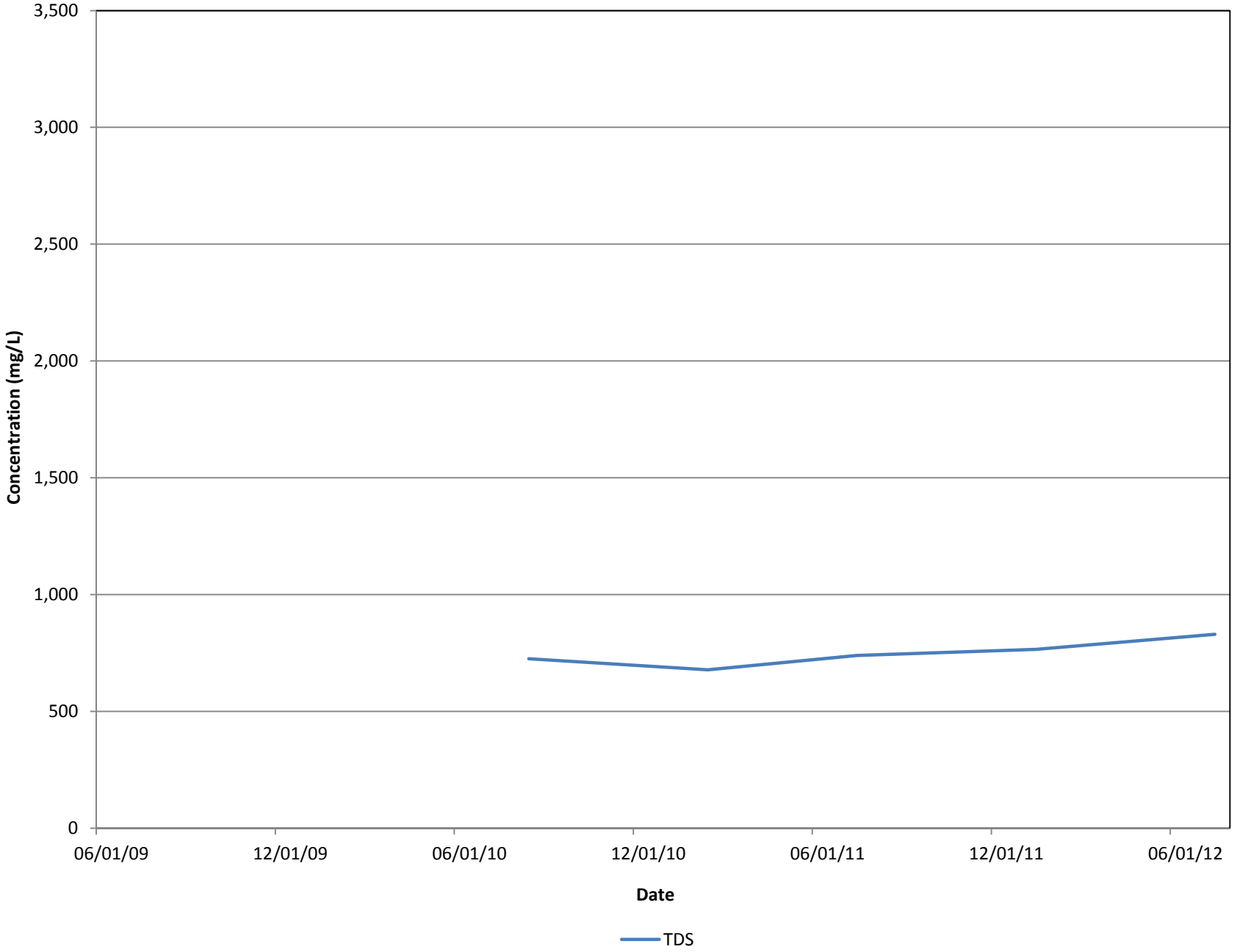
MW-21: METAL CONCENTRATIONS OVER TIME



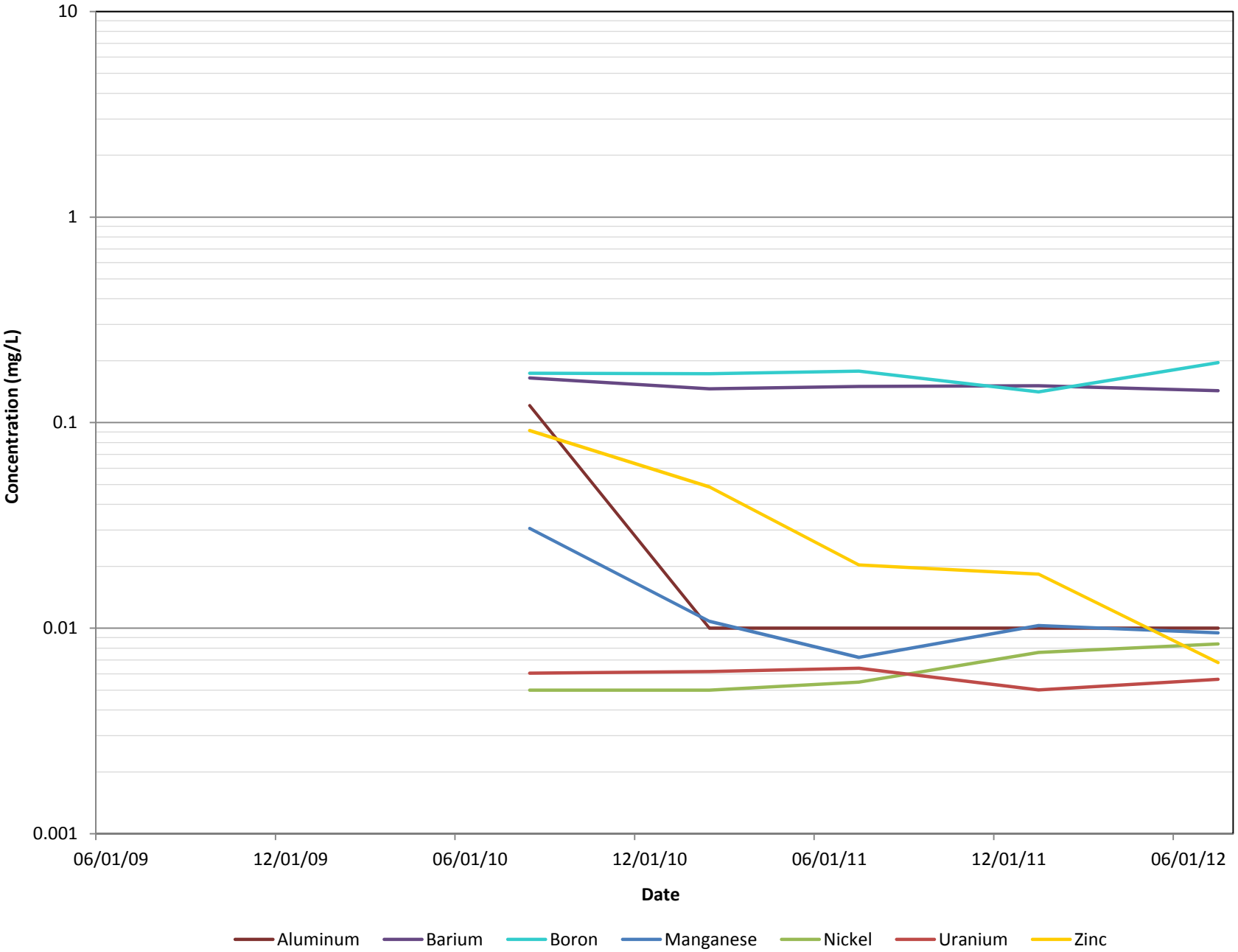
MW-22: ANION CONCENTRATIONS OVER TIME



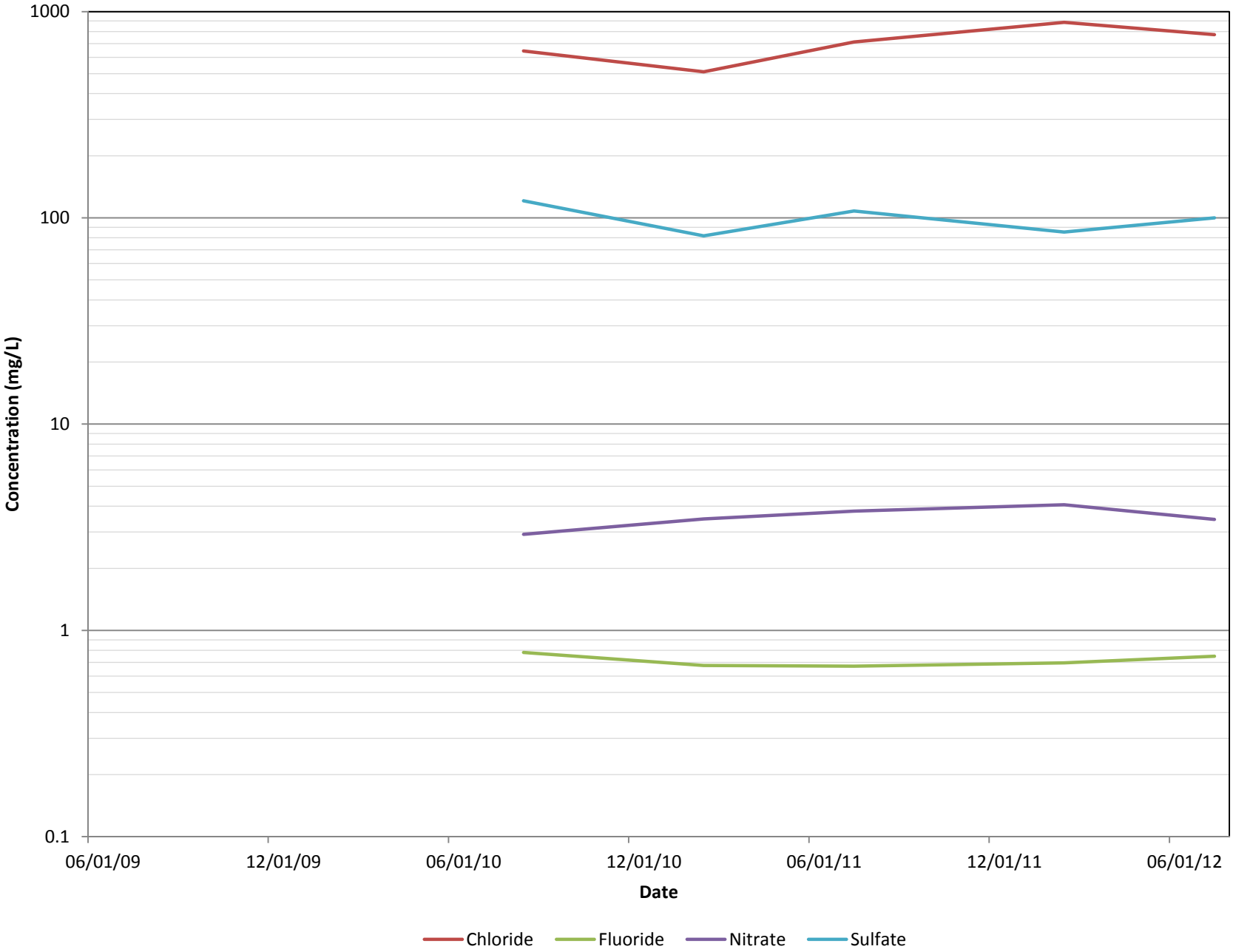
MW-22: TDS CONCENTRATIONS OVER TIME



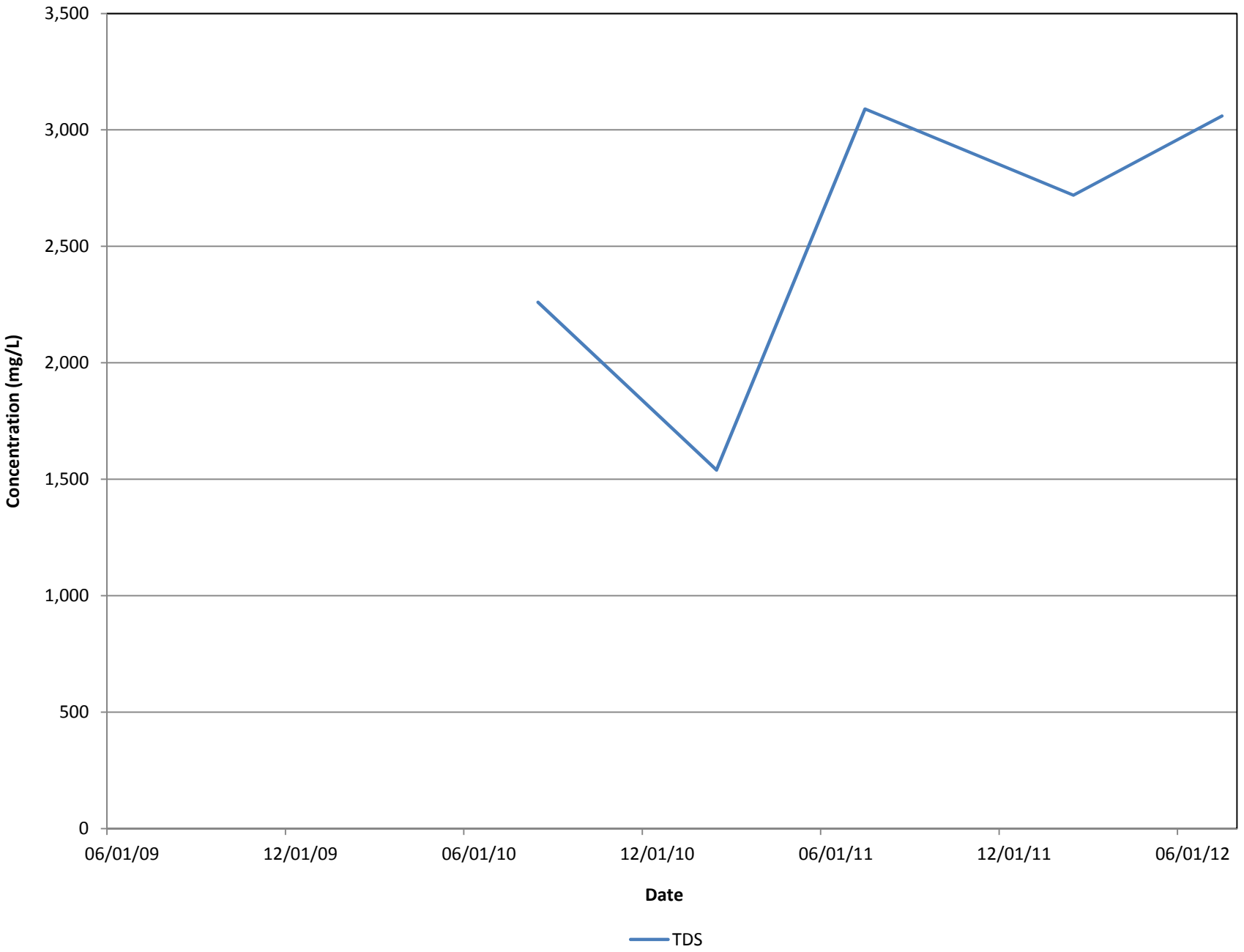
MW-22: METAL CONCENTRATIONS OVER TIME



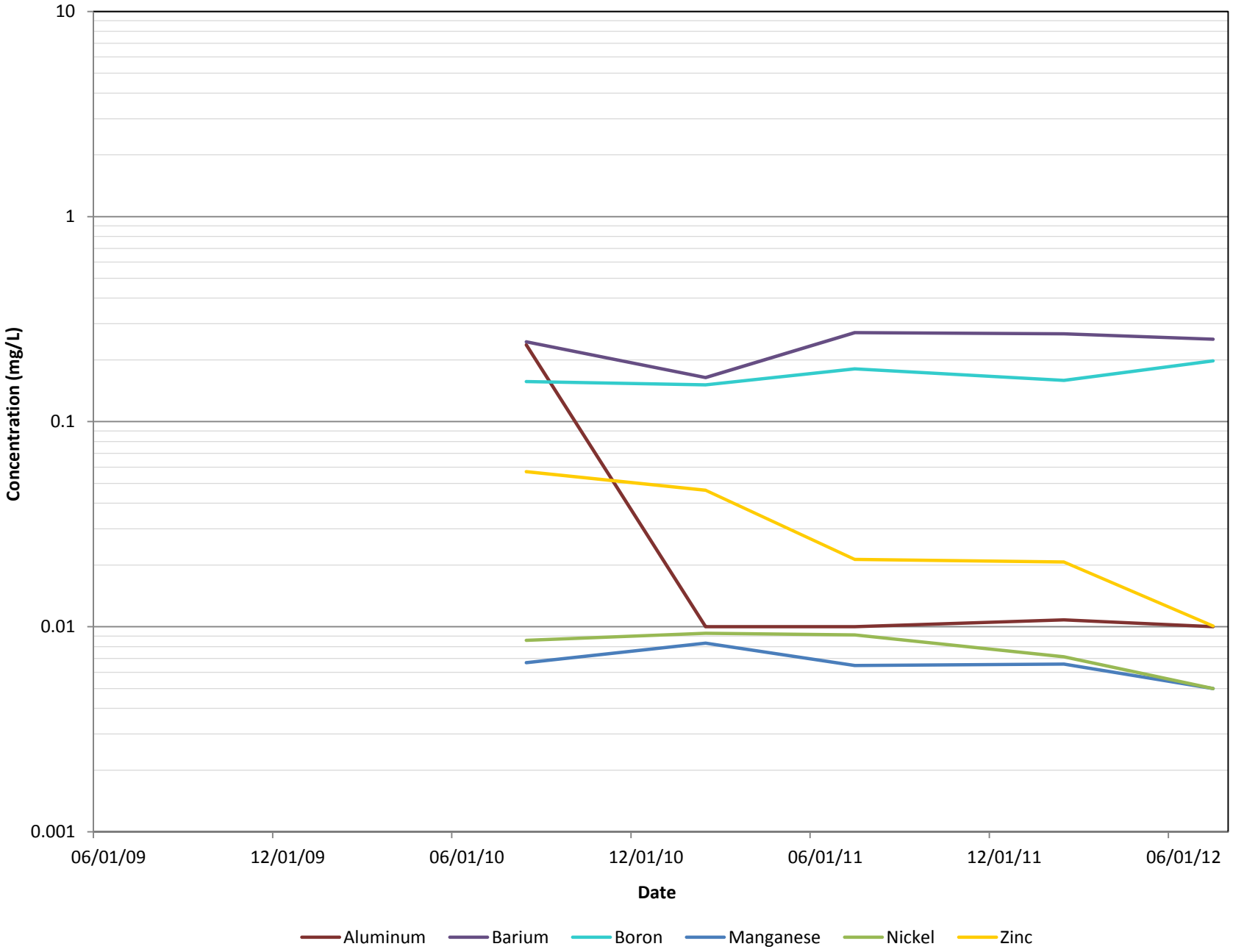
MW-23: ANION CONCENTRATIONS OVER TIME



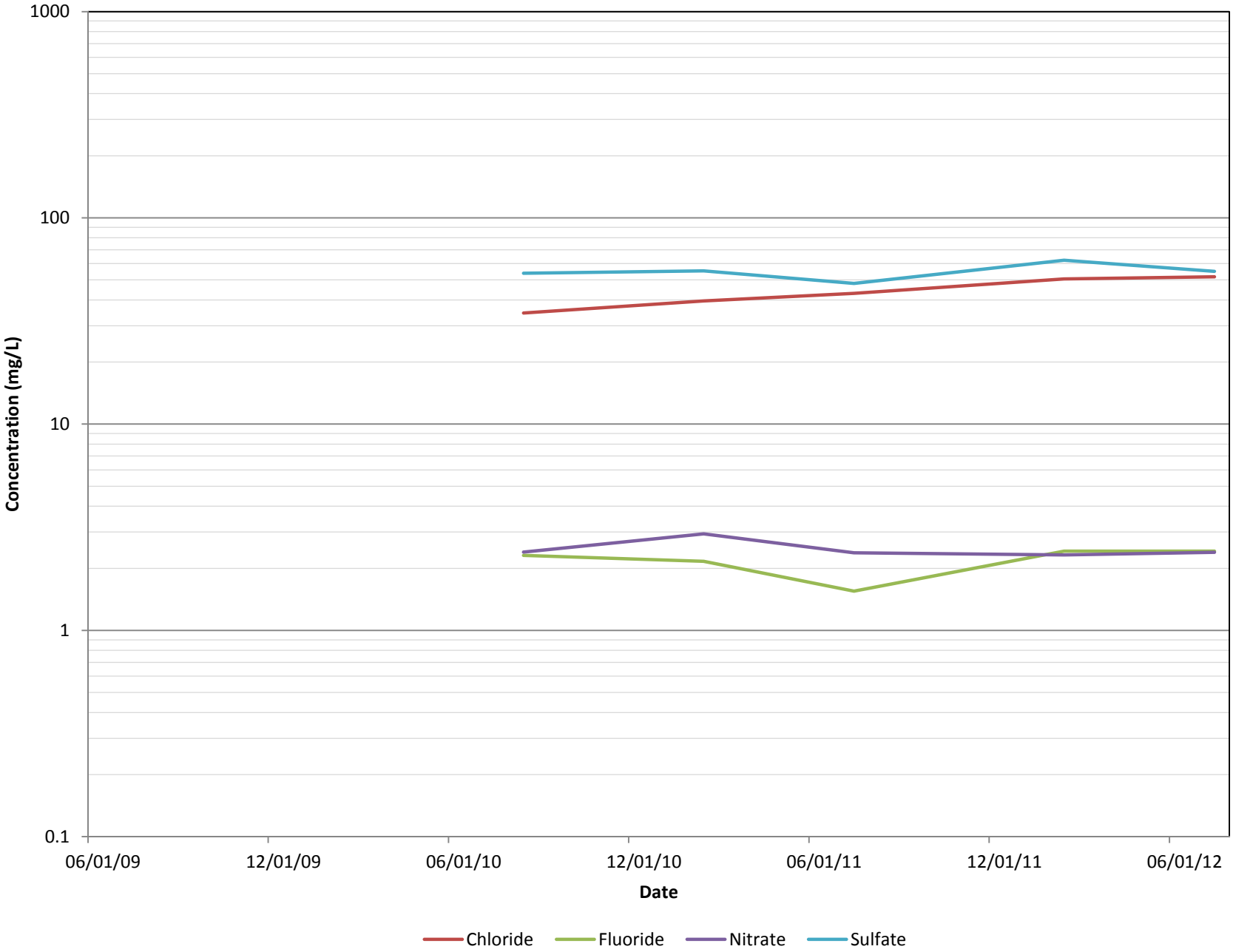
MW-23: TDS CONCENTRATIONS OVER TIME



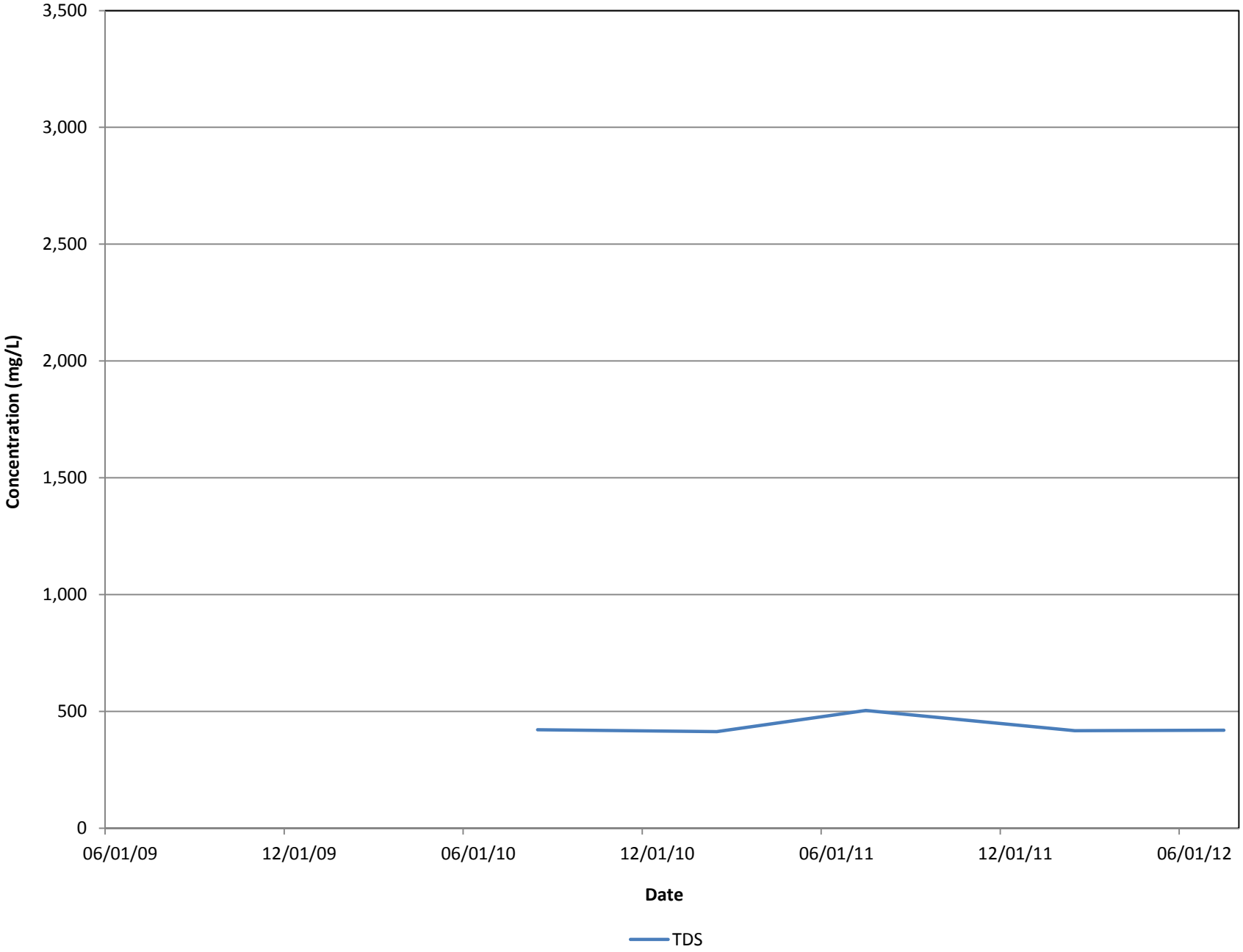
MW-23: METAL CONCENTRATIONS OVER TIME



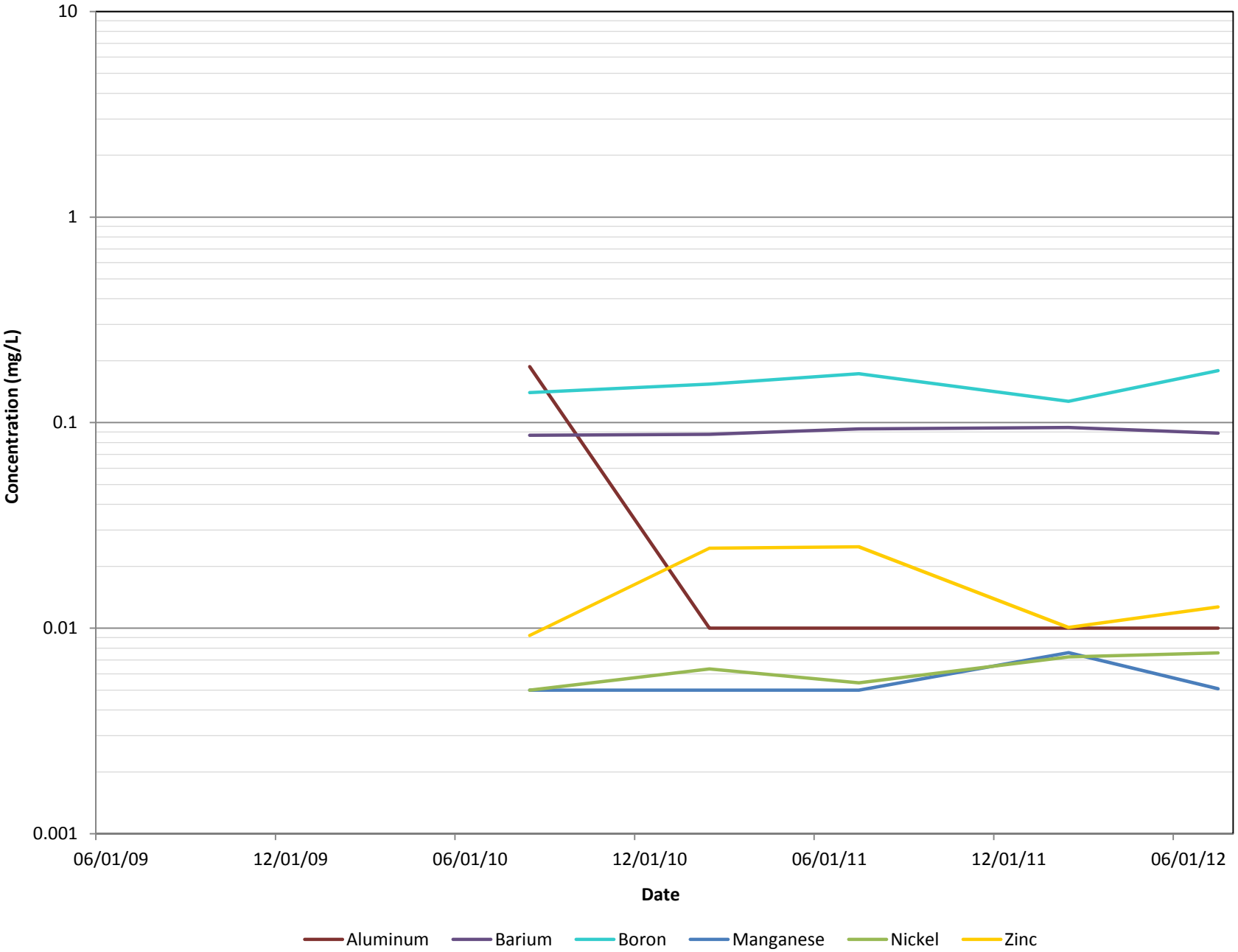
MW-24: ANION CONCENTRATIONS OVER TIME



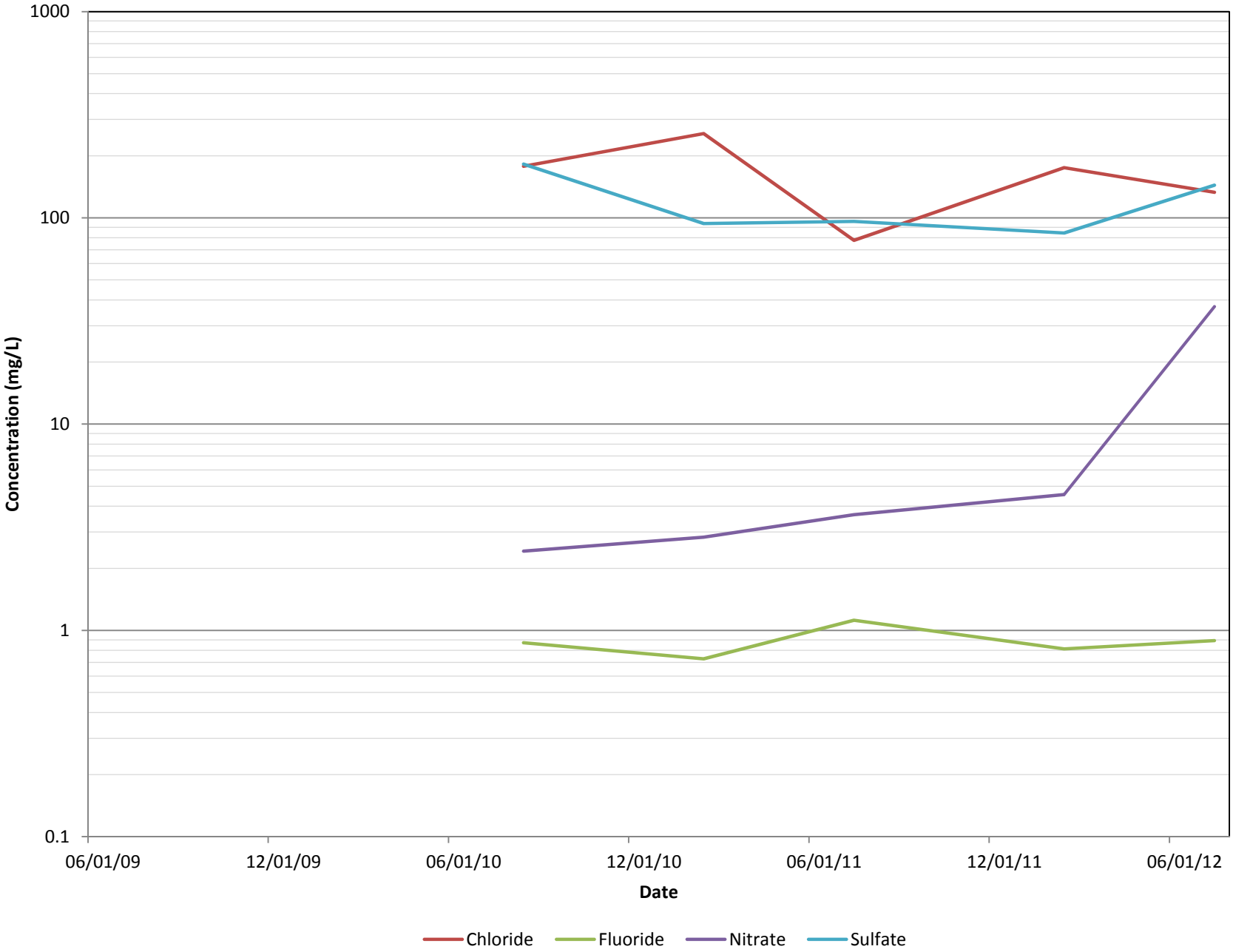
MW-24: TDS CONCENTRATIONS OVER TIME



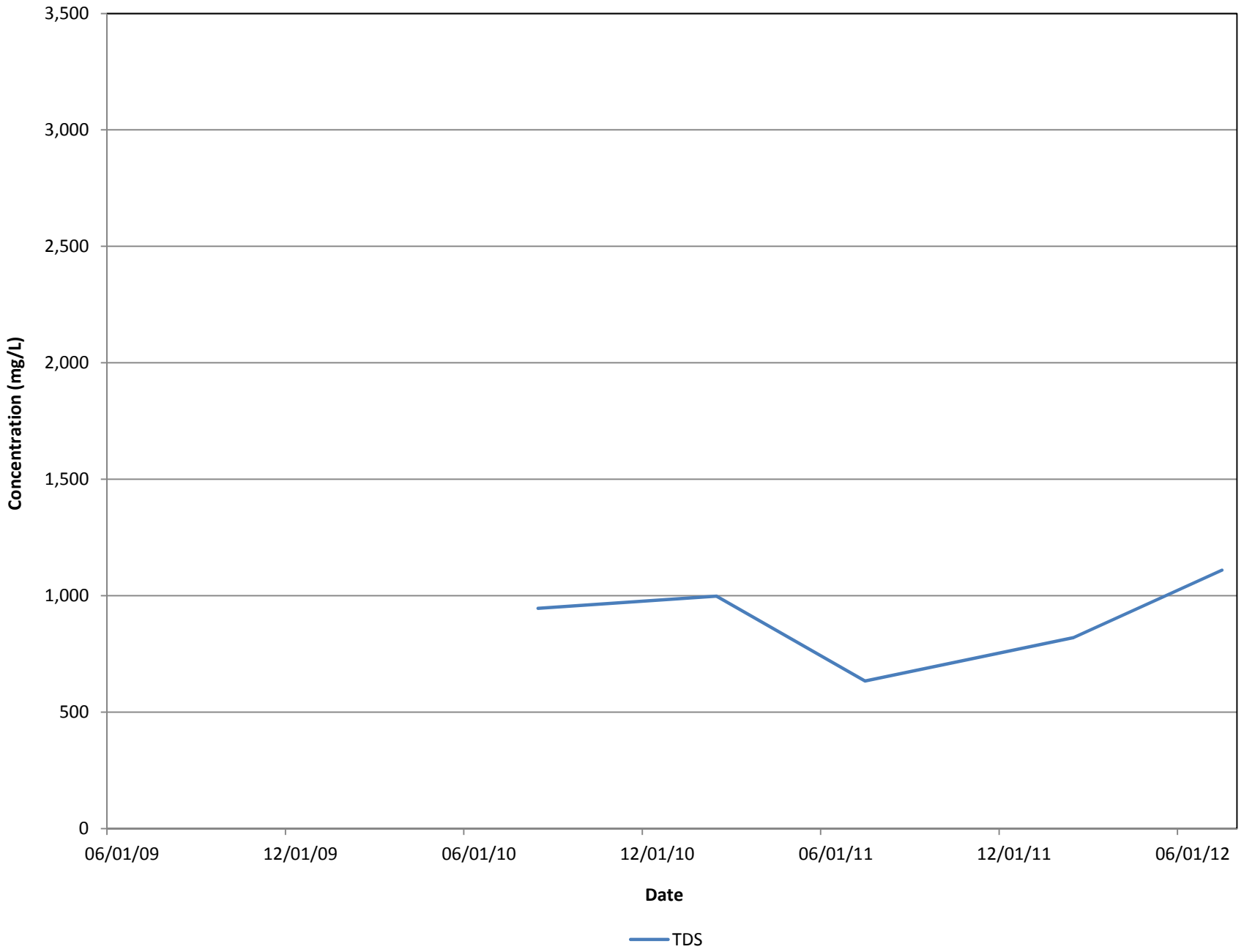
MW-24: METAL CONCENTRATIONS OVER TIME



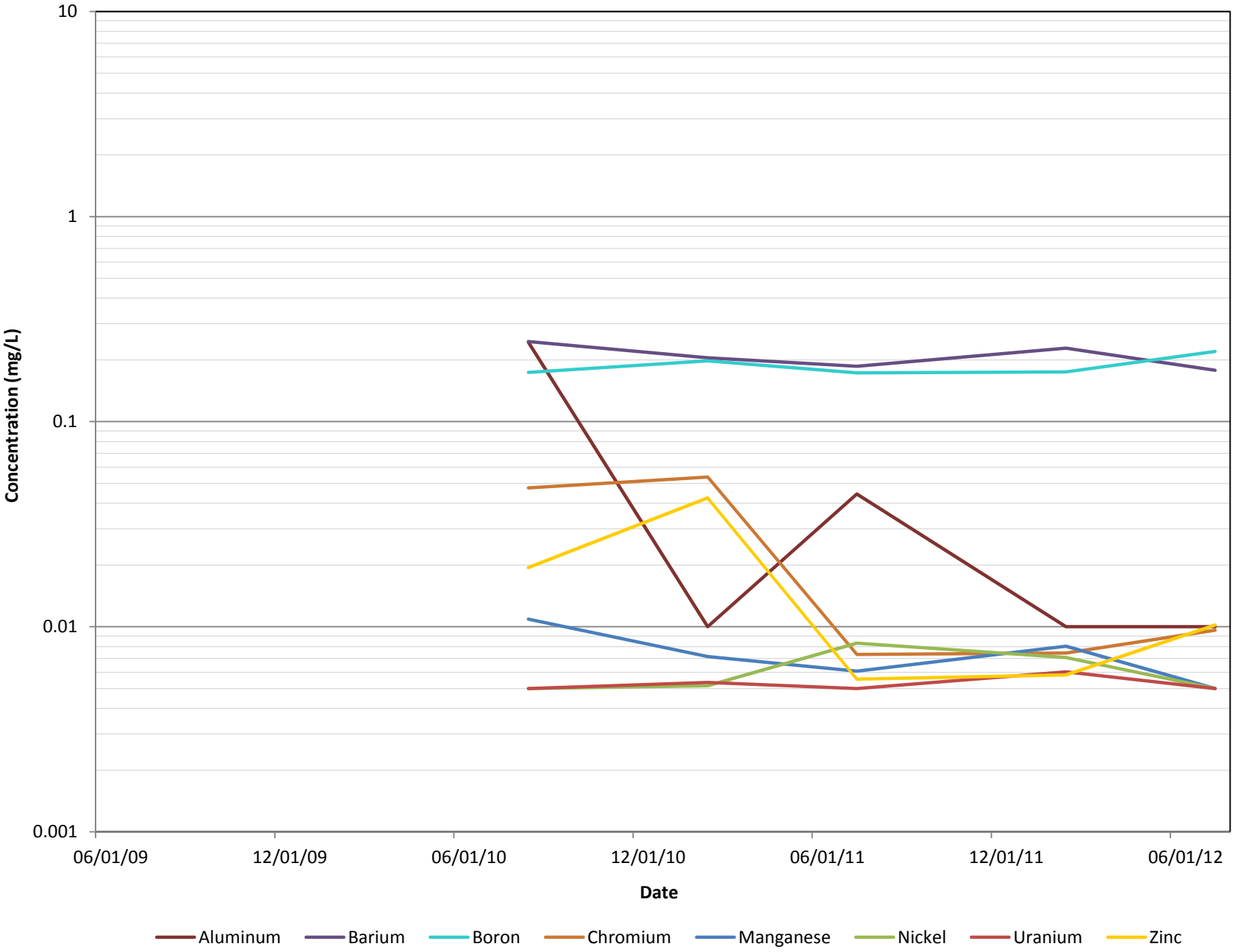
MW-25: ANION CONCENTRATIONS OVER TIME



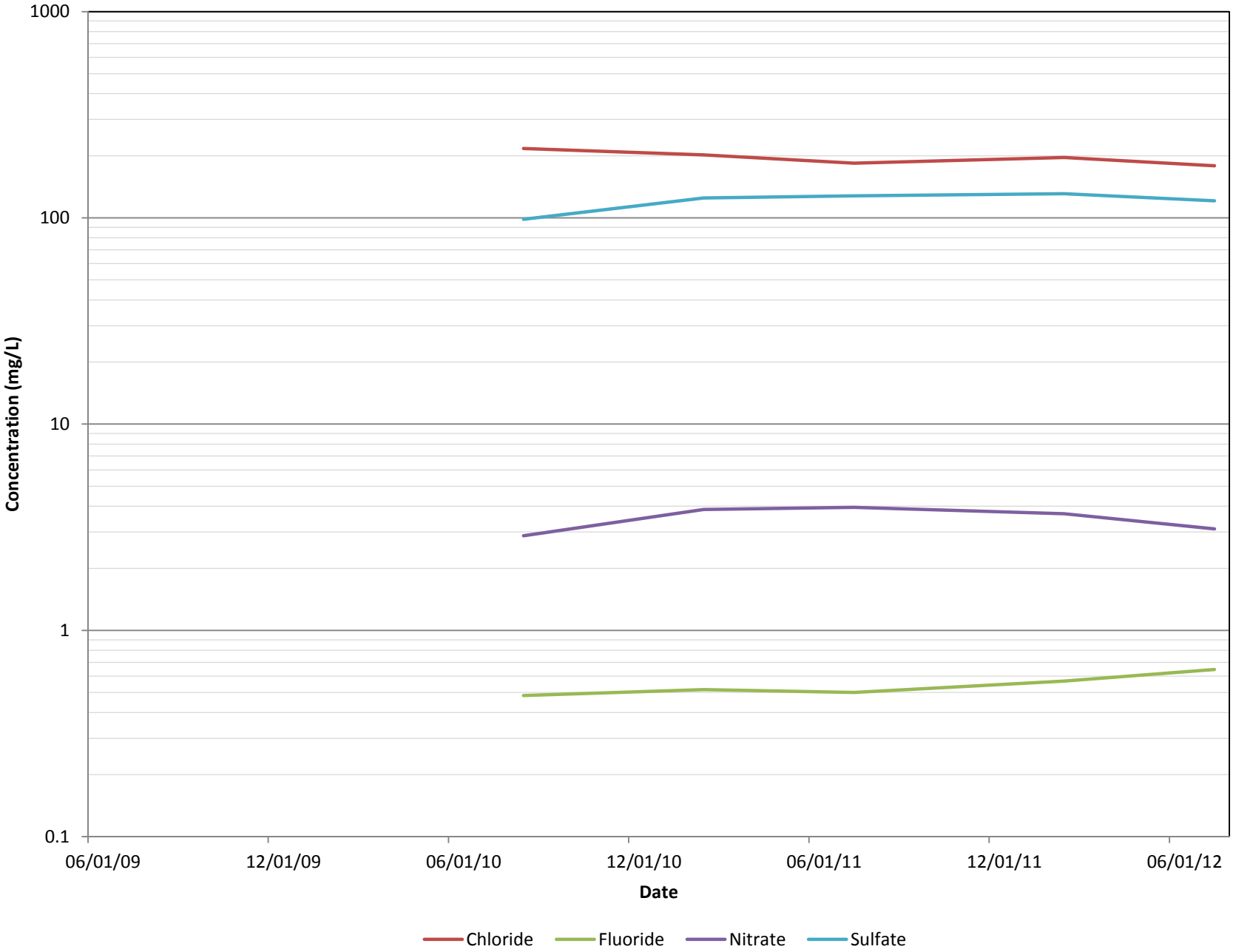
MW-25: TDS CONCENTRATIONS OVER TIME



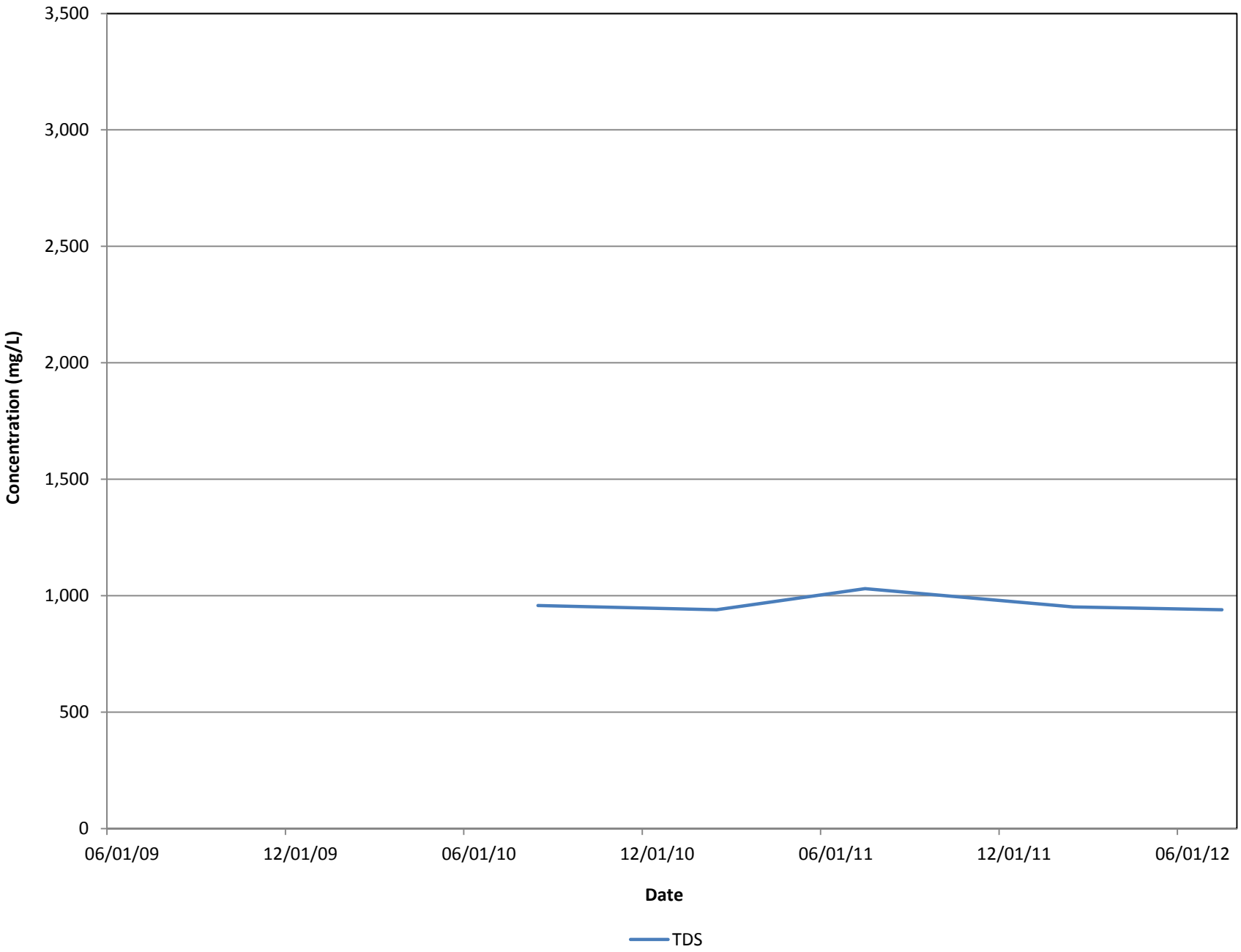
MW-25: METAL CONCENTRATIONS OVER TIME



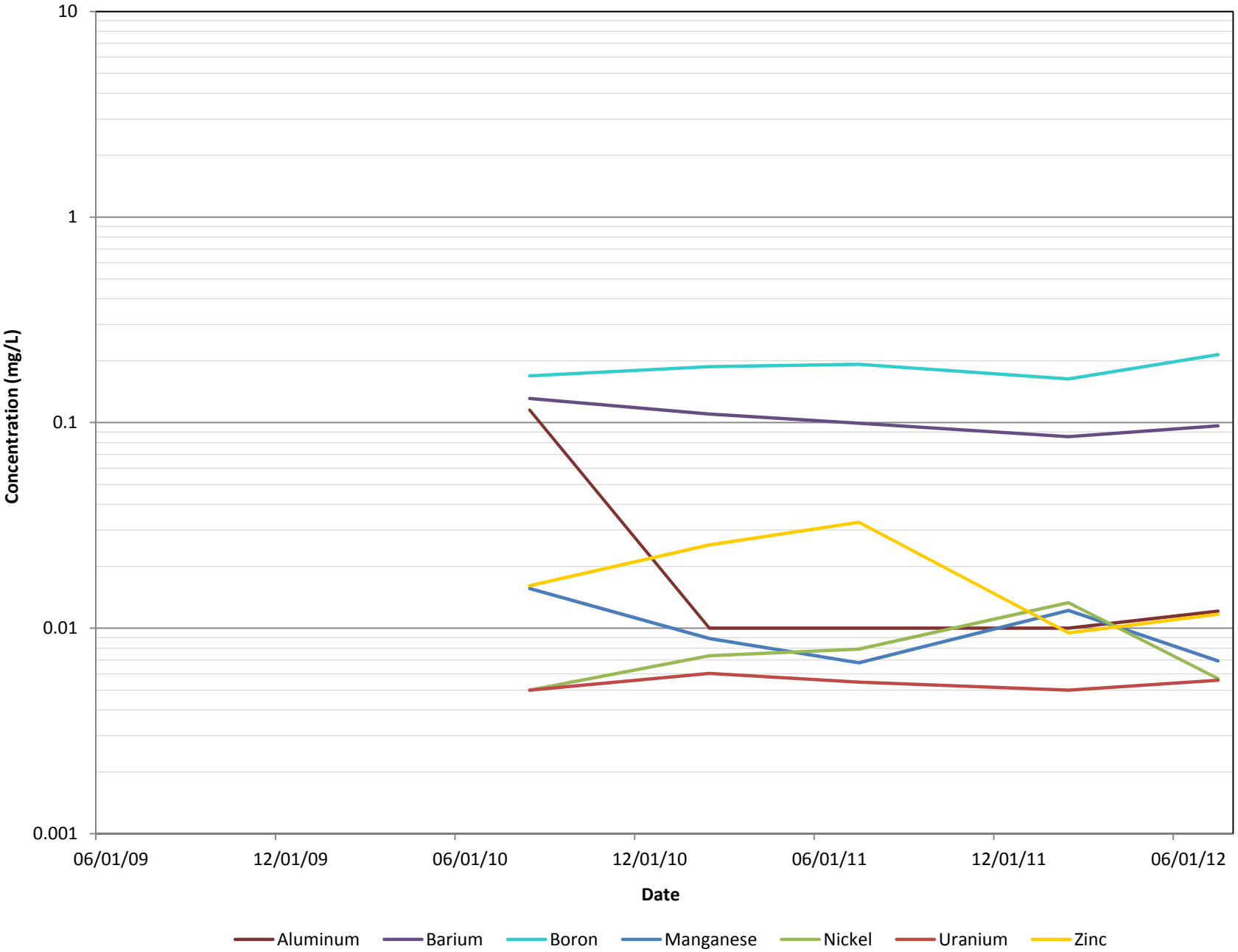
MW-26: ANION CONCENTRATIONS OVER TIME



MW-26: TDS CONCENTRATIONS OVER TIME



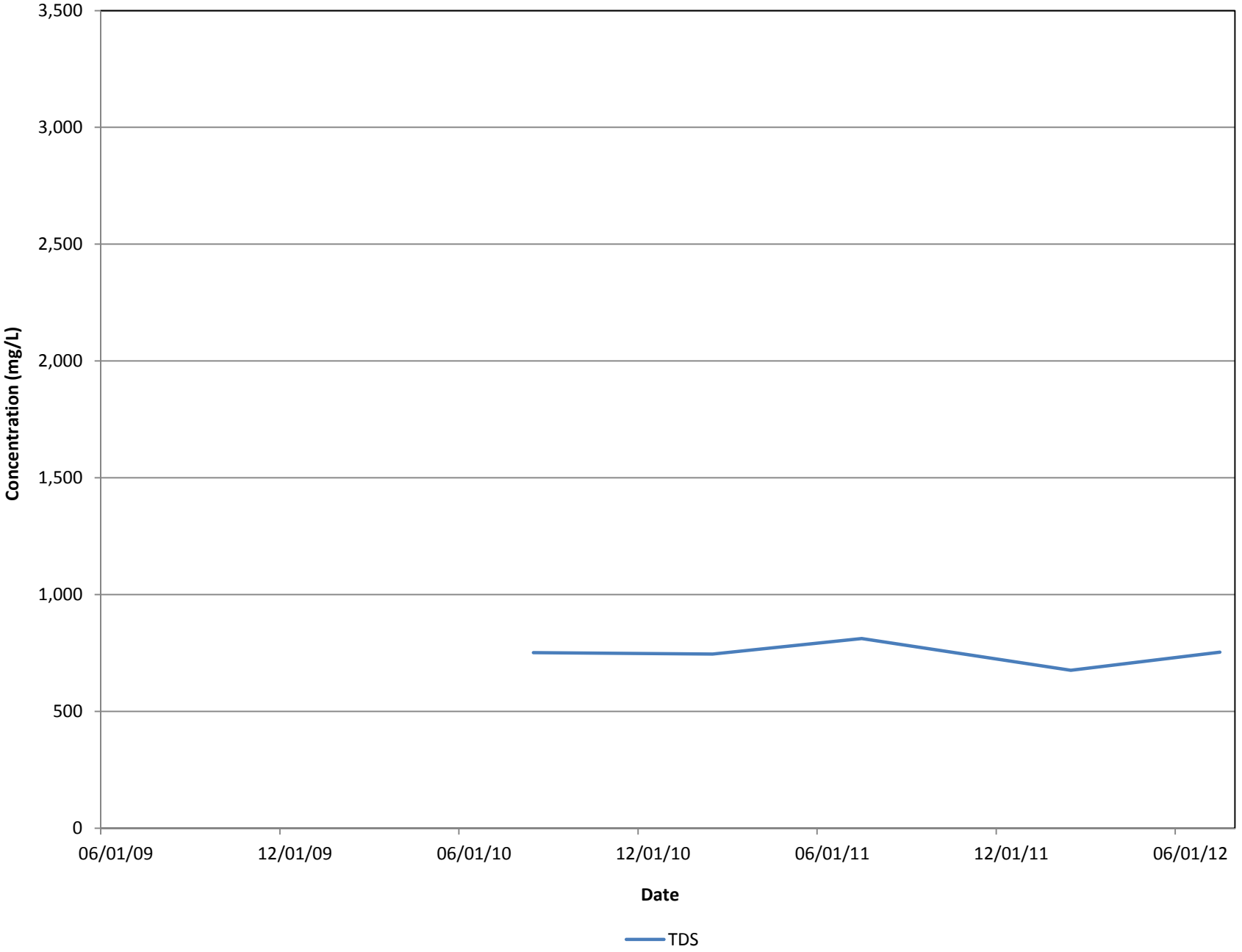
MW-26: METAL CONCENTRATIONS OVER TIME



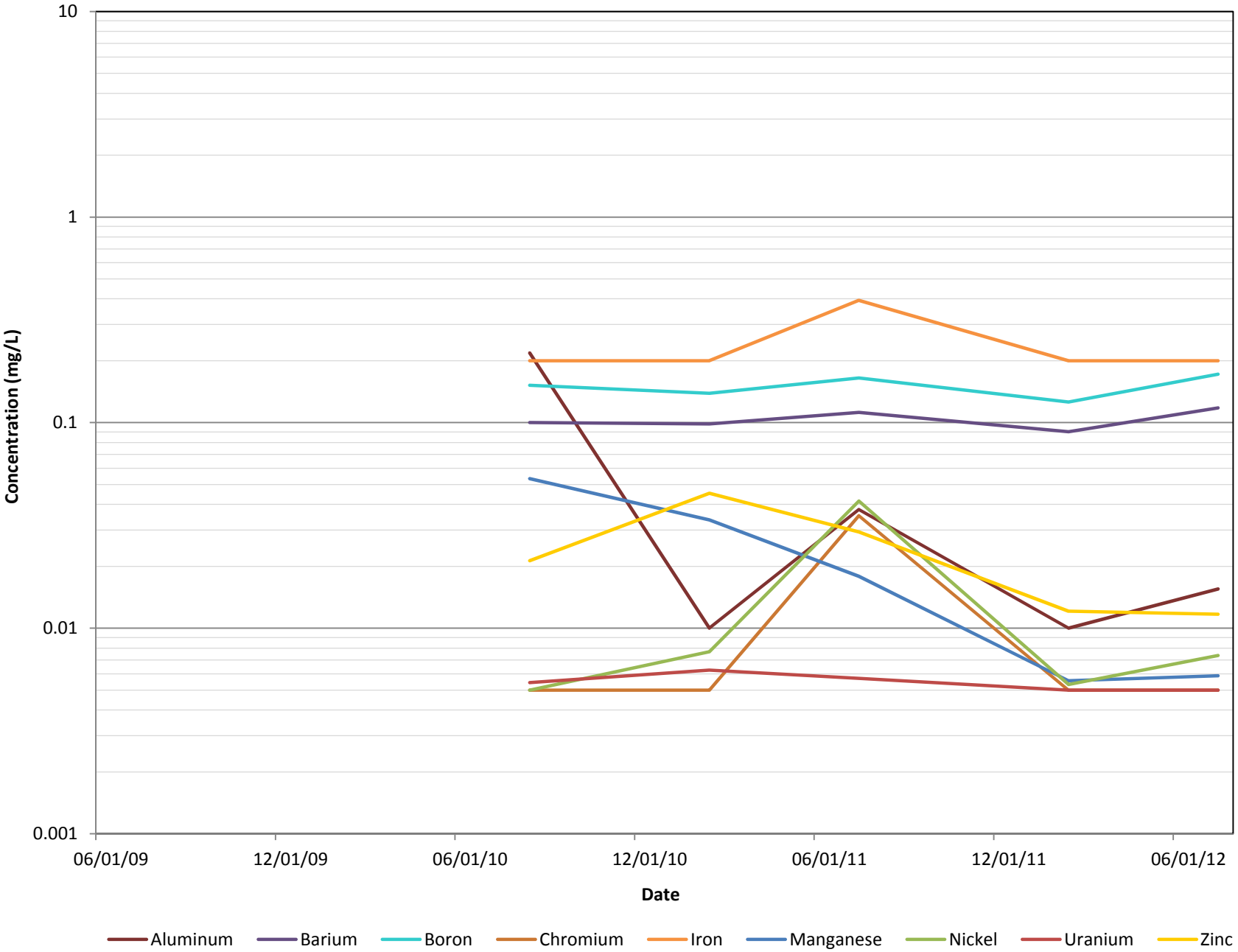
MW-27: ANION CONCENTRATIONS OVER TIME



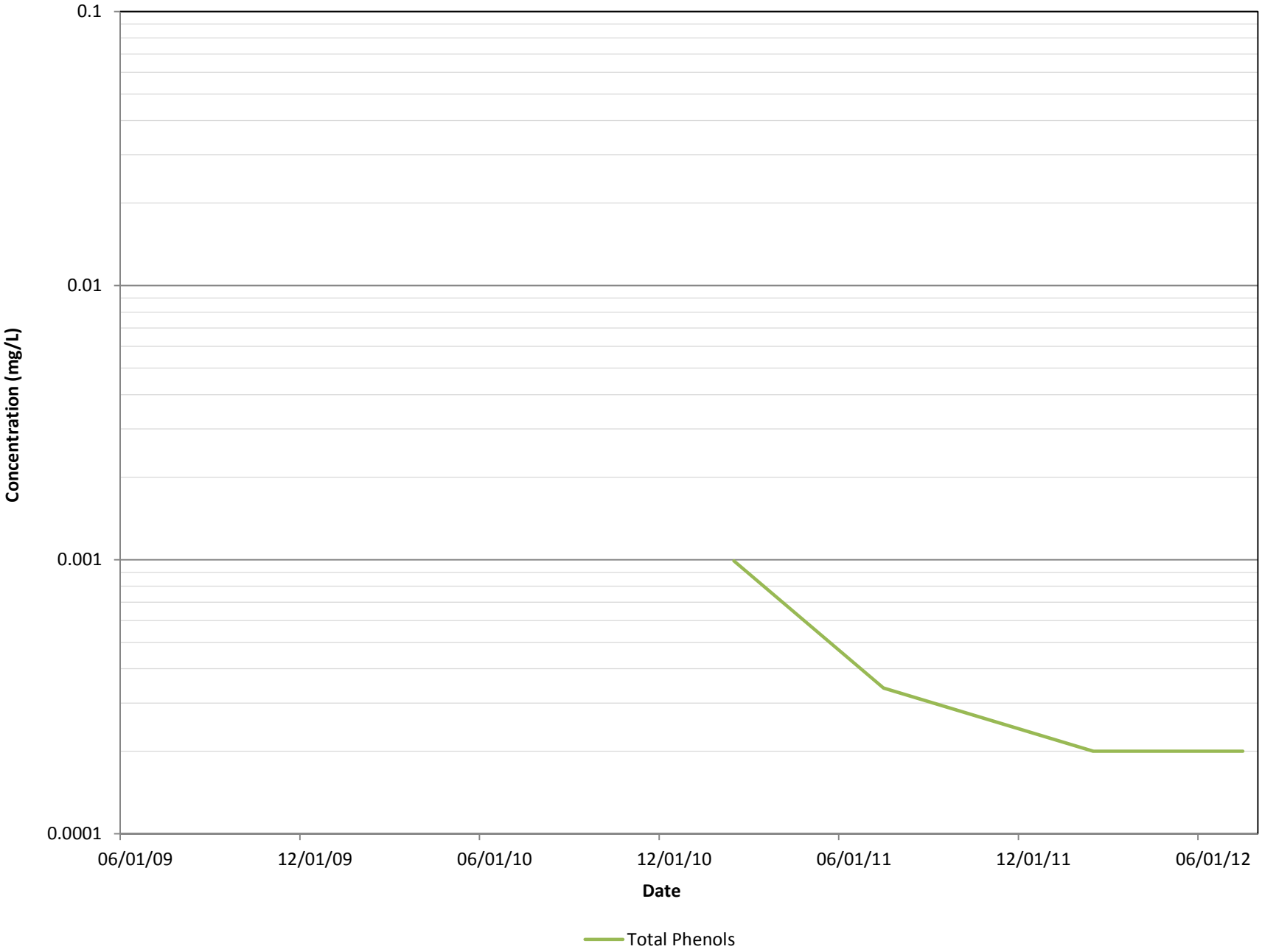
MW-27: TDS CONCENTRATIONS OVER TIME



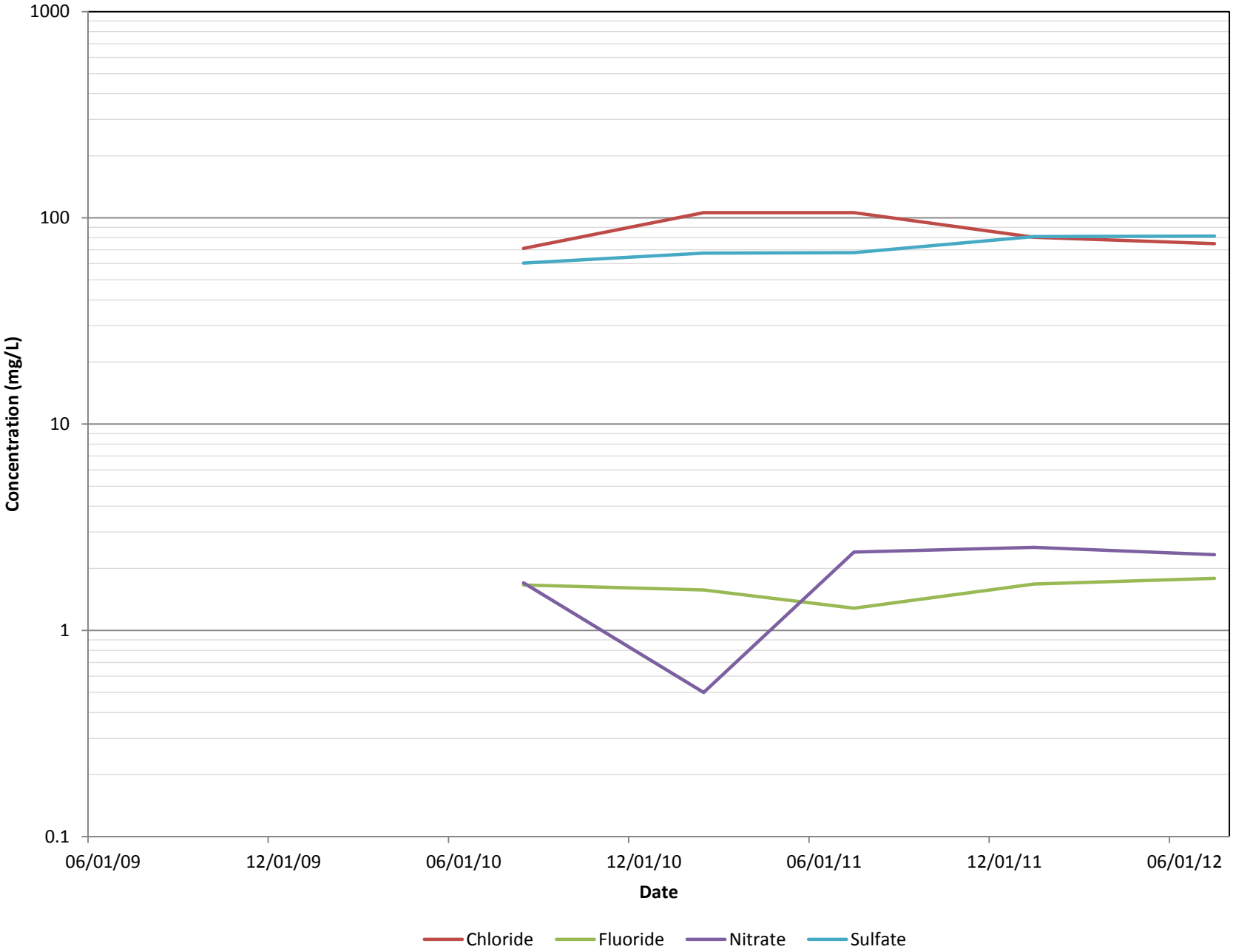
MW-27: METAL CONCENTRATIONS OVER TIME



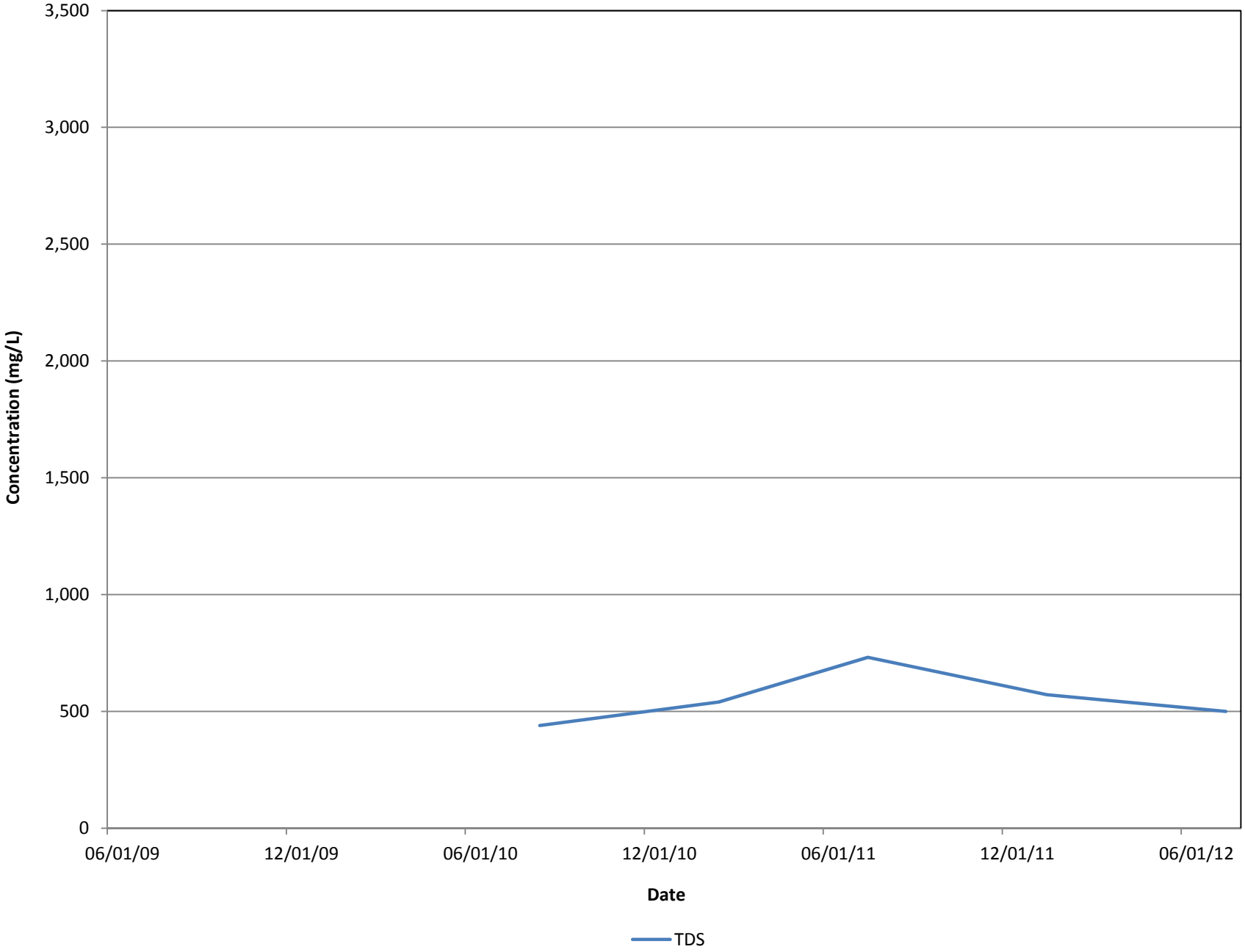
MW-27: SVOC CONCENTRATIONS OVER TIME



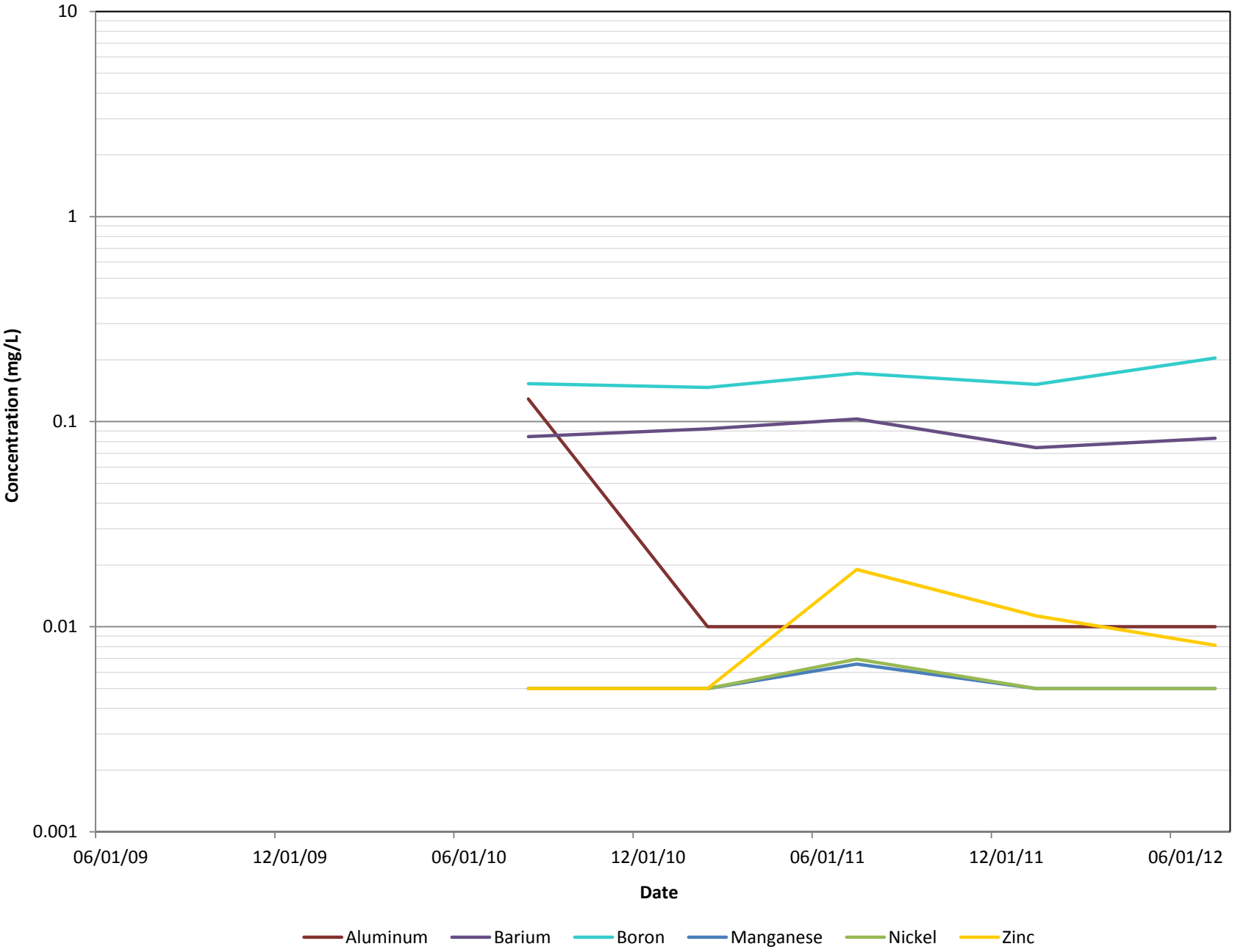
MW-28: ANION CONCENTRATIONS OVER TIME



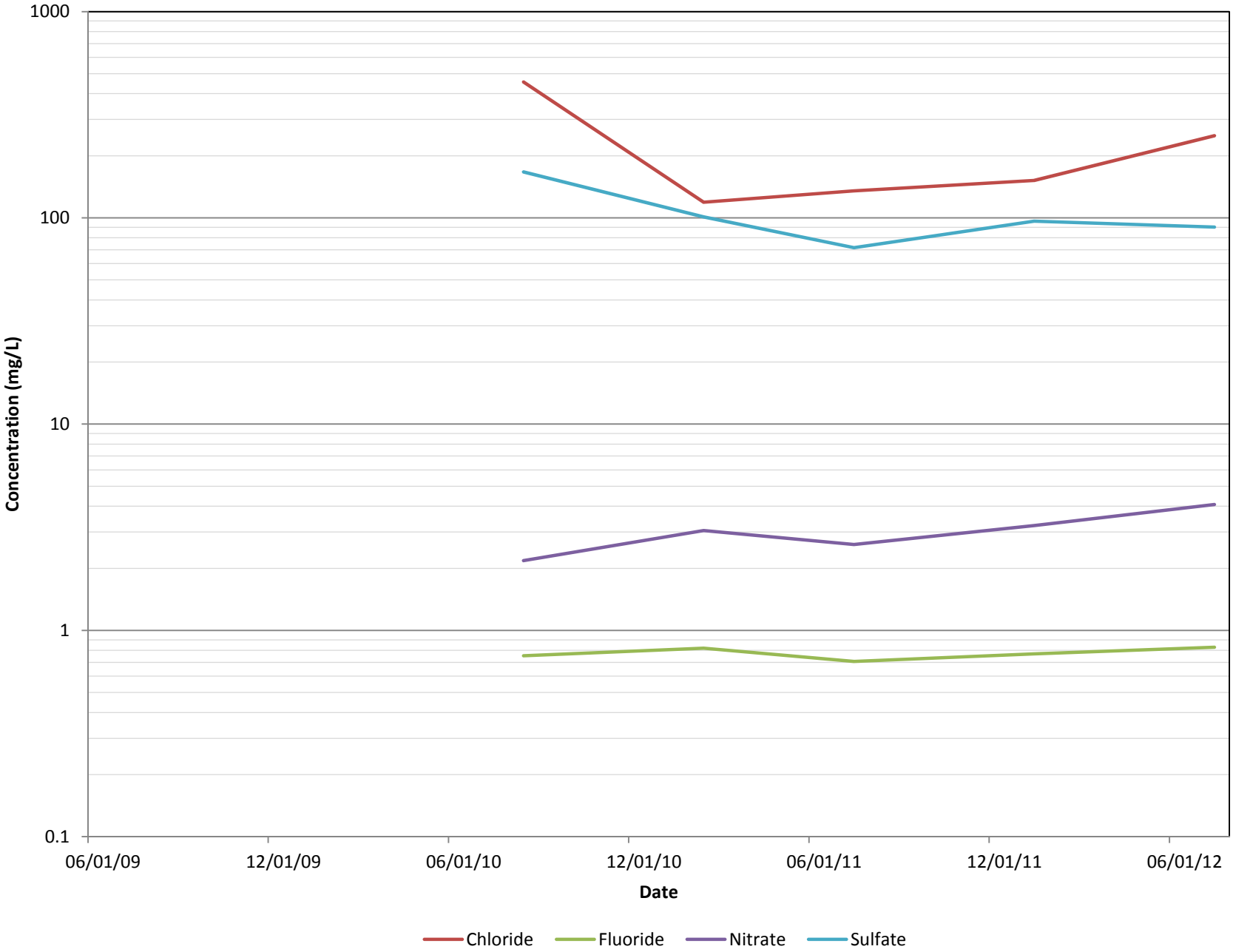
MW-28: TDS CONCENTRATIONS OVER TIME



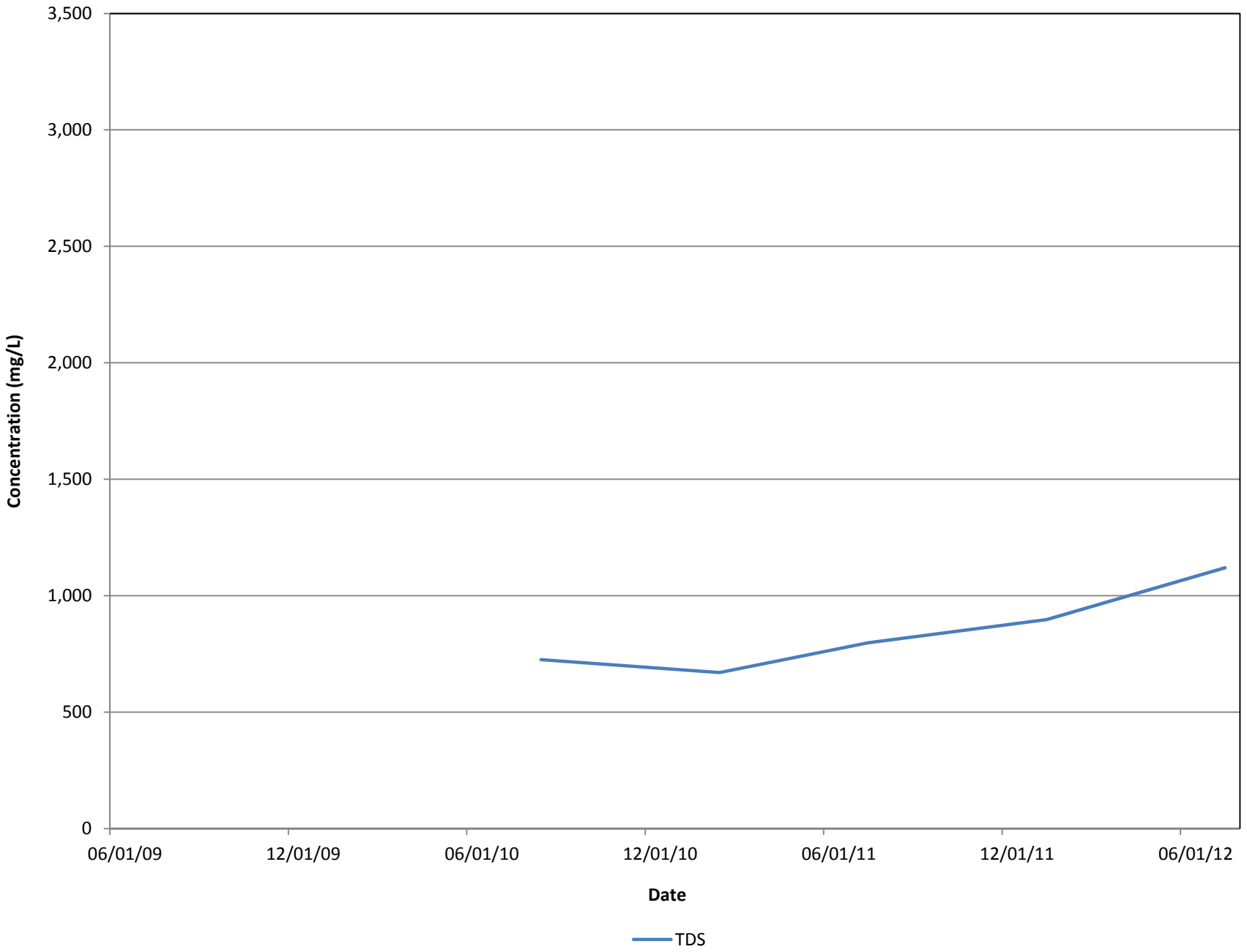
MW-28: METAL CONCENTRATIONS OVER TIME



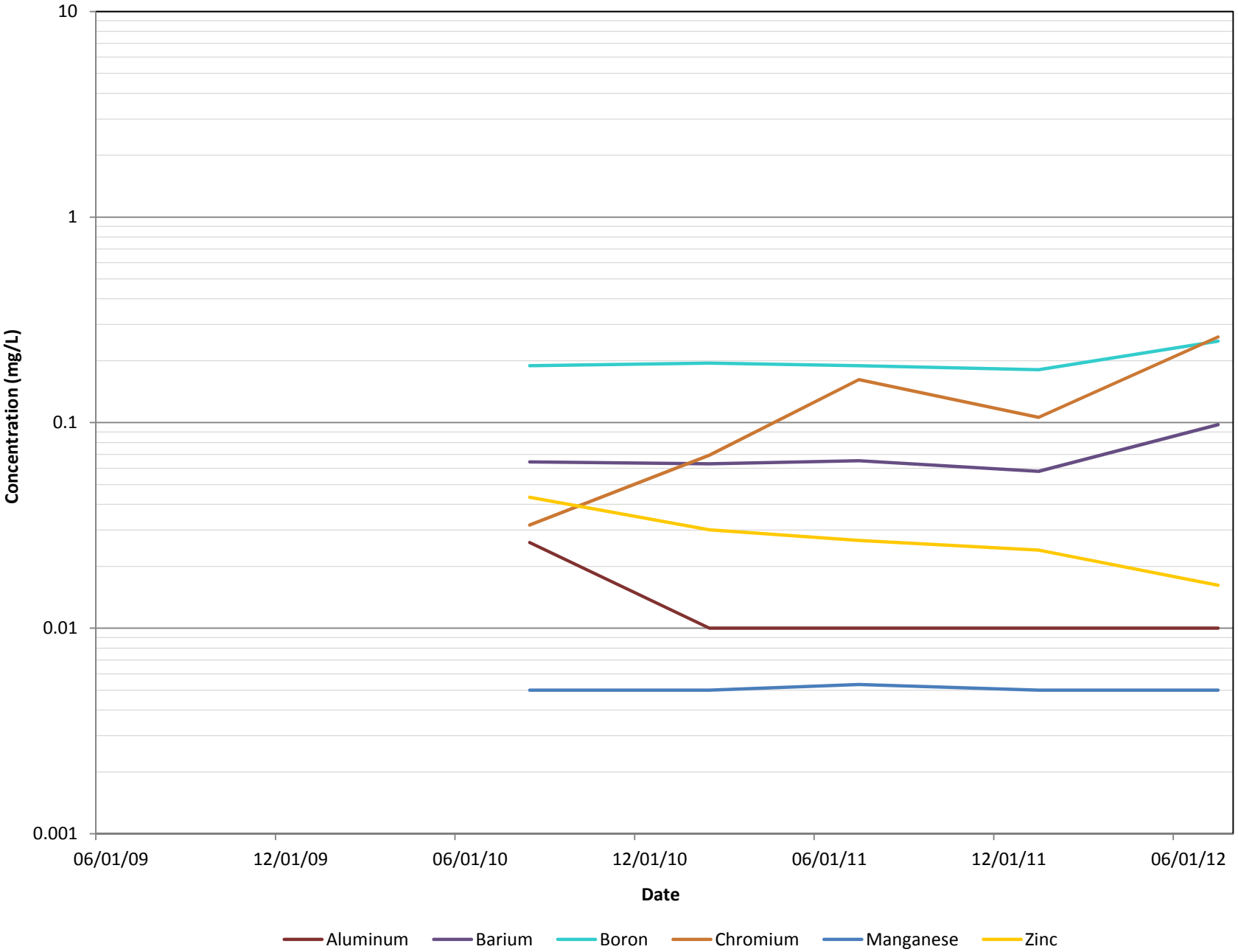
MW-29: ANION CONCENTRATIONS OVER TIME



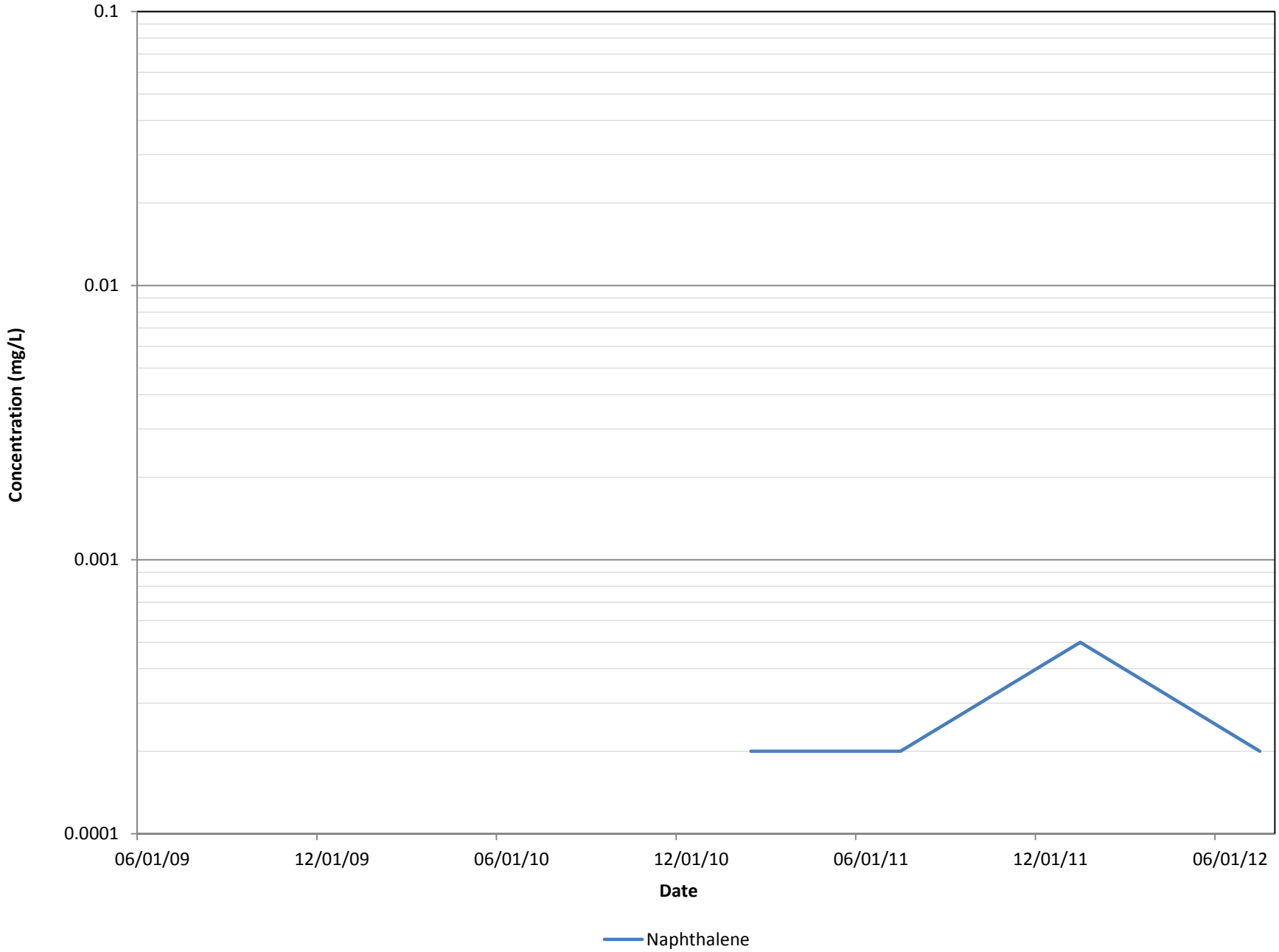
MW-29: TDS CONCENTRATIONS OVER TIME



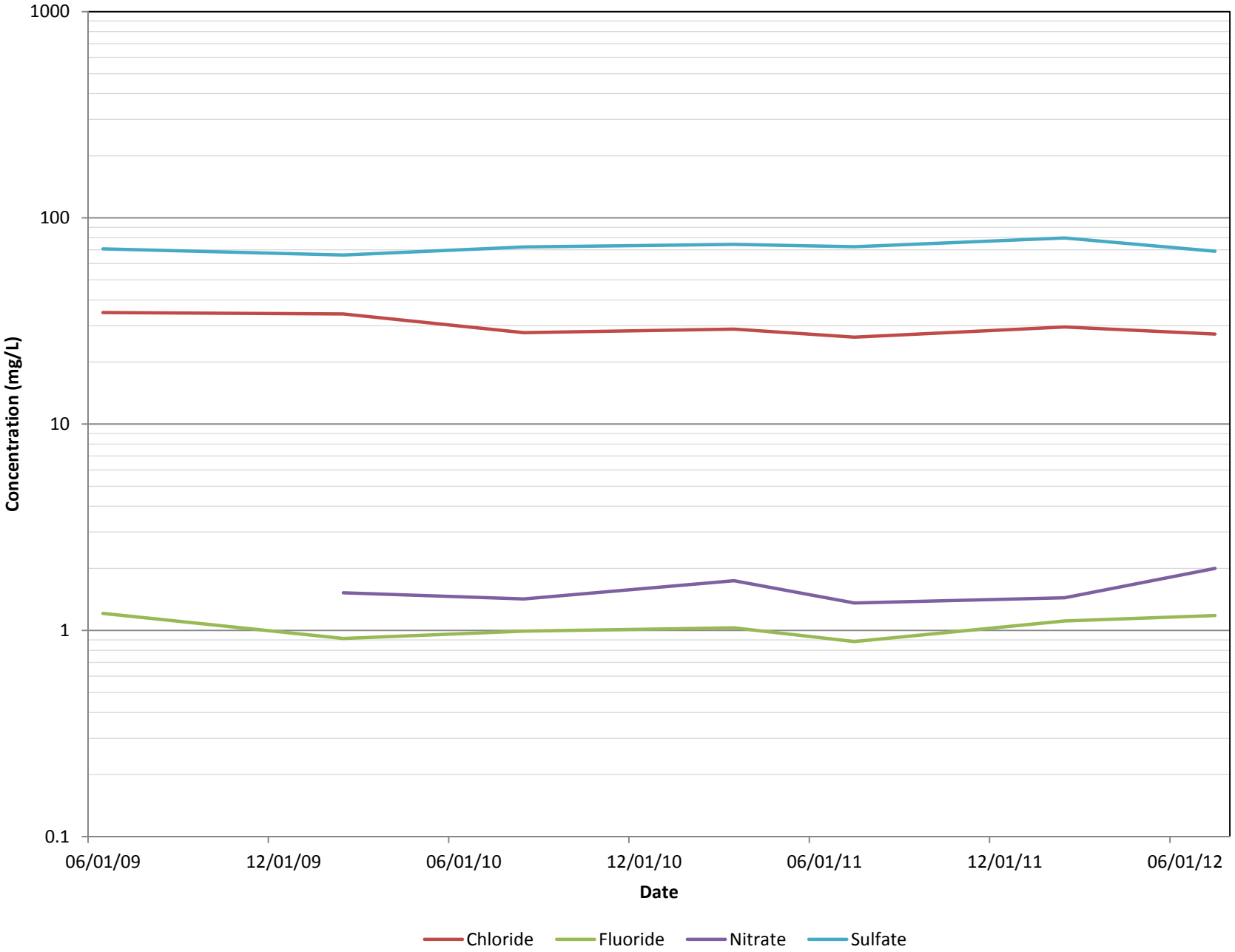
MW-29: METAL CONCENTRATIONS OVER TIME



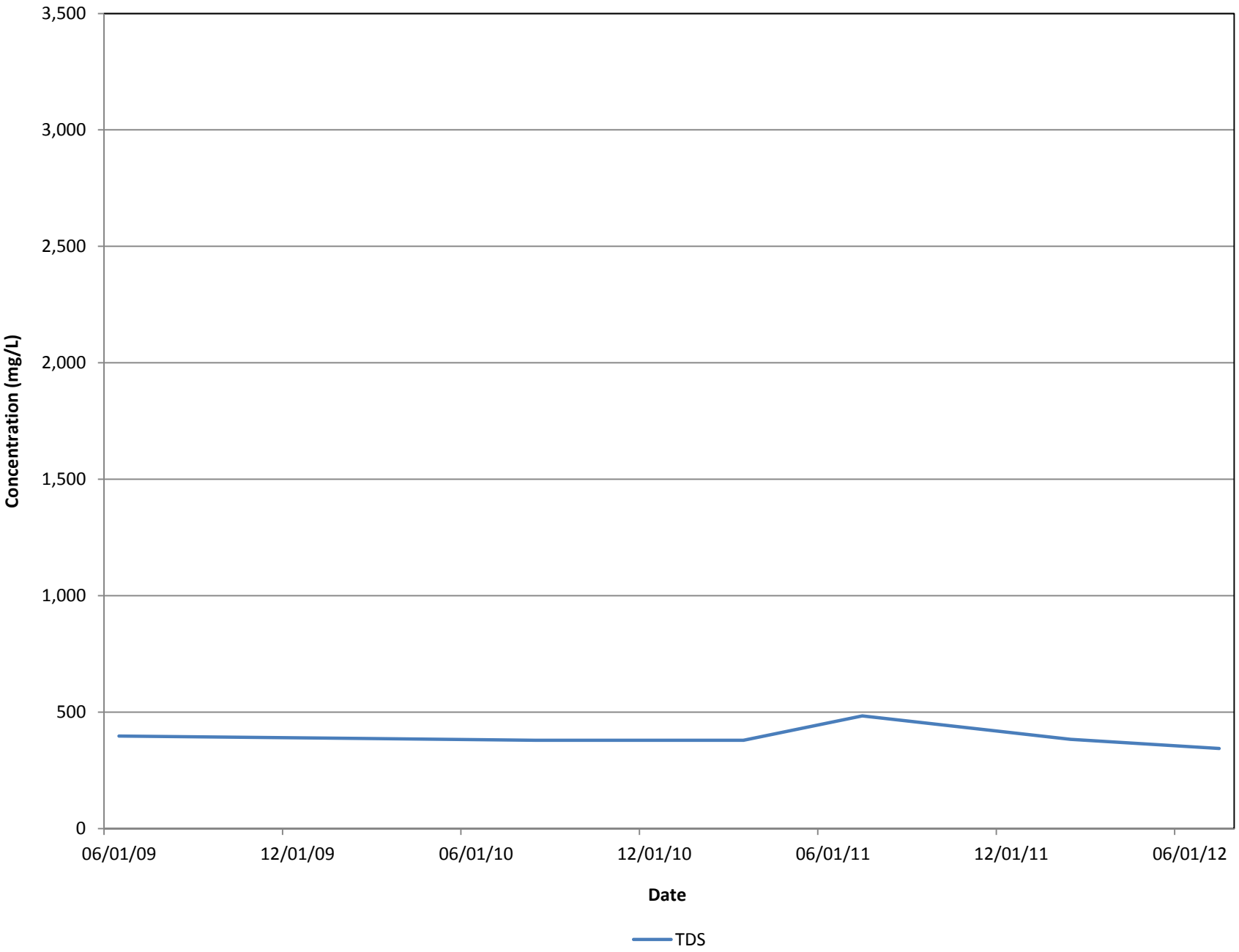
MW-29: SVOC CONCENTRATIONS OVER TIME



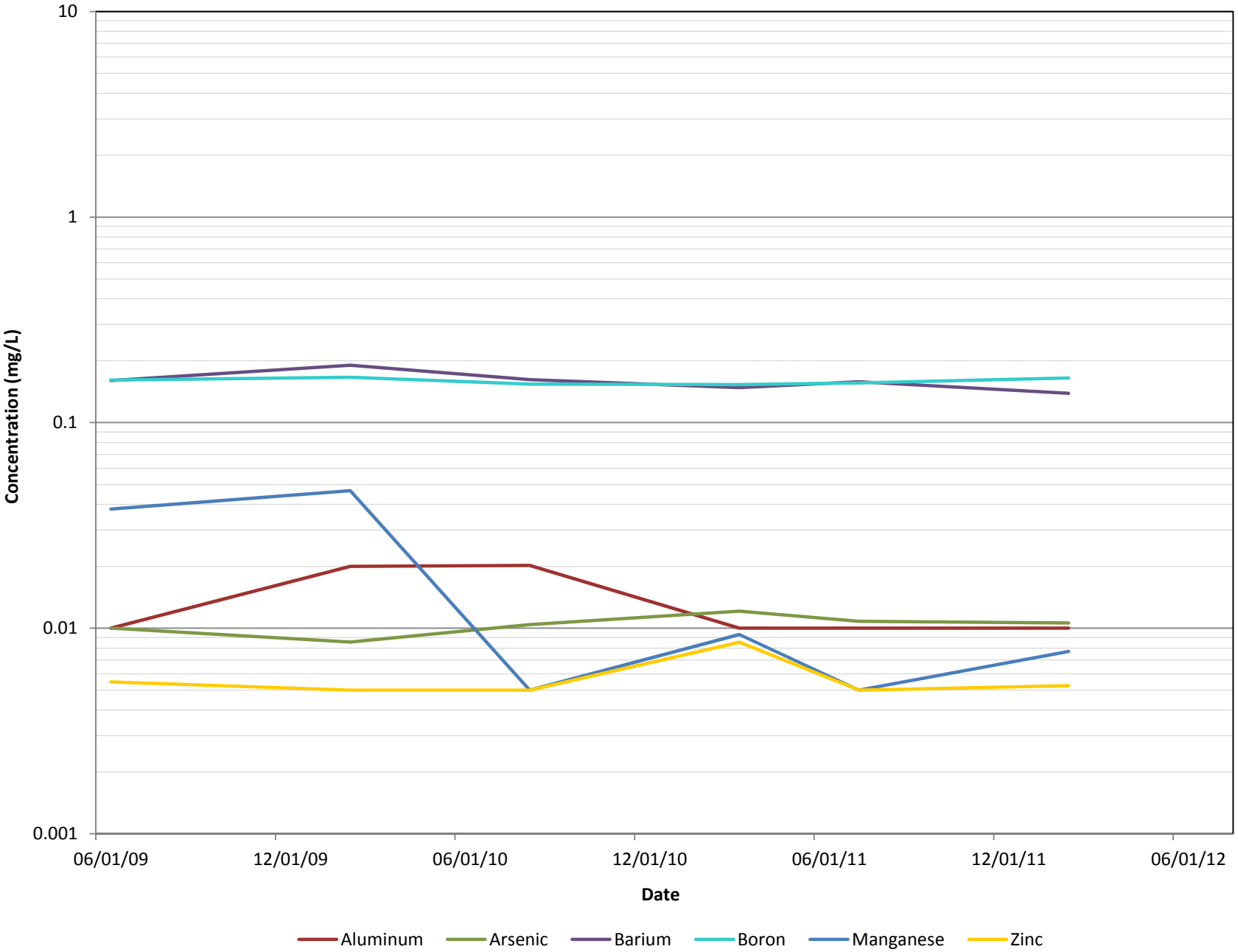
RW-1: ANION CONCENTRATIONS OVER TIME



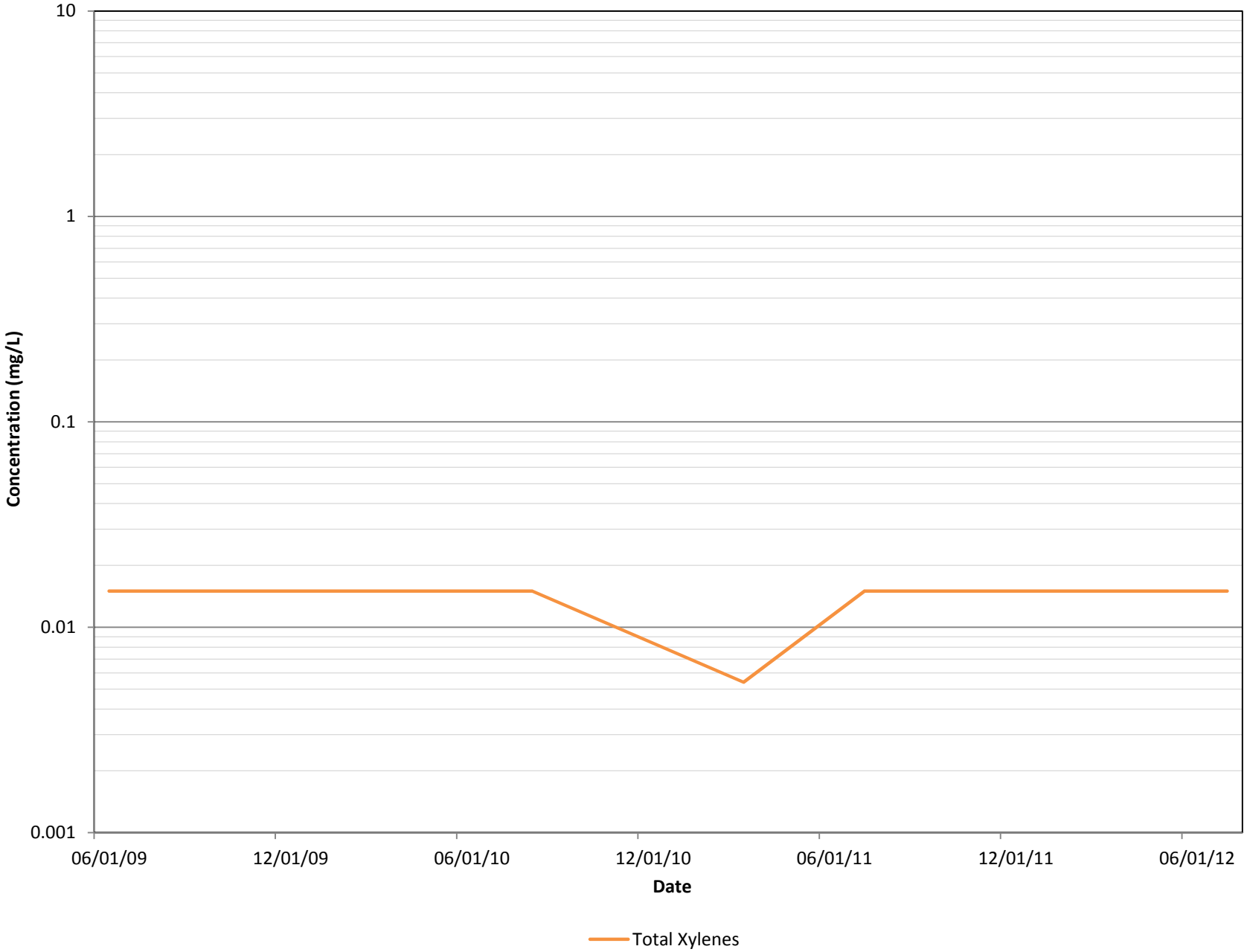
RW-1: TDS CONCENTRATIONS OVER TIME



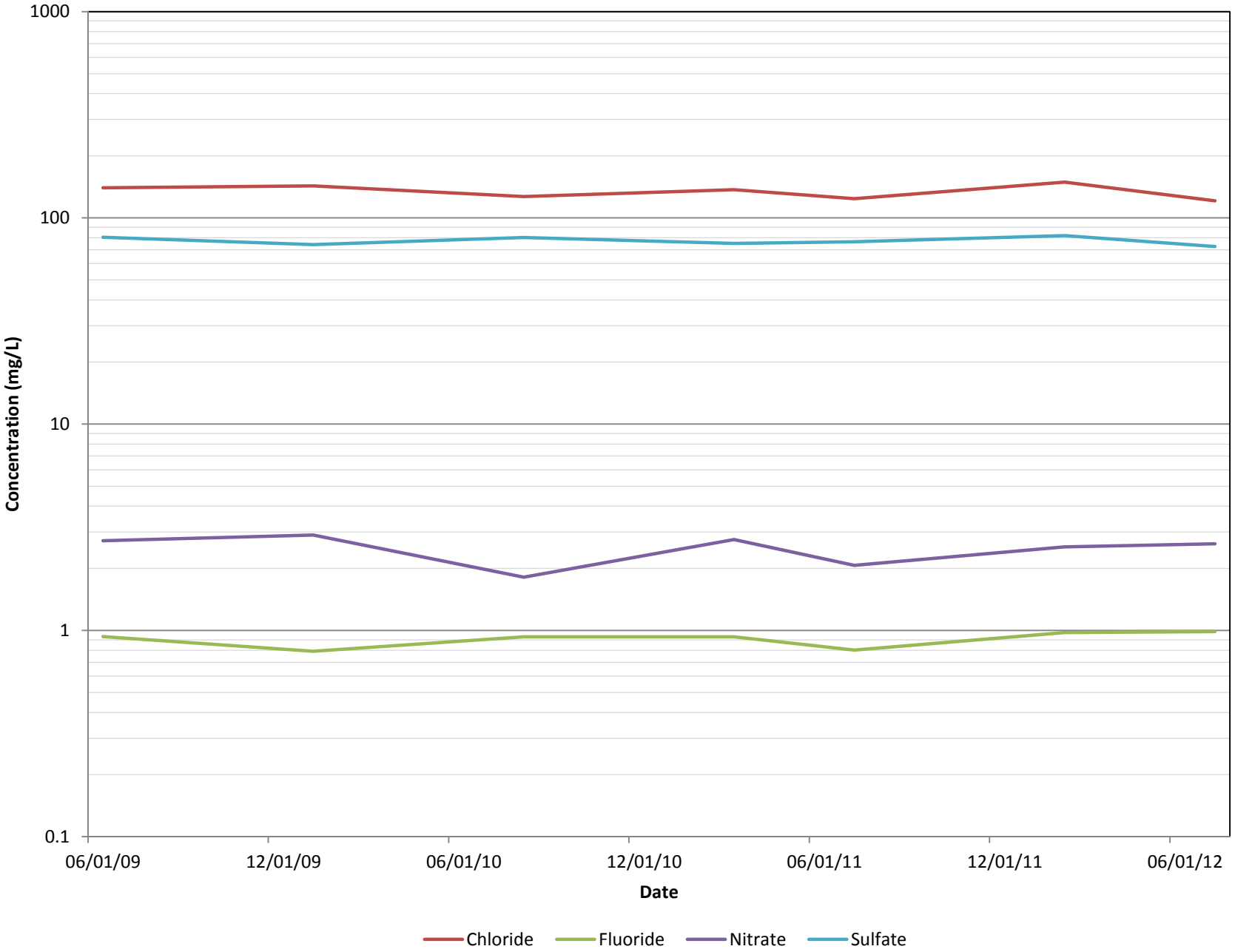
RW-1: METAL CONCENTRATIONS OVER TIME



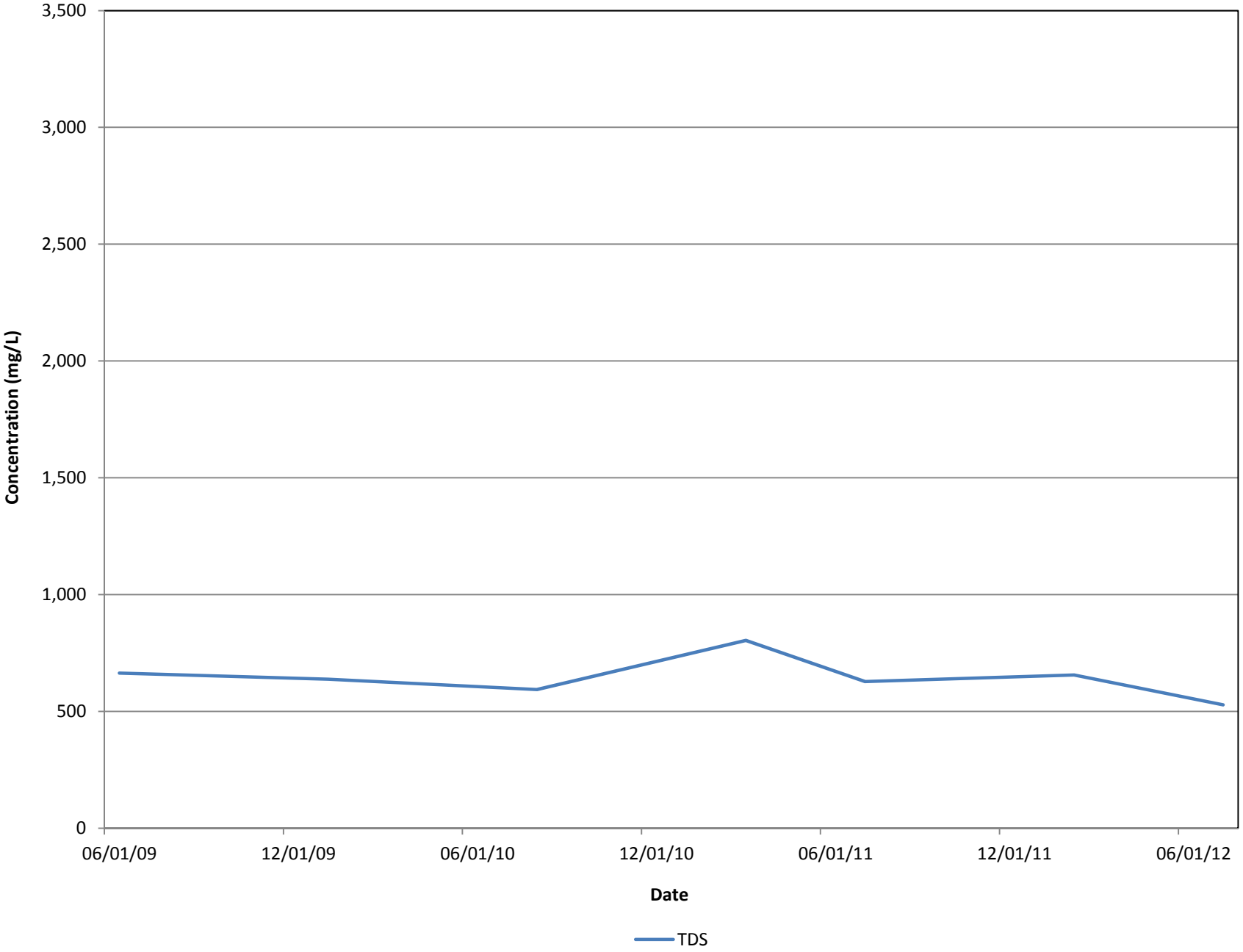
RW-1: VOC CONCENTRATIONS OVER TIME



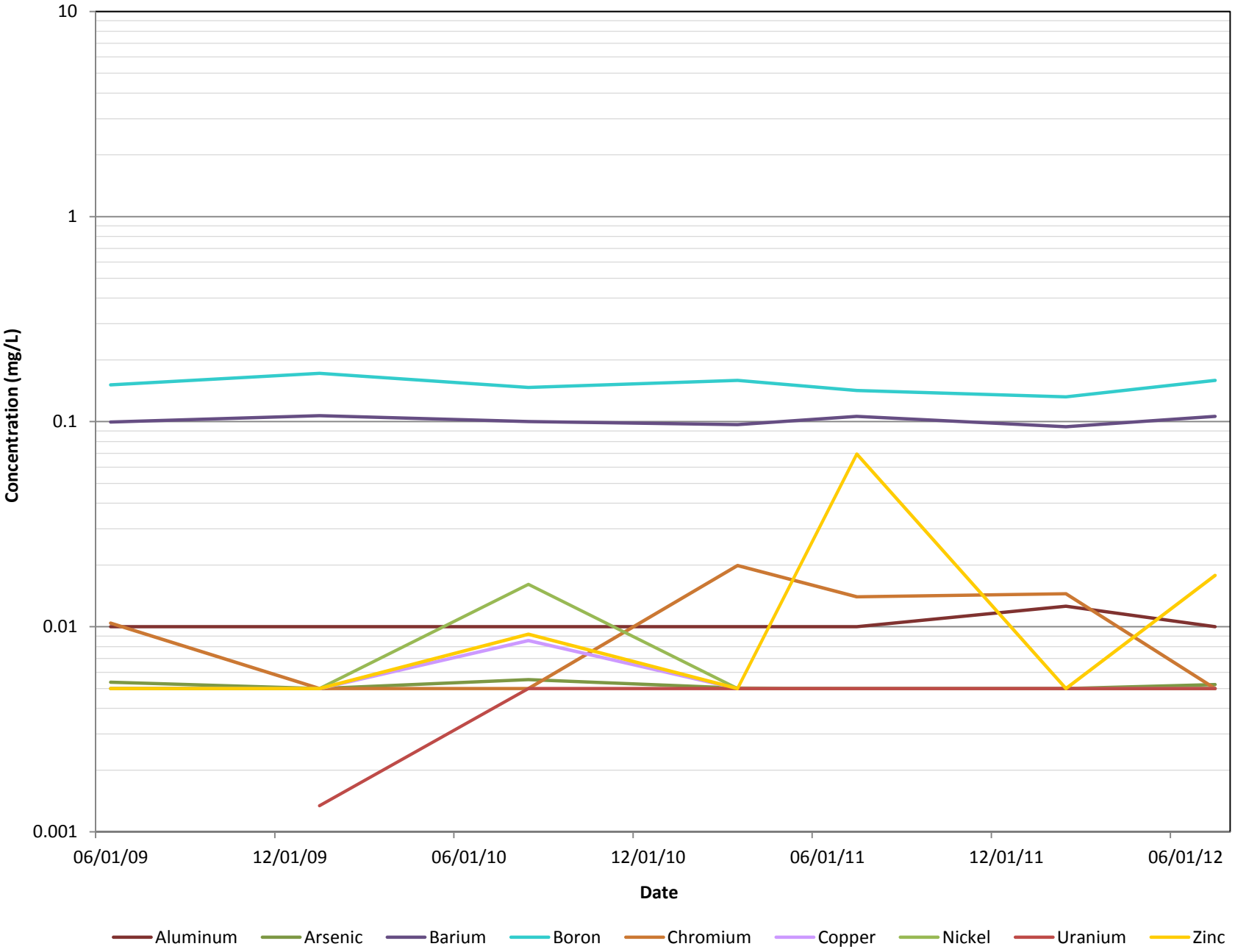
NORTH WELL (WW-NORTH): ANION CONCENTRATIONS OVER TIME



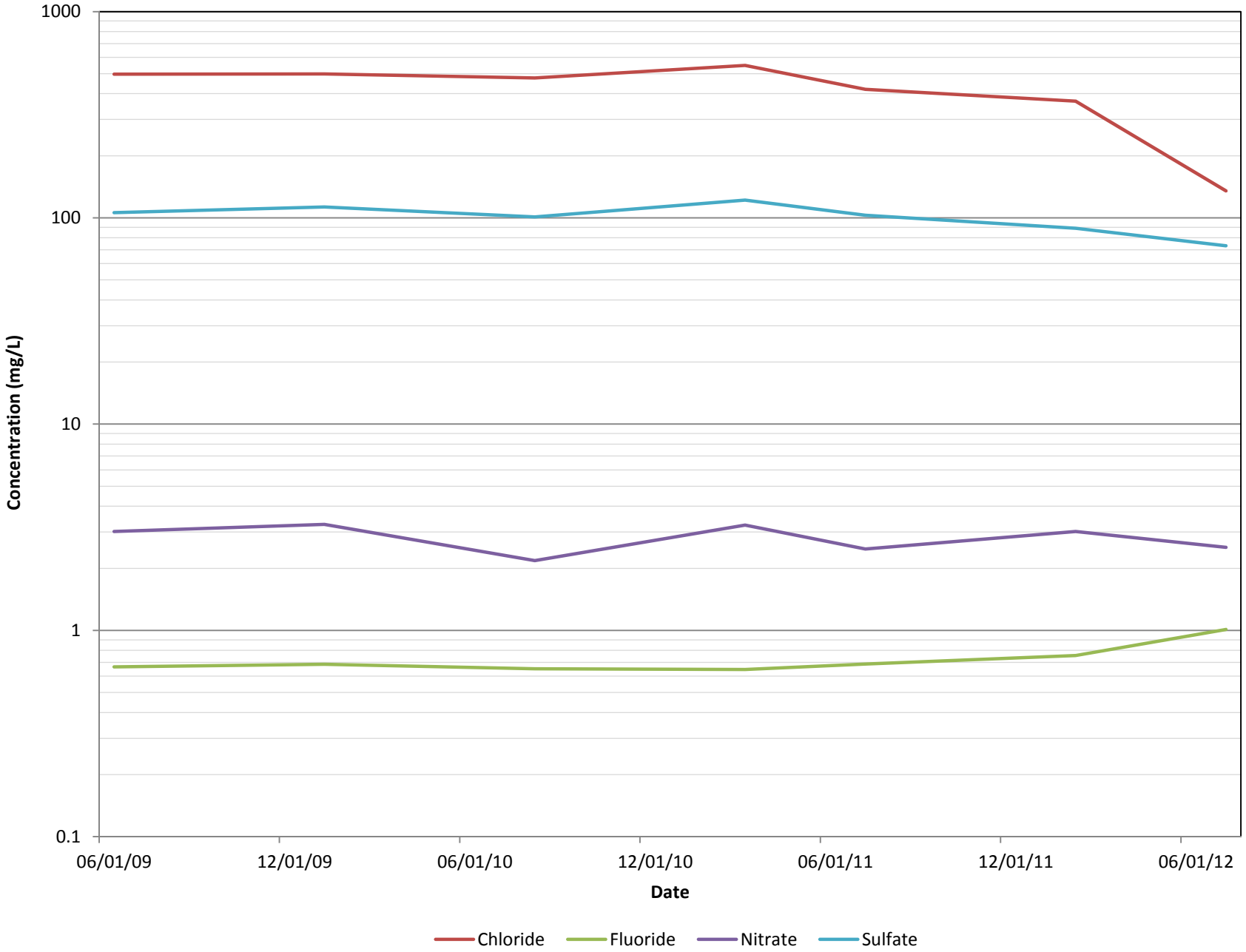
NORTH WELL (WW-NORTH): TDS CONCENTRATIONS OVER TIME



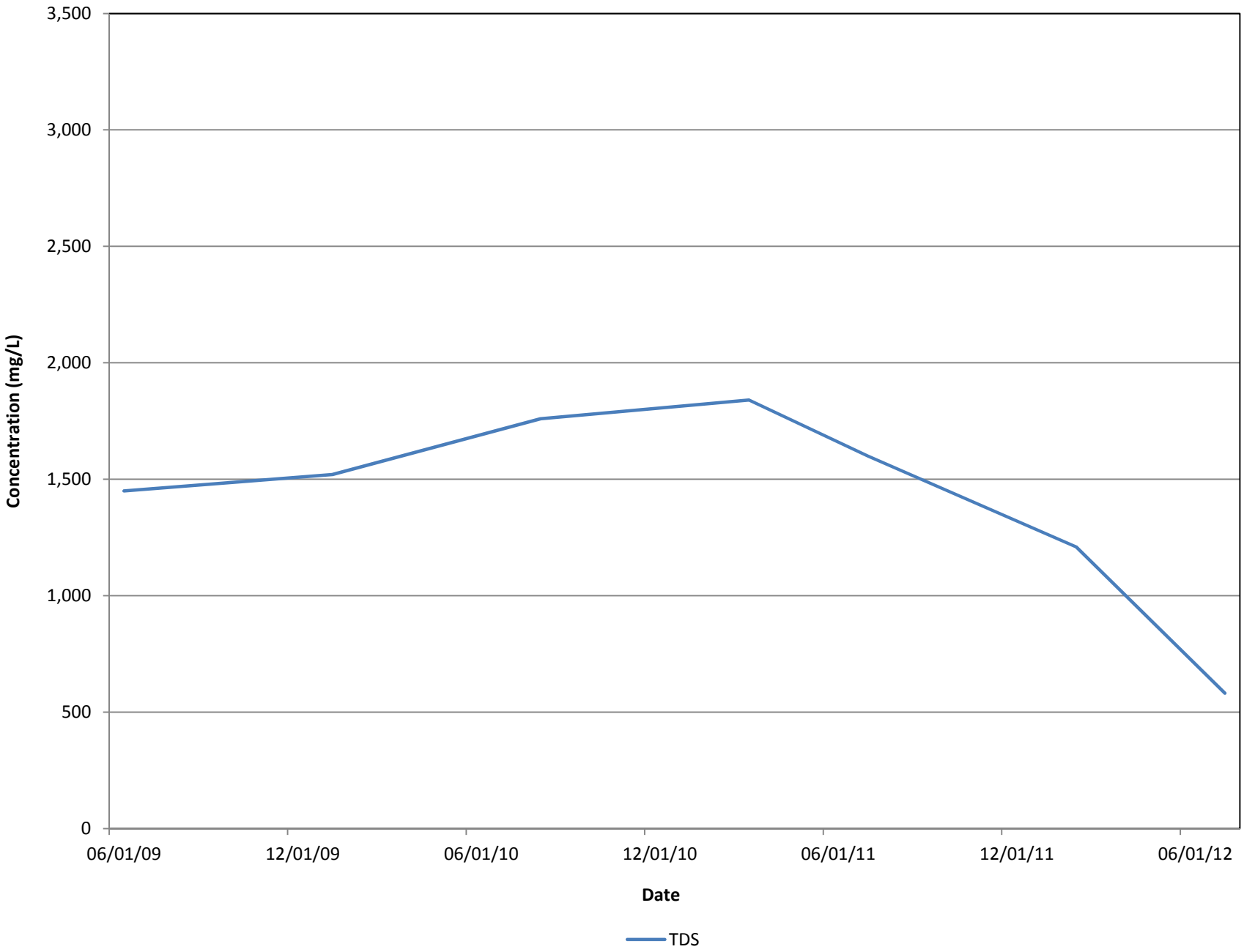
NORTH WELL (WW-NORTH): METAL CONCENTRATIONS OVER TIME



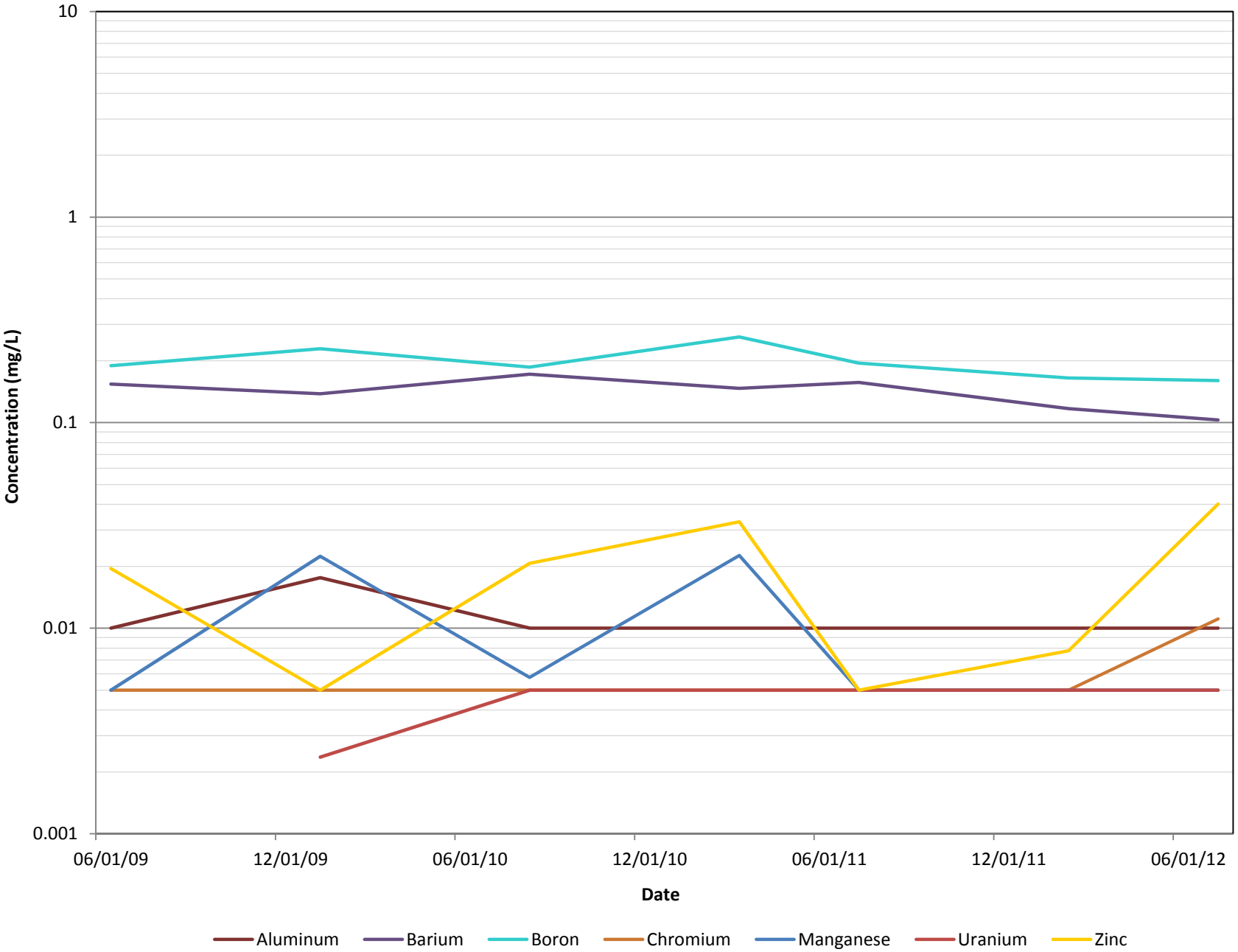
SOUTH WELL (WW-SOUTH): ANION CONCENTRATIONS OVER TIME



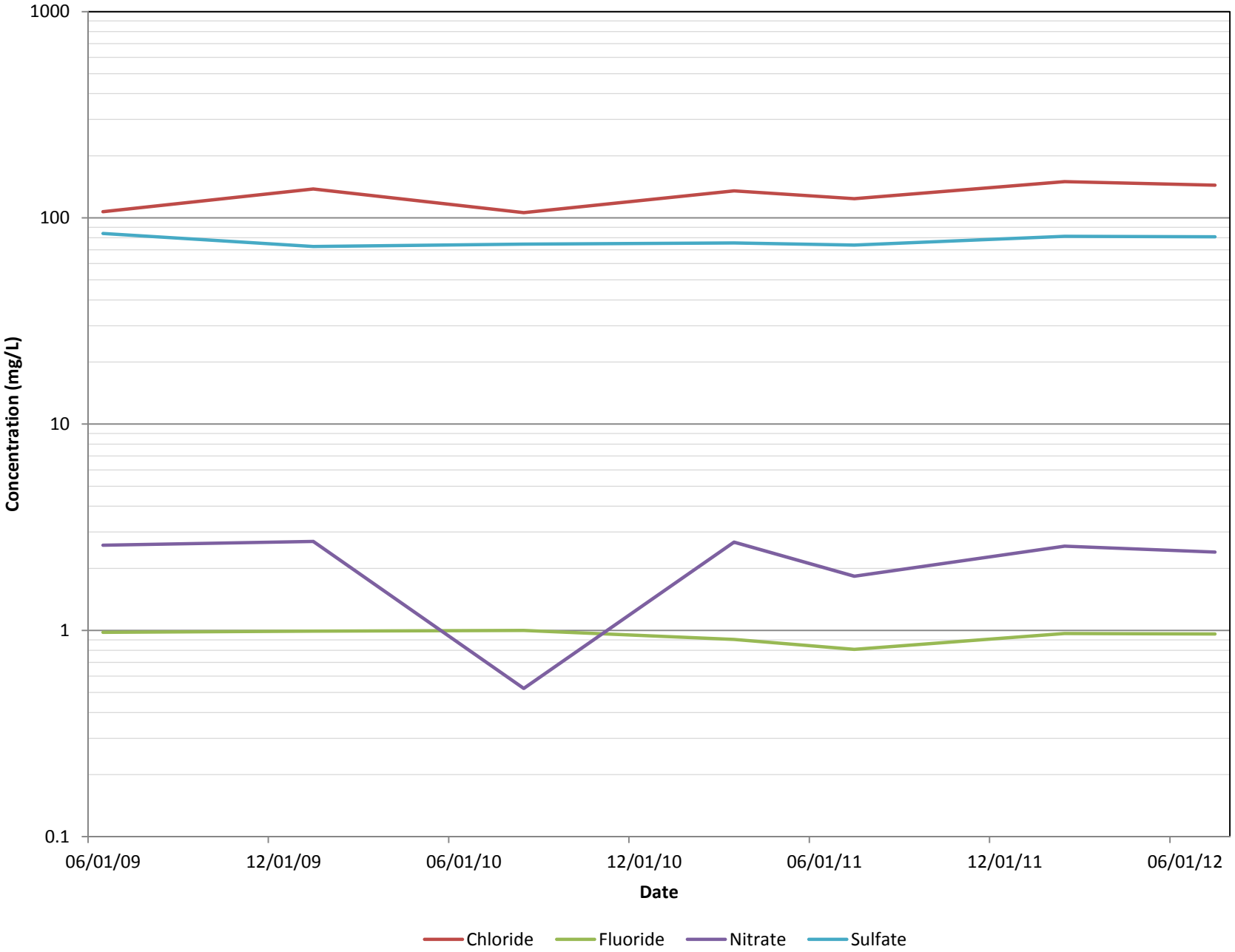
SOUTH WELL (WW-SOUTH): TDS CONCENTRATIONS OVER TIME



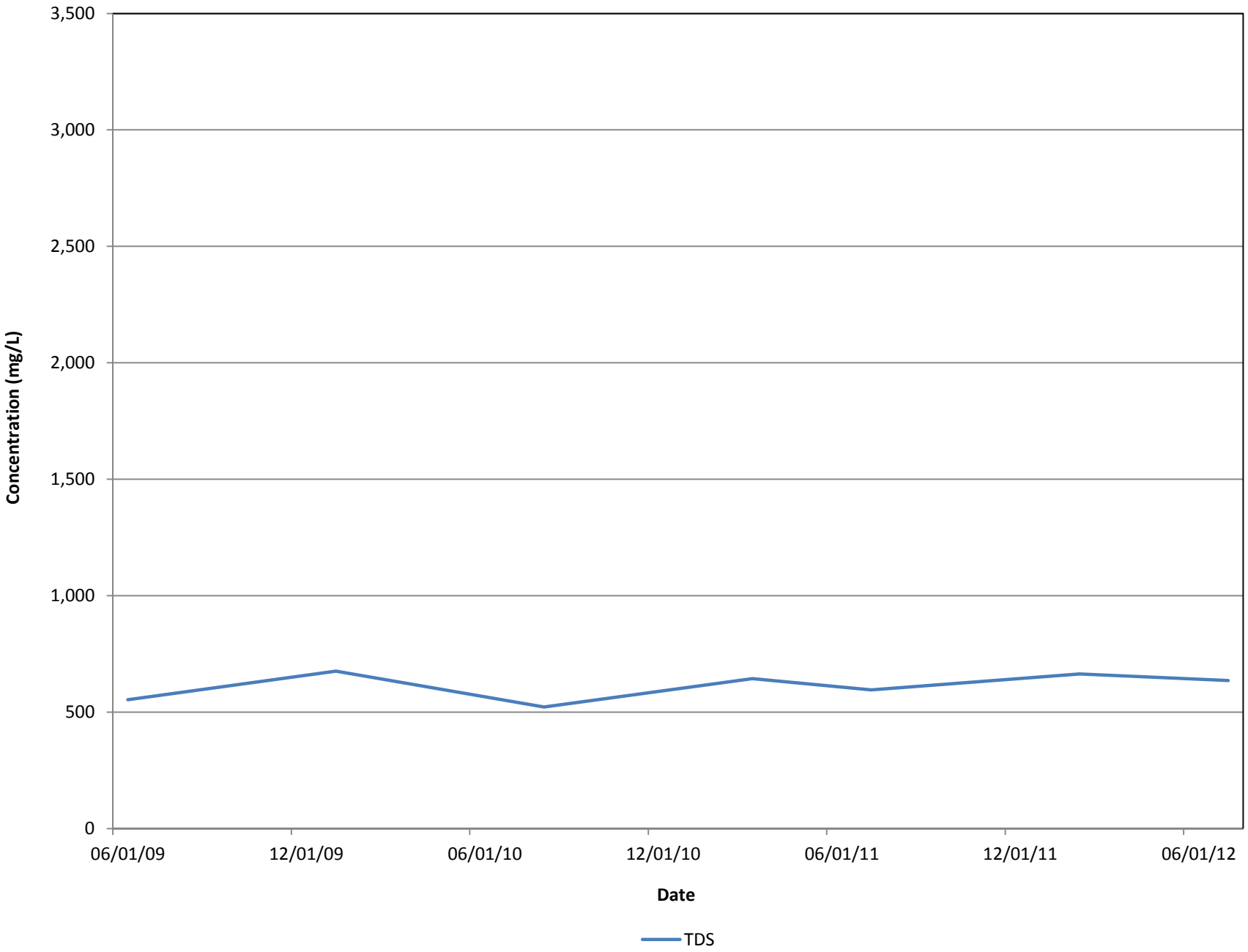
SOUTH WELL (WW-SOUTH): METAL CONCENTRATIONS OVER TIME



EAST WELL (WW-EAST): ANION CONCENTRATIONS OVER TIME



EAST WELL (WW-EAST): TDS CONCENTRATIONS OVER TIME



EAST WELL (WW-EAST): METAL CONCENTRATIONS OVER TIME

